



Assessment on the Readiness for Virtual Learning Adoption in Education System in Tanzania: A Study of Universities in Arusha Region

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Abstract: *The study assessed the readiness for virtual learning adoption in universities in Arusha region, Tanzania. The objectives were to: assess the readiness for virtual learning and find out intervening measures to the challenges facing virtual learning adoption in universities in Arusha region. The study was guided by Technological Acceptance Model (TAM). Convergent mixed methods design was adopted. Data was collected through observation, questionnaire and interview guide. The sample size consisted of 114 respondents; 21 lecturers, 90 master students selected by simple and stratified random sampling technique. Purposive sampling technique was used to select 3 ICT technicians and lecturers from top management level. Validity was established through expert judgment, while reliability was ascertained using test-retest technique and reliability index, QL $r=0.914$ and QS $r=0.912$ was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained by involving multiple analysis, while dependability was established through detail reporting of the research process. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in table of frequencies, percentages and charts. Qualitative data were analyzed thematically alongside research questions. The study findings reveal that the readiness for VL in three universities is relatively low. Also universities should train staff and student in ICT, improve VL facilities, and provide enough funds. The study recommends that TCU and universities should review and harmonize their policy programme, so as to allow other approved programme to accommodate VL as mode of delivery.*

Keywords: *Assessment, Readiness, Adoption, Virtual Learning and Education System*

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1. Introduction

Education system in Tanzania is evolving: thanks to numerous measures put in place by the government. However, it is facing a critical challenge to meet new demands for the 21st century. The challenges facing education include emerging global pandemic such as Corona Virus Disease (COVID-19), international conflicts (Russia-Ukraine strife), inadequate Information and Communication Technology (ICT) infrastructure,

change in environment, insecurity and poverty (Al-Rawashdeh et al., 2021). Tanzania needs an educational environment that would make it more responsive to challenges such as COVID-19 pandemic and international conflicts confronting the country at large. The use of traditional teaching and learning methods alone particularly those that are purely residential) fails to provide sufficient solution to challenges facing society today. Therefore, alternative ways of providing access to higher education via online need to be fully explored

(Wallis, 2020). In this direction, Higher Learning Institutions in Tanzania are becoming increasingly aware of the need for education programmes that make use of the Internet and other appropriate technologies to deliver their courses (Bhalalusesa et al., 2015). This calls for adoption of Virtual Learning (VL) in education system in Tanzania to mitigate the effects of global pandemic.

VL is the learning which occurs in absence of traditional face to face classroom environment (Schlosser & Seepersaud, 2018). It is facilitated through the use of internet and electronic devices (Al-Nofaie, 2020). VL can be asynchronous, synchronous, or hybrid (Gunes & Alagozlu, 2021). Synchronous is the type of VL where by teaching and learning take place at the same time also known as real time delivery (Martin & Parker, 2014; Schlosser & Seepersaud, 2018). Synchronous VL allows real time interaction between teacher and learner, by using platforms such as audio streaming, video streaming, text, chart, interactive white board, application sharing and instant polling (Ruddy & Ruddy, 2014). Web conferencing or videoconferencing is the common platform used in Synchronous virtual learning (Martin & Parker, 2014).

Asynchronous is the type of VL where by teaching and learning take place at different time (Schlosser & Seepersaud, 2018). It is not time bound and students can study at their own time (Perveen, 2016). It involves delivering of learning materials through different forms of Learning Management System (LMS) such as MOODLE (Al-Nofaie, 2020). It does not allow real time interaction between instructor and learner and it can be facilitated through media such as discussion board, e-mails, wikis, blogs, and video or audio recording (Huang & Hsio, 2012).

Worldwide VL trend started at 1990s where development of personal computer was on the rise (Palvia et al., 2018). VL has grown worldwide due to advancement of ICT, global acquisition of internet and better affordability of computer (Habackova, 2015). For instance, the number of students taking at least one online course in Oregon public universities in America has increased from 21.3% in 2008-2009 to 48.3% in 2018-2019. Also, the number of students who are taking fully online courses had increased from 6.2 percent in 2008-2009 to 14% in 2018-2019 and the number of students taking fully face to face or traditional classroom have declining from 72.5% to 37.5% in 2018-2019 year of study (Wallis, 2020). Virtual education is believed to become leading stream by 2025 (Palvia et al., 2018).

Despite the advantage of VL in education, the applicability of virtual learning in Tanzania is still low as the study conducted by Innocent & Masue (2020), reveal that there is limited applicability of e-learning in Tanzania universities. The current condition of corona virus pandemic has forced many universities in the world to close physical classes. This creates the need for

universities to find alternative way to provide their education without physical meetings. From the foregoing, it is important to conduct a study to interrogate the readiness for adoption of VL in education system in Tanzania. In this regard, the current study sought to assess the readiness for VL in Universities in Arusha region.

1.1 Research Questions

The research questions were;

- i. Are universities in Arusha region ready to adopt VL?
- ii. What are the intervening measures to the challenges facing VL adoption in universities in Arusha region.

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was anchored on Technological Acceptance Model.

2.1 Technological Acceptance Model

Technology acceptance model (TAM) was proposed by Fred Davis in 1989, the model was formulated based on the theory of reasoned action; the model explains how individuals accept and use technology. The theory suggests that the intention of people to accept and use technology is determined by two factors namely; perceived ease to use and perceived usefulness (Lai, 2017). Perceived ease to use “is a degree to which an individual believes that using a certain technology will be effortless and easy to use” and perceived usefulness “is the degree to which an individual believes that using a certain technology would increase his or her job performance” (Alshammari & Rosil, 2020).

The model suggests that the use of information technology depend on behavior intention, and behavior intention depend on personal attitude towards the use of the system and also his or her perception of its usefulness or utility (Kalayou, 2020). User’s attitude and belief are important features which influence the use of new technology.

2.1.1 Application of the Theory to the Current Study

The theory was relevant to the current study because it was used to assess students and lecturers behavioral intention to adopt VL. Technology acceptance model postulates that when users are subjected with new technology, different factors influence their decision on how and when to use it (Lai, 2017). People with positive perception on the use of technology have higher acceptance for VL than those with negative attitude. The attitude of a person is not the only factor that influences his or her use of a system but is also

based on the effect of its performance (Alshammari & Rosil, 2020).

2.2 Readiness for Virtual Learning in Universities

The study conducted by Adams, Sumintono and Mohamed (2018), found that students were ready for blended learning, also there were different levels of readiness based on gender, age, ethnicity, field of study, and level of education. A study by Sharadgah and Sa'di (2020), found that higher learning institutions were not well prepared to provide online assessment, nor vivid mechanism for online assessment. Academic staff do not believe that online assessment could assess all intended learning outcome, also they believe that there is high risk of cheating due to lack of quality system to prevent it (Sharadgah & Sa'di, 2020).

Majority of lecturers were not prepared enough in terms of having the basic skills and fundamentals for implementing electronic learning programs (Farazkish & Montazer, 2019). Students do not have appropriate gadgets and internet connectivity (Vitals et al., 2021). Lecturers show high readiness in the area of having technological tools such as Smartphone, computer and ability to use internet for academic purposes (Farazkish & Montazer, 2019). Virtual education in higher learning institution was conducted through mobile messenger systems and learning management systems such as VESTA (Visualization for Electronic Structural Analysis), MOODLE (Ahmady, Shahbazi, & Heidari, 2020).

Akudolu et al., (2017) found that students have skills for posting comments, questions and answers on online discussion boards. Similarly, they are capable of using online readings and links to the text-based materials, open and reading materials in HTML or PDF formats; logging in to learning platforms, blogs and using internet charts. A study by Elfirdoussi et al., (2020), found that students and professor view online learning as not interested as ordinary learning, and professor need to provide at least 50% of their teaching in face-to-face mode. In addition, technical support and training in the use of tools used for VL were provided to enhance and promote distance education.

Gyampoh et al., (2020), found that colleges lack polices on online teaching. Tutors have not acquired any formal training on how to do the blended learning and using virtual learning platforms in their lesson deliveries (Aheto-Domi et al., 2020).

2.3 Intervening Measures to the Challenges Facing Virtual Learning Adoption in Universities

O' Doherty et al. (2018), found that provision of incentives and rewards for the time involved in development of online content will solve the problem of time constrain on lecturers. Involving instructors in the decision-making process when adopting new technology and offer training on technological knowledge, pedagogical knowledge and content knowledge will solve the problem of skill deficit among the instructors (Jonson et al., 2016).

Jabreen (2017), found that the main problem facing electronic learning was lack of awareness and not accepting the transition from tradition learning to e-learning. The solution is to conduct seminars and conferences to talk about the importance of e-learning and its benefits, and hold meetings between old and new students of different majors and exchange of knowledge amongst them (Lashayo & Johar, 2018). Agbenyagah (2019) suggest that increasing investment in both internet connectivity and ICT infrastructure is needed to solve the problem of poor internet connectivity and poor infrastructure.

Muchemwa (2021), reveal that to solve the problem of local browsers that are available within the campus only, universities should create universal portal that can be assessed anywhere. Kisanga and Ireson (2015), found that usage of renewable energy will solve the problem of electric power supply; partnership with private sector and organization which provide financial aid and increasing of financial support from government will solve the problem of financial constrain. Lecturers should use online platform that allow live interaction with students rather than platform which only allow provision of notes (Muchemwa 2021). Managers and authorities to design courses which will allow fully online delivery, this will solve the problem of university's lack course program which allows fully online delivery (Ahmady et al., 2020).

3. Methodology

The study used convergent mixed methods design, suitable design to collect both qualitative and quantitative data (Creswell & Creswell 2018). Questionnaire, interview guide and observation were used for data collection. The sample size consisted of 114 respondents; 21 lecturers, 90 master students selected by simple and stratified random sampling technique. Purposive sampling technique was used to select 3 ICT technicians and lecturers from top management level. Validity was established through research expert judgment, while reliability was ascertained using test-retest technique and reliability index, QL $r=0.914$ and QS $r=0.912$ was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained by involving multiple

analysis, while dependability was established through detail reporting of the research process. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in table of frequencies, percentages and charts. Qualitative data were analyzed thematically alongside research questions.

4. Results and Discussions

The findings were discussed with regard to research objectives. Table 1 shows the results of the first objective from master students.

Table 1: The Findings from Master Students on the Readiness for Virtual Learning

| Aspect of Virtual Learning in Universities | Students(n=90) |
|--|-----------------------|
| | f(%) |
| Availability personal computer | 70(78) |
| University has reliable electric power supply | 86(96) |
| University has computer laboratory | 85(95) |
| Preference for online classroom than face-to-face classroom | 25(28) |
| Technical support from university technician to Student | 61(68) |
| University has reliable internet connectivity | 82(91) |
| University has accessible online library | 63(70) |
| Student get computer and information technology training | 59(65) |
| University offers online assessment and examination | 19(21) |
| University provides free wireless internet services | 83(92) |
| University offers virtual learning courses and program | 30(33) |
| University has online system for provision of student result | 84(93) |
| University has enough technology experts | 46(51) |
| University has online admission system | 83(92) |

n= number of respondents, f= frequency, %=percentage, values presented are the number and percentage of students who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

On the sub item, availability of personal computer, which sought to know if student had personal computer, 70(78%) of the students agreed that they have personal computer, 20(22%) of the students opposed the statement. This means that 20(22%) of students don't own computer. The results above show that most of the master students owned computer. This indicates that master students were prepared for VL because they possess personal electronic device to facilitate VL. The finding is in agreement with that of Reisdorf et al., (2020) on how lack of technology affects students' achievement, the study found that most of the university students from different background and ethnicity owned computer.

On sub-item, university has reliable electric power supply, 86(96%) of the students agreed that universities have reliable electric power supply. The finding shows that majority of respondents were in agreement with the statement that means, universities had reliable electric power supply. The findings are in contrary with that of Muchemwa (2021), in Zimbabwe who reported that

universities had unreliable electric power supply. The availability of reliable electricity in universities is important because VL is facilitated by electronic devices which are operated using electricity.

In addition, 85(95%) of the students agreed with the statement that university has computer laboratory while 5(5%) were in disagreement with the statement. This result shows that universities were having computer laboratories. The presence of computer laboratory is one of the indicators that universities are in preparation to adopt VL. The findings coincided with that of Innocent and Masue (2020) which found that all studied universities were having computer laboratory. Computer laboratory helps those students who do not own their own computers to access it at universities. Further, computer laboratory is used to provide ICT training to students.

Moreover, 25(28%) of the students agreed with the statement that they prefer online classroom to face-to face classroom. In this regard, 65(72%) of the students

disagreed. The results show that majority of the students opposed the statement, this means that majority of students do not prefer online learning, most of the student prefer face-to-face classroom. The findings are in agreement with Al-Nofaie (2020), the study argue that VL is not always attractive for students, and students prefer face- to- face classroom than online classroom.

On the item, student get technical support from university ICT technician. The results were 61(68%) of the students agreed with the statement, and 29(32%) opposed the statement. This means that majority of the students were given technical support from university technician and few of them did not get technical support from university technician. The findings tell us that many students are facing technical problems which need assistance from ICT technicians to be solved, but not all students are successful in getting the assistance they need. Therefore, there is a need for universities to come up with the strategies that will enable all students who need technical assistance to get it on time.

Also, 82(91%) of the students agreed with the statement, university has reliable internet connectivity, and only 8(9%) of the students held contrary opinion. The result show that most of the students were in agreement with the statement. This indicates that universities have reliable internet connectivity. It is imperative to note that VL is facilitated by the use of internet. This means that the availability of reliable internet connectivity will enable universities to adopt VL and improve the quality of VL programmes.

Concerning university has accessible online library, 63(70%) agreed with the statement, and 27(30%) were not in agreement with the statement. The results show that majority of students agreed that universities have accessible online library. The researcher established that online library help students to access books, e-books, journal, students research and published papers without necessarily attending to physical library. Consequently, online library is one of the requirements for virtual learning.

On whether student get computer and information technology training, 59(65%) of students agreed that students in their university were given computer and information technology training. while 31(35%) were not in agreement with the statement. This result shows that majority of students were getting information and computer training. The presence of 31(35%) students who disagreed with the statement, tell us that the training was not provided to every student, instead the training was provided depending on the type of program students were taking. The finding is in agreement with the finding by Elfirdoussi et al., (2020) who found that technical support

and training in the use of virtual learning tools was provided to students.

In addition, 19(21%) of the students agreed that university offers online assessment and examination, 71(79%) of the students were not in agreement with the statement. The result shows that most of the students were not in agreement with the statement provided; this means that, universities do not offer online assessment and examination. The result concurs with the study done by Sharadgah and Sad'i (2020) titled; preparedness of higher learning institutions for assessment in VL environment during COVID-19. The study reveals that higher learning institutions were not well prepared to provide online assessment, and there was no vivid mechanism for online assessment.

Moreover, 83(92%) agreed that university provide free wireless internet services, while 7(8%) disagreed. The findings show that majority of the students agreed that, their universities provide free wireless internet service. This means that universities do provide free wireless internet services. The findings are in agreement with that of Pete and Soko (2020) which pointed out that most of the universities provide free internet services to both lecturers and students. The provision of free internet service to students, enables students to navigate freely online; students learn, download notes and other materials, and communicates freely.

Furthermore, 30(33%) of the students agreed that university offers VL courses and programs, while 60(67%) of the students were not in agreement with the statement. The result reveals that many students were not in agreement with the statement. This implies that, universities assessed in this study do not offer online courses. A report by TCU (2022) supported the study findings by pointing out that virtual or blended mode are the new mode of delivery for most of universities in Tanzania.

On the other hand, 46(51%) of the students agreed that universities have enough technology experts, while 44(49%) of the students were not in agreement with the statement. The results show that the number of students who agreed and those who opposed the statement were almost equal. This means that universities were not in good supply of technology experts that is why there is no clear distinction between the views from the respondents. Correspondingly, Anatory (2015), suggested that there is a need for universities to employ staff with appropriate skills in virtual education field, like e-pedagogy experts, content developer and learning management system experts. Table2 shows the results of readiness from lecturers.

Table 2: Findings from Lecturers on the Readiness for Virtual Learning

| Aspects for Virtual Learning in Universities | Lecturers (n=21),f (%) |
|---|------------------------|
| Availability of personal computer | 20(95) |
| Preference for online teaching than face-to-face teaching | 7(33) |
| Pedagogical skills for online teaching | 8(38) |
| University has virtual learning policy | 7(33) |
| Lecturers have technical skills for online teaching | 10(48) |
| University has e-learning management system | 11(52) |
| Lecturers get technological support from university | 16(76) |

n= number of respondents, f=Frequency, %=Percentage, values presented are number and percentage of students who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

The findings shows that 20(95%) of lecturers agreed that they had personal computers while only 1(5%) of the lecturers had reservations. The findings show that majority of the lecturers agreed with the statement. This indicate that majority of lecturers were having personal computers. On the item, preference for online teaching than face to face teaching 7(33%) of the lecturers agreed with the statement, while 14(67%) of the lecturers were not in agreement with the statement. This mean that majority of lecturers in the study area (universities) do not prefer online teaching. The findings of the study are in agreement with the findings in the study conducted by Elfidoussi et al. (2020), which found that the respondents' (professor) view online learning as not interesting as face-to-face learning.

In addition, 8(38%) of lecturers agreed with the statement, pedagogical skills for online learning, and 13(62%) disagreed. The results show that most of lecturers opposed the statement, this indicate that most of the lecturers do not have pedagogical skills for online teaching. This finding is in agreement with the findings in the study conducted by Aheto- Domi et al. (2020). The study found that most lecturers have not acquired any formal training on how to do the blended learning and using VL platforms in their lesson delivery.

On the statement university has VL policy, 7(33%) of the lecturers agreed with the statement, while 14(67%) disagreed. The results show that majority of the lecturers opposed the statement, this indicate that the studied universities do not have VL policy. The study conducted by Mwakyusa and Ng'webeya (2022), suggested that government should put more emphasis on development of VL policies, which will increase accountability, participation and commitment in higher learning institutions. Furthermore, 10(48%) of lecturers agreed that they have technical skills for online teaching, while

11(52.9%) of lecturers disagreed. The results show that the number of lecturers who agreed is close to the number of lecturers who disagreed. This indicates that almost half of the lecturers have technical skills for online teaching. The findings are in agreement with the findings by Bariham et al., (2021), which pointed out that instructors had content knowledge but they lack technical skills to conduct online course.

Likewise, 11(52%) of the lecturers agreed with the statement that, university has e-learning management system, while 10(48%) of the lecturers were not in agreement with the statement. The results show that slightly more than half of the respondents, agreed with the statement. These imply that some universities in studied area do have e-learning management system, and others do not have e-learning management system. According to TCU (2022), a university should have e-learning management system and also should have mechanism to evaluate content in learning management system, so as to be able to deliver online and blended courses.

Lastly, on whether lecturers get technological support from university ICT technician, 16(76%) of lecturers agreed with the statement. While 5(24%) of the lecturers opposed the statement. These results show that majority of the lecturers agreed with the statement. These imply that lecturers were getting technological support from university ICT technician.

During the interviews, while responding to the theme reliable internet connectivity, the respondents indicated that all universities where the study was conducted were connected to internet service. One of the respondents reported that:

University is connected to internet service, and it provides free wireless internet services to students and

lecturers (Personal interview, 29th April, 2022).

The qualitative findings during the interviews are in agreement with the quantitative findings in this study. The quantitative findings show that the universities have been connected to internet services. Also, students and lecturers were given free internet services. The respondents further explained that they normally provided with the password for WIFI particularly once the ICT technician has opened your account in the system.

Moreover, a response on the theme, online services available in the university, a respondent who is ICT technician reported that:

Online services available are; admission system, online library, online system for provision of students' results and all these are found on our web site (Personal interview, 25th April, 2022).

The findings show that universities provide different online services such as admission services, online library, students' examination results, and all these services are found in universities web site. The findings are also in agreement with the quantitative findings in this study. Similarly, the results are in agreement with the findings in the studies done by Innocent and Masue (2020); Mwakyusa and Ng'webeya (2022).

4.2 The Findings on the Intervening Measures to the Challenges Facing Virtual Learning Adoption

Table 3 summarizes the findings on the Intervening Measures to the Challenges Facing Virtual Learning Adoption in universities in Arusha region.

Table 3: Findings on Intervening Measures to the Challenges Facing Virtual Learning Adoption

| Intervening measures to the challenges facing virtual learning adoption | Students (n=90) f (%) | Lecturer(n =21) f (%) | Total (n=111) f(%) |
|--|----------------------------------|----------------------------------|-------------------------------|
| Training staff & students in ICT | 84(93) | 21 (100) | 105(95) |
| Provision of adequate computer in computer laboratory | 77(86) | 20 (95) | 97(87) |
| Improvement of VL facilities | 77(86) | 19 (91) | 96(86) |
| Update VL policies | 78(87) | 19 (91) | 97(87) |
| Provision of adequate funds to institutions | 77(86) | 17 (81) | 94(85) |
| Creating VL awareness to students and lecturers | 77(86) | 20 (95) | 97(87) |
| Reliable and sufficient internet connectivity | 80(89) | 17 (81) | 97(87) |
| High internet speed | 80(89) | 18(86) | 98(88) |
| Provision of technological support to students and lecturers | 79(88) | 18(86) | 97(87) |
| Alternative electric power supply | 80(89) | 21(100) | 101(91) |
| Affordable internet cost | 77(86) | 17 (81) | 94(85) |
| Affordable price of electronic devices | 73(81) | 17 (81) | 90(81) |

n=number of respondents, f=Frequency, %=Percentage, values presented are number and percentage of students and lecturers who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

On the item, training staff and students in ICT, 84(93%) of the students agreed with the statement, while only 6(7%) disagreed. On the other hand, all 21(100%) lecturers agreed with the statement. The results show that majority of respondents agreed with the statement. This means that in order to overcome the challenge of limited knowledge in ICT students and staff should get ICT training. The findings are in agreement with the finding by Jabreen (2017) which suggested that institution should provide ICT training to both students and lecturers.

On provision of adequate computer in computer laboratory, 77(86%) of students agreed with the statement. Additionally, 20(95%) of the lecturers supported the statement. The results show that most of the respondents agreed with the statement. This implies that, in order to solve the problem of limited number of computers in computer laboratory, university should provide adequate

computers in computer laboratory. The finding is in agreement with the study by Mutsya and Makokha (2016), which suggested that universities should increase the number of computers in computer laboratory.

The findings on improvement of VL facilities were 77(86%) of the students agreed with the statement. In addition, 19(91%) of the lecturers were in agreement with the statement. The results showed that majority of the respondents agreed with the statement. This means that the university should improve and adequately supply VL facilities as an intervening measure to be taken in order to solve the challenge of inadequate and poor VL facilities.

The findings on updating VL policy, were 78(87%) of the students supported the statement, while 12(13%) opposed the statement. Similarly, 19(91%) of the lecturers agreed with the statement, while only 2(9%) disagreed with the statement. The findings show that majority of the

respondents agreed that, there is a need to update VL policies both at TCU, and in Education system so, as to accommodate VL. Mponela and Mkulu (2021) recommended that government should prepare VL policy that will facilitate the adoption of VL in higher learning institutions.

On provision of adequate funds to institutions, the findings were, 77(86%) of the students agreed with the statement, while 13(14%) disagreed. Moreover, 17(81%) of the students agreed with the statement, while 4(19%) of the students disagreed. The findings show that majority of respondents agreed with the statement, this means that majority of students agreed that university should be given enough funds by government and other stakeholder in order to solve the problem of inadequate funds.

Findings on the item, creating VL awareness to students and lecturers where 77(86%) of the students agreed with the statement, while 13(14%) disagreed. Also, 20(95%) of the lecturers agreed with the statement, while 1(5%) disagreed. The results show that majority of the respondents agreed that there is a need to create VL awareness to students and lecturers. The findings are in agreement with Jabreen (2017), who suggested that universities should conduct seminars and conferences on the importance and benefits of VL, and allow new students to get VL experience from the former one.

On reliable internet connectivity, the findings were, 80(89%) of the students agreed with the statement, while 10(19%) disagreed. In addition, 17(81%) of the lecturers agreed with the statement while 4(19%) disagreed. The results show that most of the respondents agreed with the statement. That means university need sufficient and reliable internet connectivity. This will even enhance online research and meetings. The finding is in agreement with Agyenyegah (2019), who suggested that universities should increase investment in internet connectivity. Pete and Soko (2020), recommended that learners and lecturers should be given internet bundles, so that they can have access to internet everywhere and not limited to campus Wi-Fi.

Findings on high internet speed were, 80(89%) of students agreed with the statement, while 10(11%) disagreed. On other hand, 18(86%) of lecturers agreed with the statement, while 10(11%) disagreed. This implies that the problem of low speed of internet must be tackled by providing internet with high speed. According to Pete and Soko (2020), low internet speed strongly affect video based platforms such as Zoom which need strong internet connection, therefore it is important for internet service provider to find a way of strengthening internet signals.

Findings on the provision of technological support to students and lecturers were, 79(88%), of the students agreed with the statement, while 11(12%) were not in agreement with the statement. Also, 18(86%) of the

lecturers agreed with the statement, while 3(14%) disagreed with the statement. The results show that most of the respondents agreed with the statement, this means that majority of the respondent agreed that provision of technological support to students and lectures is a panacea to the lack of technological support to students and lecturers.

Findings on sub item alternative power supply was supported by 80(89%) of the students while 10(11%) disagreed. Moreover, 21(100%) of lecturers gave their affirmative approval to the statement. The findings show that majority of the respondents agreed with the statement, this mean that respondents agreed that there is a need of alternative power supply source such as automatic electric generator in order to cope with the problem of frequent power outage. On the item affordable internet cost, the total number of respondents who agreed with the statement was 94(85%). This will help universities to run VL with minimum cost.

Lastly, on affordable price of electronic device, 73(81%) of the students agreed with the statement and 17(19%) of the students disagreed. Moreover, 17(81%) of the lecturers agreed with the statement, and 4(19%) disagreed. The results show that majority of the respondents agreed with the statement. This means that majority of the respondent agreed that there is a challenge of high price of electronic devices, and to address this challenge there should be affordable price of electronic devices. Government and stakeholder should look on the possibilities of outsourcing affordable electronic devices to students and the universities.

On interview about the intervening measures to the challenges facing VL adoption, a respondent who is ICT technician reported that:

University should provide ICT training to lecturers and students in order to cope with new technology, increase number of ICT experts. Provide modern and compatible device for VL. Lastly, university management should be ready to embrace new technological advancement. (Personal interview, 22nd April, 2022)

The respondent observed that university should provide ICT training to both students and lecturers; this will help them to be competent and familiar with VL facilities. Also, the respondent suggested that universities should increase the number of ICT experts, this will reduce the workload ICT technician have. Similarly, by doing so, students and lecturers will get quality and sufficient support from the technician.

Moreover, universities should provide modern and compatible devices. Respondents observed that the devices used were outdated and other devices were not compatible with some modern technology. Furthermore, the respondents suggested that university management

should be ready and willing to accept changes, it seems that sometimes management are conservative, and afraid to accept changes such as new ways of delivering courses and new technology. This fear is caused by either lack of proper knowledge concerning the technology or fear of expenses needed to adopt and run that technology.

5. Conclusion and Recommendations

5.1 Conclusion

Based on the findings of the study, the following conclusion was drawn; the first objective of the study assessed the readiness for VLin universities by considering some aspect of VL, such as availability of computer laboratory, electricity, internet connectivity, accessible online library. The findings show that lecturers do not have technical and pedagogical skills for teaching online, universities have shortage of technology experts, no university offers online assessment and examination, and no university in the study area provide VL programmes and both students and lecturers do not prefer online learning. The researcher concluded that, the readiness for virtual learning adoption in the universities was at its infant stage. This implies that universities were not ready for VL.

On other objective, which was to find out intervening measures to the challenges facing VL adoption, the researcher found that the government, stakeholders and responsible bodies should provide adequate funds to institutions, and institution should allocate enough budget which will enable universities to purchase, increase and maintain VL facilities and this will address the problem of poor and inadequate VL facilities facing most universities.

5.2 Recommendation

Based on the study findings the following recommendations were made;

- i. It is the right time for university management to adopt technology advancement and put higher learning institutions at an advantageous point to continue with teaching and learning despite emergence of phenomenon or pandemics such as COVID-19.
- ii. Universities should come up with a plan to increase the number of ICT facilities, experts and training programmes for effective implementation of VL.
- iii. TCU and universities to review and harmonize their program policy, so as to allow other approved programs to accommodate VL as mode of delivery

References

- Adams, D., Sumintono, B., and Mohamed A. (2018). E-learning readiness among students of diverse backgrounds in a leading Malaysian higher education institution. *Malaysian Journal of Learning and Institution*. 15(2), 227-256.
- Agbenyegah, T. A. (2019). Investigating the challenge of e-learning in a developing institution of higher learning: A hypothetical approach. *Journal of Applied Business Research*. 35(3), 11-21.
- Aheto-Domi, D., Issah, S., and Dorleku, E. A. (2020). Virtual learning and readiness of tutors of colleges of education in Ghana. *American Journal of Educational Research*. 8(8), 653-658.
- Ahmady, S., Shahbazi, S., and Heidari, M. (2020). Transition to virtual learning during the COVID-19 crisis in Iran: Opportunity or challenge. *Disaster Medicine and Public Health Preparedness Journal*. 14(3), 11-12.
- Ahmady, S., Shahbazi, S., and Heidari, M. (2020). Transition to virtual learning during the COVID-19 crisis in Iran: Opportunity or challenge. *Disaster Medicine and Public Health Preparedness Journal*. 14(3), 11-12.
- Akudolu, L. I, Ugochukwu, S. E., and Olibie, E. I. (2017). Preparing university student in Nigeria for global citizenship through virtual learning. *International Journal of Curriculum and Instruction*. 9 (1), 47-62.
- Al-Nofaie, H. (2020). Saudi university student's perceptions towards virtual education during covid-19 pandemic: A case study of language learning via black board. *Arab World English Journal*. 11(3), 4-20.
- Alshammari, S. H. & Rosli, M. S. (2020). A review of technology acceptance models and theories. *Innovative Teaching and Learning Journal*. 4(2), 12-22.
- Anatory, J. (2015). The establishment of school of virtual learning at university of Dodoma in Tanzania: Personal experience and reflections. *International Journal of Computer Applications*. 155(16), 1-10.
- Bariham, I., Ondigi, S. R., and Kiio, M. (2021). Preparedness of Ghanaian senior high school instructors for application of online learning in social studies instruction amid the covid- 19 pandemic. *Social Education Research Journal*.

- Bhalalusesa, R., Lukwaro, E. E., and Clemence, M. (2015). Challenges of using e-learning management systems faced by academic staff in distance based institutions from developing countries: A case study of the open university of Tanzania. *Open University Journal*. 4(2), 89-110.
- Elfirdoussi, S., Lachgar, M., Kabaili, H., Rachdi, A., Goujdami, D., and El-Firdoussi, L. (2020). Assessing Distance learning in higher education during the COVID-19 pandemic. *Education Research International Journal*. 1-13.
- Creswell, J.W & Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (5th edition)*. Los Angeles: SAGE, 2018. Print.
- Farazkish, M., and Montazer, G. A. (2019). E-learning readiness among faculty members of Iranian universities: A survey of 23 universities. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*. 10 (4), 54-64.
- Gunes, S., and Alagozlu, N. (2021). Asynchronous distance learning and blended learning in term of learners' autonomy, motivation and academic success. *Turkish Online Journal of Educational Technology (TOJET)*. 20(3), 54-65.
- Gyampoh, A. O., Ayitey, H. K., Fosu-Ayarkwah, C., Ntow, S. A., Akossah, J., Gavor, M., and Vlachopoulos, D. (2020). Tutor perception on personal and institutional preparedness for online teaching-learning during the COVID-19 crisis: The case of Ghanaian colleges of education. *African Educational Research Journal*. 8(3), 511-518.
- Huang, X.S., and Hsio, E.L. (2012). Synchronous and asynchronous communication in online environment: Faculty experience and perception. *Quarterly Review of Distance Education*. 13(1), 15-30.
- Hubackova, S. (2015). History and perspectives of e-learning. *Journal of Procedia-Social and Behavioral Sciences*. 2015(191), 1187-1190.
- Innocent, W. A., and Masue, O.S. (2020). Application of e-learning in higher institution in Tanzania. *International Journal of Education and Development*. 16(2), 242-249.
- Jebreen, I. (2017). E-learning system-challenges and barriers: A case study. *International Journal of Computing Academic Research (IJCAR)*. 6(2), 59-56.
- Johnson, A.M., Jacovina, M.E., Russell, D.E., and Soto, C.M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crosseley and D.S. McNamara (Eds). *Adaptive educational technologies for literacy instruction* (pp. 13-29). New York: Taylor & Francis.
- Kalayou, M. H. (2020). The applicability of modified technological acceptance model (TAM) on the sustainable adoption of e-health system in resource limited setting. *Journal of Information Systems and Technology Management*. 13(1), 1827-1837.
- Kisanga, D., and Ireson, G. (2015). Barriers and strategies on adoption of e-learning in Tanzanian higher learning institutions: Lessons for adopters. *International Journal of Education and Development Using Information and Technology*. 11(2), 126-137.
- Lai, P.C. (2017). The literature review of technology adoption models and theory for the novelty technologies. *Journal of Information Systems and Technology Management*. 14(1), 21-38.
- Lashayo, D. M., and Johar, I. (2018). Instructors Adoption of e-learning systems in Tanzania's universities: A proposed multi- factors adoption model. *International Journal on Informatics Visualization*. 2(2), 76-80.
- Martin, F., & Parker, M. A. (2014). Use of synchronous virtual classrooms: Why, who, and how. *MERLOT Journal of Online Learning and Teaching*. 10(2), 332-349.
- Mponela, E. A., & Mkulu, A. E. (2021). Post-covid 19 preparedness of higher learning institutions on the use of e-learning technology in Mbeya city Tanzania. *African Research Journal of Education*. 8(3), 48-60.
- Muchemwa, S. (2021). University lecturers and students' preparedness for online teaching and learning in Zimbabwe. *East African Journal of Education and Social Sciences*. 2(4), 22-30.
- Mutsya, D. W., and Makokha, G. (2016). Challenges affecting adoption of e-learning in public universities in Kenya. *International Review of Research and Distributed Learning*. 16(2), 75-85.

- Mwakyusa, W. P and Ng'webeya, M. L. (2022). The response of Tanzania higher learning institutions to e-learning during COVID-19 pandemic. *East Africa Journal of Education and Social Science*. 3(1), 19-28.
- O'Doherty, D., Dromey, M., Lougheed, J., Hannigan, A., Last, J., & McGrath, D. (2018). Barrier and solution to online learning in medical education: An integrative review. *BMC Medical Education* .18(1), 130-140.
- Palvia, S., Aeron, P., Gupta, P., Mahaptra, D., Parida, R., Rosner, R., & Sindhi, S. (2018). Online education: Worldwide, status, challenges, trends and implication. *Journal of Global Information Technology Management*. 4(21), 233-241.
- Parveen, A. (2016). Synchronous and asynchronous e-language learning: A case study of virtual university of Pakistan. *Open Praxis Journal*. 8(1), 21-39.
- Pete, J., and Soko, J. J. (2020). Preparedness for online learning in the context of covid-19 in selected sub-Saharan African countries. *African Journal of Development and Education*. 15(2), 100-110.
- Reisdorf, B. C, Triwibowo, W., Kelevinch, Y. A. (2020). How lack of technology affects students' achievement. *American Behavior Scientist Journal*. 4(1), 1-23.
- Ruddy, D. P., & Ruddy, D. P. (2014). The value of video in online instruction. *Journal of Institutional Pedagogy*. 13(2), 1-7.
- Sharadgah, A.T., and Sa'di, A.R. (2020). Preparedness of institutions of higher education for assessment in virtual learning environments during the covid-19 lockdown: Evidence of bona fide challenges and pragmatic solutions. *Journal of Information Technology Education Research*. 19(2), 755-756.
- Simonson, M., and Seepersaud, D. (2018). *Distance education: Definition and terms*. (4th ed). Charlotte, NC: Information Age Publishing (IAP) House.
- TCU. (2022). *Guidelines for online and blended delivery modes of courses for university institution in Tanzania*: Dar es salaam: Tanzania commission for universities.
- Vitales, V. A., Aquino, K. J. M., De Leon. E. F., Lacap, P. P., Maranan, S. S., and Duldualo, J. J. (2021). Preparedness and challenges of the new normal: Perspective of Filipino students in virtual learning. *Technium Social Science Journal*.23(1), 199-211.
- Wallis, L. (2020, August 11). Growth in distance learning outpaces total enrollment growth. Retrieved from <https://www.qualityinfo.org>.



Assessment on the Readiness for Virtual Learning Adoption in Education System in Tanzania: A Study of Universities in Arusha Region

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Abstract: The study assessed the readiness for virtual learning adoption in universities in Arusha region, Tanzania. The objectives were to: assess the readiness for virtual learning and find out intervening measures to the challenges facing virtual learning adoption in universities in Arusha region. The study was guided by Technological Acceptance Model (TAM). Convergent mixed methods design was adopted. Data was collected through observation, questionnaire and interview guide. The sample size consisted of 114 respondents; 21 lecturers, 90 master students selected by simple and stratified random sampling technique. Purposive sampling technique was used to select 3 ICT technicians and lecturers from top management level. Validity was established through expert judgment, while reliability was ascertained using test-retest technique and reliability index, $QL r=0.914$ and $QS r=0.912$ was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained by involving multiple analysis, while dependability was established through detail reporting of the research process. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in table of frequencies, percentages and charts. Qualitative data were analyzed thematically alongside research questions. The study findings reveal that the readiness for VL in three universities is relatively low. Also universities should train staff and student in ICT, improve VL facilities, and provide enough funds. The study recommends that TCU and universities should review and harmonize their policy programme, so as to allow other approved programme to accommodate VL as mode of delivery.

Keywords: Assessment, Readiness, Adoption, Virtual Learning and Education System

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1. Introduction

Education system in Tanzania is evolving: thanks to numerous measures put in place by the government. However, it is facing a critical challenge to meet new demands for the 21st century. The challenges facing education include emerging global pandemic such as Corona Virus Disease (COVID-19), international conflicts (Russia-Ukraine strife), inadequate Information and Communication Technology (ICT) infrastructure,

change in environment, insecurity and poverty (Al-Rawashdeh et al., 2021). Tanzania needs an educational environment that would make it more responsive to challenges such as COVID-19 pandemic and international conflicts confronting the country at large. The use of traditional teaching and learning methods alone particularly those that are purely residential) fails to provide sufficient solution to challenges facing society today. Therefore, alternative ways of providing access to higher education via online need to be fully explored

(Wallis, 2020). In this direction, Higher Learning Institutions in Tanzania are becoming increasingly aware of the need for education programmes that make use of the Internet and other appropriate technologies to deliver their courses (Bhalalusesa et al., 2015). This calls for adoption of Virtual Learning (VL) in education system in Tanzania to mitigate the effects of global pandemic.

VL is the learning which occurs in absence of traditional face to face classroom environment (Schlosser & Seepersaud, 2018). It is facilitated through the use of internet and electronic devices (Al-Nofaie, 2020). VL can be asynchronous, synchronous, or hybrid (Gunes & Alagozlu, 2021). Synchronous is the type of VL where by teaching and learning take place at the same time also known as real time delivery (Martin & Parker, 2014; Schlosser & Seepersaud, 2018). Synchronous VL allows real time interaction between teacher and learner, by using platforms such as audio streaming, video streaming, text, chart, interactive white board, application sharing and instant polling (Ruddy & Ruddy, 2014). Web conferencing or videoconferencing is the common platform used in Synchronous virtual learning (Martin & Parker, 2014).

Asynchronous is the type of VL where by teaching and learning take place at different time (Schlosser & Seepersaud, 2018). It is not time bound and students can study at their own time (Perveen, 2016). It involves delivering of learning materials through different forms of Learning Management System (LMS) such as MOODLE (Al-Nofaie, 2020). It does not allow real time interaction between instructor and learner and it can be facilitated through media such as discussion board, e-mails, wikis, blogs, and video or audio recording (Huang & Hsio, 2012).

Worldwide VL trend started at 1990s where development of personal computer was on the rise (Palvia et al., 2018). VL has grown worldwide due to advancement of ICT, global acquisition of internet and better affordability of computer (Habackova, 2015). For instance, the number of students taking at least one online course in Oregon public universities in America has increased from 21.3% in 2008-2009 to 48.3% in 2018-2019. Also, the number of students who are taking fully online courses had increased from 6.2 percent in 2008-2009 to 14% in 2018-2019 and the number of students taking fully face to face or traditional classroom have declining from 72.5% to 37.5% in 2018-2019 year of study (Wallis, 2020). Virtual education is believed to become leading stream by 2025 (Palvia et al., 2018).

Despite the advantage of VL in education, the applicability of virtual learning in Tanzania is still low as the study conducted by Innocent & Masue (2020), reveal that there is limited applicability of e-learning in Tanzania universities. The current condition of corona virus pandemic has forced many universities in the world to close physical classes. This creates the need for

universities to find alternative way to provide their education without physical meetings. From the foregoing, it is important to conduct a study to interrogate the readiness for adoption of VL in education system in Tanzania. In this regard, the current study sought to assess the readiness for VL in Universities in Arusha region.

1.1 Research Questions

The research questions were;

- i. Are universities in Arusha region ready to adopt VL?
- ii. What are the intervening measures to the challenges facing VL adoption in universities in Arusha region.

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was anchored on Technological Acceptance Model.

2.1 Technological Acceptance Model

Technology acceptance model (TAM) was proposed by Fred Davis in 1989, the model was formulated based on the theory of reasoned action; the model explains how individuals accept and use technology. The theory suggests that the intention of people to accept and use technology is determined by two factors namely; perceived ease to use and perceived usefulness (Lai, 2017). Perceived ease to use “is a degree to which an individual believes that using a certain technology will be effortless and easy to use” and perceived usefulness “is the degree to which an individual believes that using a certain technology would increase his or her job performance” (Alshammari & Rosil, 2020).

The model suggests that the use of information technology depend on behavior intention, and behavior intention depend on personal attitude towards the use of the system and also his or her perception of its usefulness or utility (Kalayou, 2020). User’s attitude and belief are important features which influence the use of new technology.

2.1.1 Application of the Theory to the Current Study

The theory was relevant to the current study because it was used to assess students and lecturers behavioral intention to adopt VL. Technology acceptance model postulates that when users are subjected with new technology, different factors influence their decision on how and when to use it (Lai, 2017). People with positive perception on the use of technology have higher acceptance for VL than those with negative attitude. The attitude of a person is not the only factor that influences his or her use of a system but is also

based on the effect of its performance (Alshammari & Rosil, 2020).

2.2 Readiness for Virtual Learning in Universities

The study conducted by Adams, Sumintono and Mohamed (2018), found that students were ready for blended learning, also there were different levels of readiness based on gender, age, ethnicity, field of study, and level of education. A study by Sharadgah and Sa'di (2020), found that higher learning institutions were not well prepared to provide online assessment, nor vivid mechanism for online assessment. Academic staff do not believe that online assessment could assess all intended learning outcome, also they believe that there is high risk of cheating due to lack of quality system to prevent it (Sharadgah & Sa'di, 2020).

Majority of lecturers were not prepared enough in terms of having the basic skills and fundamentals for implementing electronic learning programs (Farazkish & Montazer, 2019). Students do not have appropriate gadgets and internet connectivity (Vitals et al., 2021). Lecturers show high readiness in the area of having technological tools such as Smartphone, computer and ability to use internet for academic purposes (Farazkish & Montazer, 2019). Virtual education in higher learning institution was conducted through mobile messenger systems and learning management systems such as VESTA (Visualization for Electronic Structural Analysis), MOODLE (Ahmady, Shahbazi, & Heidari, 2020).

Akudolu et al., (2017) found that students have skills for posting comments, questions and answers on online discussion boards. Similarly, they are capable of using online readings and links to the text-based materials, open and reading materials in HTML or PDF formats; logging in to learning platforms, blogs and using internet charts. A study by Elfirdoussi et al., (2020), found that students and professor view online learning as not interested as ordinary learning, and professor need to provide at least 50% of their teaching in face-to-face mode. In addition, technical support and training in the use of tools used for VL were provided to enhance and promote distance education.

Gyampoh et al., (2020), found that colleges lack polices on online teaching. Tutors have not acquired any formal training on how to do the blended learning and using virtual learning platforms in their lesson deliveries (Aheto-Domi et al., 2020).

2.3 Intervening Measures to the Challenges Facing Virtual Learning Adoption in Universities

O' Doherty et al. (2018), found that provision of incentives and rewards for the time involved in development of online content will solve the problem of time constrain on lecturers. Involving instructors in the decision-making process when adopting new technology and offer training on technological knowledge, pedagogical knowledge and content knowledge will solve the problem of skill deficit among the instructors (Jonson et al., 2016).

Jabreen (2017), found that the main problem facing electronic learning was lack of awareness and not accepting the transition from tradition learning to e-learning. The solution is to conduct seminars and conferences to talk about the importance of e-learning and its benefits, and hold meetings between old and new students of different majors and exchange of knowledge amongst them (Lashayo & Johar, 2018). Agbenyagah (2019) suggest that increasing investment in both internet connectivity and ICT infrastructure is needed to solve the problem of poor internet connectivity and poor infrastructure.

Muchemwa (2021), reveal that to solve the problem of local browsers that are available within the campus only, universities should create universal portal that can be assessed anywhere. Kisanga and Ireson (2015), found that usage of renewable energy will solve the problem of electric power supply; partnership with private sector and organization which provide financial aid and increasing of financial support from government will solve the problem of financial constrain. Lecturers should use online platform that allow live interaction with students rather than platform which only allow provision of notes (Muchemwa 2021). Managers and authorities to design courses which will allow fully online delivery, this will solve the problem of university's lack course program which allows fully online delivery (Ahmady et al., 2020).

3. Methodology

The study used convergent mixed methods design, suitable design to collect both qualitative and quantitative data (Creswell & Creswell 2018). Questionnaire, interview guide and observation were used for data collection. The sample size consisted of 114 respondents; 21 lecturers, 90 master students selected by simple and stratified random sampling technique. Purposive sampling technique was used to select 3 ICT technicians and lecturers from top management level. Validity was established through research expert judgment, while reliability was ascertained using test-retest technique and reliability index, QL $r=0.914$ and QS $r=0.912$ was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained by involving multiple

analysis, while dependability was established through detail reporting of the research process. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in table of frequencies, percentages and charts. Qualitative data were analyzed thematically alongside research questions.

4. Results and Discussions

The findings were discussed with regard to research objectives. Table 1 shows the results of the first objective from master students.

Table 1: The Findings from Master Students on the Readiness for Virtual Learning

| Aspect of Virtual Learning in Universities | Students(n=90) |
|--|-----------------------|
| | f(%) |
| Availability personal computer | 70(78) |
| University has reliable electric power supply | 86(96) |
| University has computer laboratory | 85(95) |
| Preference for online classroom than face-to-face classroom | 25(28) |
| Technical support from university technician to Student | 61(68) |
| University has reliable internet connectivity | 82(91) |
| University has accessible online library | 63(70) |
| Student get computer and information technology training | 59(65) |
| University offers online assessment and examination | 19(21) |
| University provides free wireless internet services | 83(92) |
| University offers virtual learning courses and program | 30(33) |
| University has online system for provision of student result | 84(93) |
| University has enough technology experts | 46(51) |
| University has online admission system | 83(92) |

n= number of respondents, f= frequency, %=percentage, values presented are the number and percentage of students who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

On the sub item, availability of personal computer, which sought to know if student had personal computer, 70(78%) of the students agreed that they have personal computer, 20(22%) of the students opposed the statement. This means that 20(22%) of students don't own computer. The results above show that most of the master students owned computer. This indicates that master students were prepared for VL because they possess personal electronic device to facilitate VL. The finding is in agreement with that of Reisdorf et al., (2020) on how lack of technology affects students' achievement, the study found that most of the university students from different background and ethnicity owned computer.

On sub-item, university has reliable electric power supply, 86(96%) of the students agreed that universities have reliable electric power supply. The finding shows that majority of respondents were in agreement with the statement that means, universities had reliable electric power supply. The findings are in contrary with that of Muchemwa (2021), in Zimbabwe who reported that

universities had unreliable electric power supply. The availability of reliable electricity in universities is important because VL is facilitated by electronic devices which are operated using electricity.

In addition, 85(95%) of the students agreed with the statement that university has computer laboratory while 5(5%) were in disagreement with the statement. This result shows that universities were having computer laboratories. The presence of computer laboratory is one of the indicators that universities are in preparation to adopt VL. The findings coincided with that of Innocent and Masue (2020) which found that all studied universities were having computer laboratory. Computer laboratory helps those students who do not own their own computers to access it at universities. Further, computer laboratory is used to provide ICT training to students.

Moreover, 25(28%) of the students agreed with the statement that they prefer online classroom to face-to face classroom. In this regard, 65(72%) of the students

disagreed. The results show that majority of the students opposed the statement, this means that majority of students do not prefer online learning, most of the student prefer face-to-face classroom. The findings are in agreement with Al-Nofaie (2020), the study argue that VL is not always attractive for students, and students prefer face- to- face classroom than online classroom.

On the item, student get technical support from university ICT technician. The results were 61(68%) of the students agreed with the statement, and 29(32%) opposed the statement. This means that majority of the students were given technical support from university technician and few of them did not get technical support from university technician. The findings tell us that many students are facing technical problems which need assistance from ICT technicians to be solved, but not all students are successful in getting the assistance they need. Therefore, there is a need for universities to come up with the strategies that will enable all students who need technical assistance to get it on time.

Also, 82(91%) of the students agreed with the statement, university has reliable internet connectivity, and only 8(9%) of the students held contrary opinion. The result show that most of the students were in agreement with the statement. This indicates that universities have reliable internet connectivity. It is imperative to note that VL is facilitated by the use of internet. This means that the availability of reliable internet connectivity will enable universities to adopt VL and improve the quality of VL programmes.

Concerning university has accessible online library, 63(70%) agreed with the statement, and 27(30%) were not in agreement with the statement. The results show that majority of students agreed that universities have accessible online library. The researcher established that online library help students to access books, e-books, journal, students research and published papers without necessarily attending to physical library. Consequently, online library is one of the requirements for virtual learning.

On whether student get computer and information technology training, 59(65%) of students agreed that students in their university were given computer and information technology training. while 31(35%) were not in agreement with the statement. This result shows that majority of students were getting information and computer training. The presence of 31(35%) students who disagreed with the statement, tell us that the training was not provided to every student, instead the training was provided depending on the type of program students were taking. The finding is in agreement with the finding by Elfirdoussi et al., (2020) who found that technical support

and training in the use of virtual learning tools was provided to students.

In addition, 19(21%) of the students agreed that university offers online assessment and examination, 71(79%) of the students were not in agreement with the statement. The result shows that most of the students were not in agreement with the statement provided; this means that, universities do not offer online assessment and examination. The result concurs with the study done by Sharadgah and Sad'i (2020) titled; preparedness of higher learning institutions for assessment in VL environment during COVID-19. The study reveals that higher learning institutions were not well prepared to provide online assessment, and there was no vivid mechanism for online assessment.

Moreover, 83(92%) agreed that university provide free wireless internet services, while 7(8%) disagreed. The findings show that majority of the students agreed that, their universities provide free wireless internet service. This means that universities do provide free wireless internet services. The findings are in agreement with that of Pete and Soko (2020) which pointed out that most of the universities provide free internet services to both lecturers and students. The provision of free internet service to students, enables students to navigate freely online; students learn, download notes and other materials, and communicates freely.

Furthermore, 30(33%) of the students agreed that university offers VL courses and programs, while 60(67%) of the students were not in agreement with the statement. The result reveals that many students were not in agreement with the statement. This implies that, universities assessed in this study do not offer online courses. A report by TCU (2022) supported the study findings by pointing out that virtual or blended mode are the new mode of delivery for most of universities in Tanzania.

On the other hand, 46(51%) of the students agreed that universities have enough technology experts, while 44(49%) of the students were not in agreement with the statement. The results show that the number of students who agreed and those who opposed the statement were almost equal. This means that universities were not in good supply of technology experts that is why there is no clear distinction between the views from the respondents. Correspondingly, Anatory (2015), suggested that there is a need for universities to employ staff with appropriate skills in virtual education field, like e-pedagogy experts, content developer and learning management system experts. Table2 shows the results of readiness from lecturers.

Table 2: Findings from Lecturers on the Readiness for Virtual Learning

| Aspects for Virtual Learning in Universities | Lecturers (n=21),f (%) |
|---|------------------------|
| Availability of personal computer | 20(95) |
| Preference for online teaching than face-to-face teaching | 7(33) |
| Pedagogical skills for online teaching | 8(38) |
| University has virtual learning policy | 7(33) |
| Lecturers have technical skills for online teaching | 10(48) |
| University has e-learning management system | 11(52) |
| Lecturers get technological support from university | 16(76) |

n= number of respondents, f=Frequency, %=Percentage, values presented are number and percentage of students who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

The findings shows that 20(95%) of lecturers agreed that they had personal computers while only 1(5%) of the lecturers had reservations. The findings show that majority of the lecturers agreed with the statement. This indicate that majority of lecturers were having personal computers. On the item, preference for online teaching than face to face teaching 7(33%) of the lecturers agreed with the statement, while 14(67%) of the lecturers were not in agreement with the statement. This mean that majority of lecturers in the study area (universities) do not prefer online teaching. The findings of the study are in agreement with the findings in the study conducted by Elfidoussi et al. (2020), which found that the respondents' (professor) view online learning as not interesting as face-to-face learning.

In addition, 8(38%) of lecturers agreed with the statement, pedagogical skills for online learning, and 13(62%) disagreed. The results show that most of lecturers opposed the statement, this indicate that most of the lecturers do not have pedagogical skills for online teaching. This finding is in agreement with the findings in the study conducted by Aheto- Domi et al. (2020). The study found that most lecturers have not acquired any formal training on how to do the blended learning and using VL platforms in their lesson delivery.

On the statement university has VL policy, 7(33%) of the lecturers agreed with the statement, while 14(67%) disagreed. The results show that majority of the lecturers opposed the statement, this indicate that the studied universities do not have VL policy. The study conducted by Mwakyusa and Ng'webeya (2022), suggested that government should put more emphasis on development of VL policies, which will increase accountability, participation and commitment in higher learning institutions. Furthermore, 10(48%) of lecturers agreed that they have technical skills for online teaching, while

11(52.9%) of lecturers disagreed. The results show that the number of lecturers who agreed is close to the number of lecturers who disagreed. This indicates that almost half of the lecturers have technical skills for online teaching. The findings are in agreement with the findings by Bariham et al., (2021), which pointed out that instructors had content knowledge but they lack technical skills to conduct online course.

Likewise, 11(52%) of the lecturers agreed with the statement that, university has e-learning management system, while 10(48%) of the lecturers were not in agreement with the statement. The results show that slightly more than half of the respondents, agreed with the statement. These imply that some universities in studied area do have e-learning management system, and others do not have e-learning management system. According to TCU (2022), a university should have e-learning management system and also should have mechanism to evaluate content in learning management system, so as to be able to deliver online and blended courses.

Lastly, on whether lecturers get technological support from university ICT technician, 16(76%) of lecturers agreed with the statement. While 5(24%) of the lecturers opposed the statement. These results show that majority of the lecturers agreed with the statement. These imply that lecturers were getting technological support from university ICT technician.

During the interviews, while responding to the theme reliable internet connectivity, the respondents indicated that all universities where the study was conducted were connected to internet service. One of the respondents reported that:

University is connected to internet service, and it provides free wireless internet services to students and

lecturers (Personal interview, 29th April, 2022).

The qualitative findings during the interviews are in agreement with the quantitative findings in this study. The quantitative findings show that the universities have been connected to internet services. Also, students and lecturers were given free internet services. The respondents further explained that they normally provided with the password for WIFI particularly once the ICT technician has opened your account in the system.

Moreover, a response on the theme, online services available in the university, a respondent who is ICT technician reported that:

Online services available are; admission system, online library, online system for provision of students' results and all these are found on our web site (Personal interview, 25th April, 2022).

The findings show that universities provide different online services such as admission services, online library, students' examination results, and all these services are found in universities web site. The findings are also in agreement with the quantitative findings in this study. Similarly, the results are in agreement with the findings in the studies done by Innocent and Masue (2020); Mwakyusa and Ng'webeya (2022).

4.2 The Findings on the Intervening Measures to the Challenges Facing Virtual Learning Adoption

Table 3 summarizes the findings on the Intervening Measures to the Challenges Facing Virtual Learning Adoption in universities in Arusha region.

Table 3: Findings on Intervening Measures to the Challenges Facing Virtual Learning Adoption

| Intervening measures to the challenges facing virtual learning adoption | Students (n=90) f (%) | Lecturer(n =21) f (%) | Total (n=111) f(%) |
|--|----------------------------------|----------------------------------|-------------------------------|
| Training staff & students in ICT | 84(93) | 21 (100) | 105(95) |
| Provision of adequate computer in computer laboratory | 77(86) | 20 (95) | 97(87) |
| Improvement of VL facilities | 77(86) | 19 (91) | 96(86) |
| Update VL policies | 78(87) | 19 (91) | 97(87) |
| Provision of adequate funds to institutions | 77(86) | 17 (81) | 94(85) |
| Creating VL awareness to students and lecturers | 77(86) | 20 (95) | 97(87) |
| Reliable and sufficient internet connectivity | 80(89) | 17 (81) | 97(87) |
| High internet speed | 80(89) | 18(86) | 98(88) |
| Provision of technological support to students and lecturers | 79(88) | 18(86) | 97(87) |
| Alternative electric power supply | 80(89) | 21(100) | 101(91) |
| Affordable internet cost | 77(86) | 17 (81) | 94(85) |
| Affordable price of electronic devices | 73(81) | 17 (81) | 90(81) |

n=number of respondents, f=Frequency, %=Percentage, values presented are number and percentage of students and lecturers who agree with statement. Hence, those with contrary opinion to the statement are implied. **Source: Field Data (2022)**

On the item, training staff and students in ICT, 84(93%) of the students agreed with the statement, while only 6(7%) disagreed. On the other hand, all 21(100%) lecturers agreed with the statement. The results show that majority of respondents agreed with the statement. This means that in order to overcome the challenge of limited knowledge in ICT students and staff should get ICT training. The findings are in agreement with the finding by Jabreen (2017) which suggested that institution should provide ICT training to both students and lecturers.

On provision of adequate computer in computer laboratory, 77(86%) of students agreed with the statement. Additionally, 20(95%) of the lecturers supported the statement. The results show that most of the respondents agreed with the statement. This implies that, in order to solve the problem of limited number of computers in computer laboratory, university should provide adequate

computers in computer laboratory. The finding is in agreement with the study by Mutsya and Makokha (2016), which suggested that universities should increase the number of computers in computer laboratory.

The findings on improvement of VL facilities were 77(86%) of the students agreed with the statement. In addition, 19(91%) of the lecturers were in agreement with the statement. The results showed that majority of the respondents agreed with the statement. This means that the university should improve and adequately supply VL facilities as an intervening measure to be taken in order to solve the challenge of inadequate and poor VL facilities.

The findings on updating VL policy, were 78(87%) of the students supported the statement, while 12(13%) opposed the statement. Similarly, 19(91%) of the lecturers agreed with the statement, while only 2(9%) disagreed with the statement. The findings show that majority of the

respondents agreed that, there is a need to update VL policies both at TCU, and in Education system so, as to accommodate VL. Mponela and Mkulu (2021) recommended that government should prepare VL policy that will facilitate the adoption of VL in higher learning institutions.

On provision of adequate funds to institutions, the findings were, 77(86%) of the students agreed with the statement, while 13(14%) disagreed. Moreover, 17(81%) of the students agreed with the statement, while 4(19%) of the students disagreed. The findings show that majority of respondents agreed with the statement, this means that majority of students agreed that university should be given enough funds by government and other stakeholder in order to solve the problem of inadequate funds.

Findings on the item, creating VL awareness to students and lecturers where 77(86%) of the students agreed with the statement, while 13(14%) disagreed. Also, 20(95%) of the lecturers agreed with the statement, while 1(5%) disagreed. The results show that majority of the respondents agreed that there is a need to create VL awareness to students and lecturers. The findings are in agreement with Jabreen (2017), who suggested that universities should conduct seminars and conferences on the importance and benefits of VL, and allow new students to get VL experience from the former one.

On reliable internet connectivity, the findings were, 80(89%) of the students agreed with the statement, while 10(19%) disagreed. In addition, 17(81%) of the lecturers agreed with the statement while 4(19%) disagreed. The results show that most of the respondents agreed with the statement. That means university need sufficient and reliable internet connectivity. This will even enhance online research and meetings. The finding is in agreement with Agyenyegah (2019), who suggested that universities should increase investment in internet connectivity. Pete and Soko (2020), recommended that learners and lecturers should be given internet bundles, so that they can have access to internet everywhere and not limited to campus Wi-Fi.

Findings on high internet speed were, 80(89%) of students agreed with the statement, while 10(11%) disagreed. On other hand, 18(86%) of lecturers agreed with the statement, while 10(11%) disagreed. This implies that the problem of low speed of internet must be tackled by providing internet with high speed. According to Pete and Soko (2020), low internet speed strongly affect video based platforms such as Zoom which need strong internet connection, therefore it is important for internet service provider to find a way of strengthening internet signals.

Findings on the provision of technological support to students and lecturers were, 79(88%), of the students agreed with the statement, while 11(12%) were not in agreement with the statement. Also, 18(86%) of the

lecturers agreed with the statement, while 3(14%) disagreed with the statement. The results show that most of the respondents agreed with the statement, this means that majority of the respondent agreed that provision of technological support to students and lectures is a panacea to the lack of technological support to students and lecturers.

Findings on sub item alternative power supply was supported by 80(89%) of the students while 10(11%) disagreed. Moreover, 21(100%) of lecturers gave their affirmative approval to the statement. The findings show that majority of the respondents agreed with the statement, this mean that respondents agreed that there is a need of alternative power supply source such as automatic electric generator in order to cope with the problem of frequent power outage. On the item affordable internet cost, the total number of respondents who agreed with the statement was 94(85%). This will help universities to run VL with minimum cost.

Lastly, on affordable price of electronic device, 73(81%) of the students agreed with the statement and 17(19%) of the students disagreed. Moreover, 17(81%) of the lecturers agreed with the statement, and 4(19%) disagreed. The results show that majority of the respondents agreed with the statement. This means that majority of the respondent agreed that there is a challenge of high price of electronic devices, and to address this challenge there should be affordable price of electronic devices. Government and stakeholder should look on the possibilities of outsourcing affordable electronic devices to students and the universities.

On interview about the intervening measures to the challenges facing VL adoption, a respondent who is ICT technician reported that:

University should provide ICT training to lecturers and students in order to cope with new technology, increase number of ICT experts. Provide modern and compatible device for VL. Lastly, university management should be ready to embrace new technological advancement. (Personal interview, 22nd April, 2022)

The respondent observed that university should provide ICT training to both students and lecturers; this will help them to be competent and familiar with VL facilities. Also, the respondent suggested that universities should increase the number of ICT experts, this will reduce the workload ICT technician have. Similarly, by doing so, students and lecturers will get quality and sufficient support from the technician.

Moreover, universities should provide modern and compatible devices. Respondents observed that the devices used were outdated and other devices were not compatible with some modern technology. Furthermore, the respondents suggested that university management

should be ready and willing to accept changes, it seems that sometimes management are conservative, and afraid to accept changes such as new ways of delivering courses and new technology. This fear is caused by either lack of proper knowledge concerning the technology or fear of expenses needed to adopt and run that technology.

5. Conclusion and Recommendations

5.1 Conclusion

Based on the findings of the study, the following conclusion was drawn; the first objective of the study assessed the readiness for VLin universities by considering some aspect of VL, such as availability of computer laboratory, electricity, internet connectivity, accessible online library. The findings show that lecturers do not have technical and pedagogical skills for teaching online, universities have shortage of technology experts, no university offers online assessment and examination, and no university in the study area provide VL programmes and both students and lecturers do not prefer online learning. The researcher concluded that, the readiness for virtual learning adoption in the universities was at its infant stage. This implies that universities were not ready for VL.

On other objective, which was to find out intervening measures to the challenges facing VL adoption, the researcher found that the government, stakeholders and responsible bodies should provide adequate funds to institutions, and institution should allocate enough budget which will enable universities to purchase, increase and maintain VL facilities and this will address the problem of poor and inadequate VL facilities facing most universities.

5.2 Recommendation

Based on the study findings the following recommendations were made;

- i. It is the right time for university management to adopt technology advancement and put higher learning institutions at an advantageous point to continue with teaching and learning despite emergence of phenomenon or pandemics such as COVID-19.
- ii. Universities should come up with a plan to increase the number of ICT facilities, experts and training programmes for effective implementation of VL.
- iii. TCU and universities to review and harmonize their program policy, so as to allow other approved programs to accommodate VL as mode of delivery

References

- Adams, D., Sumintono, B., and Mohamed A. (2018). E-learning readiness among students of diverse backgrounds in a leading Malaysian higher education institution. *Malaysian Journal of Learning and Institution*. 15(2), 227-256.
- Agbenyegah, T. A. (2019). Investigating the challenge of e-learning in a developing institution of higher learning: A hypothetical approach. *Journal of Applied Business Research*. 35(3), 11-21.
- Aheto-Domi, D., Issah, S., and Dorleku, E. A. (2020). Virtual learning and readiness of tutors of colleges of education in Ghana. *American Journal of Educational Research*. 8(8), 653-658.
- Ahmady, S., Shahbazi, S., and Heidari, M. (2020). Transition to virtual learning during the COVID-19 crisis in Iran: Opportunity or challenge. *Disaster Medicine and Public Health Preparedness Journal*. 14(3), 11-12.
- Ahmady, S., Shahbazi, S., and Heidari, M. (2020). Transition to virtual learning during the COVID-19 crisis in Iran: Opportunity or challenge. *Disaster Medicine and Public Health Preparedness Journal*. 14(3), 11-12.
- Akudolu, L. I, Ugochukwu, S. E., and Olibie, E. I. (2017). Preparing university student in Nigeria for global citizenship through virtual learning. *International Journal of Curriculum and Instruction*. 9 (1), 47-62.
- Al-Nofaie, H. (2020). Saudi university student's perceptions towards virtual education during covid-19 pandemic: A case study of language learning via black board. *Arab World English Journal*. 11(3), 4-20.
- Alshammari, S. H. & Rosli, M. S. (2020). A review of technology acceptance models and theories. *Innovative Teaching and Learning Journal*. 4(2), 12-22.
- Anatory, J. (2015). The establishment of school of virtual learning at university of Dodoma in Tanzania: Personal experience and reflections. *International Journal of Computer Applications*. 155(16), 1-10.
- Bariham, I., Ondigi, S. R., and Kiio, M. (2021). Preparedness of Ghanaian senior high school instructors for application of online learning in social studies instruction amid the covid- 19 pandemic. *Social Education Research Journal*.

3(2), 52-64.

- Bhalalusesa, R., Lukwaro, E. E., and Clemence, M. (2015). Challenges of using e-learning management systems faced by academic staff in distance based institutions from developing countries: A case study of the open university of Tanzania. *Open University Journal*. 4(2), 89-110.
- Elfirdoussi, S., Lachgar, M., Kabaili, H., Rachdi, A., Goujdami, D., and El-Firdoussi, L. (2020). Assessing Distance learning in higher education during the COVID-19 pandemic. *Education Research International Journal*. 1-13.
- Creswell, J.W & Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (5th edition)*. Los Angeles: SAGE, 2018. Print.
- Farazkish, M., and Montazer, G. A. (2019). E-learning readiness among faculty members of Iranian universities: A survey of 23 universities. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*. 10 (4), 54-64.
- Gunes, S., and Alagozlu, N. (2021). Asynchronous distance learning and blended learning in term of learners' autonomy, motivation and academic success. *Turkish Online Journal of Educational Technology (TOJET)*. 20(3), 54-65.
- Gyampoh, A. O., Ayitey, H. K., Fosu-Ayarkwah, C., Ntow, S. A., Akossah, J., Gavor, M., and Vlachopoulos, D. (2020). Tutor perception on personal and institutional preparedness for online teaching-learning during the COVID-19 crisis: The case of Ghanaian colleges of education. *African Educational Research Journal*. 8(3), 511-518.
- Huang, X.S., and Hsio, E.L. (2012). Synchronous and asynchronous communication in online environment: Faculty experience and perception. *Quarterly Review of Distance Education*. 13(1), 15-30.
- Hubackova, S. (2015). History and perspectives of e-learning. *Journal of Procedia-Social and Behavioral Sciences*. 2015(191), 1187-1190.
- Innocent, W. A., and Masue, O.S. (2020). Application of e-learning in higher institution in Tanzania. *International Journal of Education and Development*. 16(2), 242-249.
- Jebreen, I. (2017). E-learning system-challenges and barriers: A case study. *International Journal of Computing Academic Research (IJCAR)*. 6(2), 59-56.
- Johnson, A.M., Jacovina, M.E., Russell, D.E., and Soto, C.M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crosseley and D.S. McNamara (Eds). *Adaptive educational technologies for literacy instruction* (pp. 13-29). New York: Taylor & Francis.
- Kalayou, M. H. (2020). The applicability of modified technological acceptance model (TAM) on the sustainable adoption of e-health system in resource limited setting. *Journal of Information Systems and Technology Management*. 13(1), 1827-1837.
- Kisanga, D., and Ireson, G. (2015). Barriers and strategies on adoption of e-learning in Tanzanian higher learning institutions: Lessons for adopters. *International Journal of Education and Development Using Information and Technology*. 11(2), 126-137.
- Lai, P.C. (2017). The literature review of technology adoption models and theory for the novelty technologies. *Journal of Information Systems and Technology Management*. 14(1), 21-38.
- Lashayo, D. M., and Johar, I. (2018). Instructors Adoption of e-learning systems in Tanzania's universities: A proposed multi- factors adoption model. *International Journal on Informatics Visualization*. 2(2), 76-80.
- Martin, F., & Parker, M. A. (2014). Use of synchronous virtual classrooms: Why, who, and how. *MERLOT Journal of Online Learning and Teaching*. 10(2), 332-349.
- Mponela, E. A., & Mkulu, A. E. (2021). Post-covid 19 preparedness of higher learning institutions on the use of e-learning technology in Mbeya city Tanzania. *African Research Journal of Education*. 8(3), 48-60.
- Muchemwa, S. (2021). University lecturers and students' preparedness for online teaching and learning in Zimbabwe. *East African Journal of Education and Social Sciences*. 2(4), 22-30.
- Mutsya, D. W., and Makokha, G. (2016). Challenges affecting adoption of e-learning in public universities in Kenya. *International Review of Research and Distributed Learning*. 16(2), 75-85.

- Mwakyusa, W. P and Ng'webeya, M. L. (2022). The response of Tanzania higher learning institutions to e-learning during COVID-19 pandemic. *East Africa Journal of Education and Social Science*. 3(1), 19-28.
- O'Doherty, D., Dromey, M., Lougheed, J., Hannigan, A., Last, J., & McGrath, D. (2018). Barrier and solution to online learning in medical education: An integrative review. *BMC Medical Education* .18(1), 130-140.
- Palvia, S., Aeron, P., Gupta, P., Mahaptra, D., Parida, R., Rosner, R., & Sindhi, S. (2018). Online education: Worldwide, status, challenges, trends and implication. *Journal of Global Information Technology Management*. 4(21), 233-241.
- Parveen, A. (2016). Synchronous and asynchronous e-language learning: A case study of virtual university of Pakistan. *Open Praxis Journal*. 8(1), 21-39.
- Pete, J., and Soko, J. J. (2020). Preparedness for online learning in the context of covid-19 in selected sub-Saharan African countries. *African Journal of Development and Education*. 15(2), 100-110.
- Reisdorf, B. C, Triwibowo, W., Kelevinch, Y. A. (2020). How lack of technology affects students' achievement. *American Behavior Scientist Journal*. 4(1), 1-23.
- Ruddy, D. P., & Ruddy, D. P. (2014). The value of video in online instruction. *Journal of Institutional Pedagogy*. 13(2), 1-7.
- Sharadgah, A.T., and Sa'di, A.R. (2020). Preparedness of institutions of higher education for assessment in virtual learning environments during the covid-19 lockdown: Evidence of bona fide challenges and pragmatic solutions. *Journal of Information Technology Education Research*. 19(2), 755-756.
- Simonson, M., and Seepersaud, D. (2018). *Distance education: Definition and terms*. (4th ed). Charlotte, NC: Information Age Publishing (IAP) House.
- TCU. (2022). *Guidelines for online and blended delivery modes of courses for university institution in Tanzania*: Dar es salaam: Tanzania commission for universities.
- Vitales, V. A., Aquino, K. J. M., De Leon. E. F., Lacap, P. P., Maranan, S. S., and Duldualo, J. J. (2021). Preparedness and challenges of the new normal: Perspective of Filipino students in virtual learning. *Technium Social Science Journal*.23(1), 199-211.
- Wallis, L. (2020, August 11). Growth in distance learning outpaces total enrollment growth. Retrieved from <https://www.qualityinfo.org>.



Teachers' Deployment from Secondary to Primary Schools and Its Influence on Their Job Performance in Hanang' District, Tanzania

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Abstract: This study investigated teachers' deployment from secondary to primary schools and its influence on their performance in Hanang' District. The objectives were to; identify the factors for teachers' deployment from secondary to primary schools and determine the influence of teachers' deployment from secondary to primary schools on their performance in Hanang' District. Social Exchange Theory guided the study. Descriptive survey design and mixed methods approach was employed. Questionnaire was used to collect quantitative data while interview guide was used for qualitative data. The study targeted 135 primary schools in 25 wards in Hanang' district, 135 head teachers, 1003 teachers, 25 ward education officers and 1 DEO, which makes a total of 1164 respondents. The sample size consisted of 92 respondents (84 teachers, 6 School Heads, 1 DEO and 1 WEO). Validity was established through expert in the judgment whereas reliability was determined using test-retest technique and reliability index, $r = 0.91$ was obtained using Cronbach Alpha Method. Quantitative data was analyzed using descriptive statistics in the SPSS version 22 and results were presented in tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions. The study revealed inadequate teaching staff in primary schools as the major factor for teacher deployment. Moreover, there is a general feeling of despair from deployed secondary school teachers due to demotion perception hence poor performance. The study recommends that the government education policies should be clearly revised so that it captures teacher deployment plan, recruitment and retention.

Key words: Deployment, Teachers, Performance, School and Hanang' District

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1. Introduction

According to UNESCO (2021) teacher deployment refers to the posting of a teacher to the respective school to carry out the duties and responsibilities of teaching and learning. Improving deployment practices can have important implications for teacher retention. In a study by Nguon

(2018), in many countries, governments have encountered barriers to effective deployment of teachers to rural areas. As a result, positions in rural primary schools remain unfilled for the whole or a considerable part of the year. Factors contributing to deployment challenges vary and include issues pertaining to urban-rural, along with other geographic and demographic dynamics (Luschei &

Chudgar, 2015). Carefully planned and track deployments can foster the equitable distribution of teachers according to schools' needs with clear transparent rules and political motivation is fundamental to make informed decisions that benefit the process of teacher's deployment from secondary to primary schools (UNESCO, 2018).

In the right context, UNESCO (2019) reported that these challenges include extreme geographic remoteness, stakeholder influence, local-level versus macro-level interest, responsiveness to regional deployment practices intricately linked to the dominant issues of decentralization, lack of management and support given at the local administrative level. Luschei & Chudgar(2015) recommended that teacher's deployment should engage with the realities and specific needs of schools to recruit and retain teachers who have the necessary skills and commitment to work and are able to motivate learners, their parents and the wider community.

World Bank (2018) conducted a study of teacher's deployment from October 2016 to August 2018 in Poland. The study highlights that selecting and supporting teachers throughout their careers to allow them to focus on the classroom is one of five core factors that are driving learning. Education systems perform best when they have teachers who are respected, prepared, and selected, and who advance in their careers (UNESCO, 2018). The sound policies with respect to teachers as the key to promoting learning, emphasizing the need to raise the selectivity of those who become teachers, provide support to new teachers, and devise ways to keep experienced teachers in the classroom, which in turn is a necessary condition for improving the quality of teaching and learning (World Bank, 2018).

Malisa (2015) conducted a study on Teachers' Retention Strategies in Secondary Schools in Hanang' District Council in Tanzania. The study revealed that, new teachers were neither provided with orientation nor induction course. Therefore, this might be considered as a factor for teachers' turnover due to lack of orientation/induction which would have led to awareness to job description. The report by President's Office - Regional Administration and Local Government (PO-RALG) (2018) revealed a significant shortage of 85,000 (43.6%) primary school teachers in Tanzania. To solve this problem, the government decided to deploy about 7,463 (8.78%) teachers from secondary to primary schools in districts including Hanang' district to address the severe shortage of teachers in primary schools.

Teacher deployment in Hanang' district was conducted using central management system and involuntary whereby about 12% (896) teachers were deployed from secondary to primary schools. However, there was a need to make sure that the deployed teachers are given orientation so as to minimize teacher's turnover and therefore maximize output but the difference between

primary and secondary schools was seen in terms of teaching methodologies and techniques. The primary level need close attentions, learners are taught through songs, drawings which is contrary to secondary schools (Hanang' District Education Office, 2022).

1.1 Research Questions

The study answered the following research questions:

- i. What are the factors for teachers' deployment from secondary to primary schools in Hanang' District?
- ii. What is the Influence of teachers' deployment from secondary to primary schools on their job performance in Hanang' District?

2. Literature Review

Theoretical and empirical literature was reviewed with reference to research objectives. The study was guided by Social Exchange Theory.

2.1 Social Exchange Theory

Social exchange theory is a psychological and sociological perspective theory that explains social change and stability as a process of negotiated exchanges between parties (Baruch & Holtom, 2008). Social exchange theory posits that human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. Social exchange theory involves a series of interactions that are interdependent, contingent on the actions of the other partner in the social relationship (Walton, 2013).

The theory implores on the need to treat employees with respect and dignity in order to pay back with high performance and loyalty. An exchange starts with one party giving a benefit to another and consequently a series of beneficial exchanges occurs and feelings of mutual obligation between the parties are created (Coyle-Shapiro and Shore 2007). Employees' obligation and feeling is a prescriptive belief regarding whether one should care about the organization's well-being and should help the organization to reach its goals. Whereas employees value beneficial treatment, employers seek loyalty and dedication (Wagner, 2010). Positive actions directed at employees by the organization are argued to contribute to the establishment of high-quality exchange relationships and high employee performance (Eder & Eisenberger, 2008).

The theory believes that if employees are not treated well then their work attendance and subsequent performance would be negatively affected. For instance, unfair deployment of teachers would certainly affect their delivery at work place (Wagner, 2010).

2.1.1 Application of the Theory

This theory is applicable in employees' job performance where by employees pay back loyalty to what they perceive as supportive treatment from their employers and the organization. Therefore, teacher's deployment to new environments should influence better job performance if the exercise would meet teacher's basic interests (Eder and Eisenberger, 2008).

2.2 The Factors for Teachers' Deployment from Secondary to Primary Schools

According to Carroll, et al., (2015), there is a relationship between employees' transfer and school characteristics which come from the largest analysis of school level transfer. It is founded that highest transfer and employee turnover occurs in schools. The same multi state analysis of 7000 schools found rates higher at low performing schools than in other schools (USA, 2017). Using cross-sectional design, the study revealed that employee's transfer has taken another face contrary to expectation. Many employees are transferred from United Kingdom to work abroad in places like Qatar, Hong Kong, Dubai and Switzerland. Record number of teachers, for example, is quitting the UK to work abroad raising fears of an exodus that would leave British schools understaffed and poor in performance (Guin, 2014). Deployments can foster the equitable distribution of teachers according to schools' needs. Having up to date information on the school's requirements and characteristics, with clear, transparent rules, and free from political motivation is also fundamental to making informed decisions that benefit the system (Jordan, 2014).

A comparative study conducted by Sinyolo (2017) for teachers' issues in African Countries like Gambia, Kenya, Lesotho, Tanzania, Uganda and Zambia reported an average rate of teachers' attrition in the six countries to be 4%, as typical teachers are over the age of 20 when recruited, demand retirement at ages between 55 and 60. Therefore, retirement alone would be expected to account for losses of almost 3% teachers annually (UNESCO, 2018). Retiring teachers are highly experienced and typically are replaced with much less experienced teachers or with new teachers. There is evidence of the strong relationship between experience and effectiveness in the classroom (Wiswasset al., 2019).

Lusingu (2018) conducted a study on the factors for unequal distribution of primary school teachers in Ruangwa District council. To capture the objectives of this study random and purposive sampling techniques were employed in the selection of a sample of 160 respondents out of a total of a population of 479. The findings suggested that a combination of lack of motivation and incentives; attrition; poor recruitment and deployment

policy; lack of opportunity to career development; access to social service such as health care; and teachers' mobility are the factors responsible for inequitable distribution of teachers in Ruangwa District council. (URT, 2017) concurs that during the Primary Education Development Programme (PEDP), efforts were made to ensure an equitable and gender-balanced distribution of trained teachers by recruiting more teachers into schools, and reducing regional inequalities in Teacher-Pupil Ratio.

According to URT (2018) on the report of Education Sector Development Plan (2016/17 – 2020/21), enrolment at the primary level has shown an increase of 14.8% from 8,116,488 pupils in 2015 to 9,317,791 pupils in 2017. A total of 8,969,110 pupils were recorded in Government schools and 348,681 in Non-Government schools. Enrolment of girls is slightly higher than that of boys. The report indicated that, the pupil-classroom ratio has risen from 66:1 in 2010 to 77:1 in 2017 (Best & Kahn, 2017). In many African countries, teachers prefer to teach in urban areas than rural areas, as a result, rural schools may be left with empty posts. This implies that schools in the rural districts had always been subjected to constant problems of teacher distribution (Mulkeen, 2015).

2.3 The Influence of Teachers' Deployment from Secondary to Primary Schools on their Job Performance

Deployment process should take teacher's preferences into account in less desirable locations, and these areas are often where teacher shortages occurs. In this way deployment policies have a particular effect on equity issues, as the less desirable locations with disadvantaged students often end up with the least qualified teachers who are new to the profession or with the fewest teachers (World Bank, 2016). Measures need to be in place to ensure the equitable distribution of qualified teachers among all schools which requires strong leadership and management to provide sufficient support to teachers in rural schools, including equitable access to professional development opportunities, and efficient salary payments (Ingersoll, 2017).

Howgego & Myers (2014) analyze deployment policies to ensure full coverage of schools, in some cases, long distances prevent itinerant teachers from visiting all schools they have been assigned to support itinerant specialists to work full-time by balancing mainstream teaching responsibilities with the high demands of serious difficulties to deployed teachers. Barnes, et al., (2017) conducted a pilot study on the Cost of Teacher Turnover in Five School Districts in American Schools. The study revealed that, the transfer of employees however; may have broader school systematic influence that reach beyond leaving staffs, replacement staffs and their

students. Where transfer is considered to have a disruptive school system, all members of school community are vulnerable, including staffs and their students. Teacher transfer can result in job dissatisfaction or the pursuit of another job, dissatisfaction with the support received from administrators, political propaganda, religion propaganda and shortage of transport allowance which may lead to low performance of the school (Armstrong, 2016).

In East Asia and Pacific the 2018 World Bank Report states that decentralization of decision-making to districts in Indonesia is expected to lead to improvements in teacher recruitment and deployment, which in turn is a necessary condition for improving the quality of teaching and learning. This report aims to provide concrete policy options for improving identification of the demand for teachers as well as for the allocation, recruitment, and distribution of teachers in Indonesia (World Bank, 2018). Job performance would be very low and deployment was not conducted based on both staff public interest. Therefore, the government should carry out an analysis to fill areas of scarcity and to ensure that there is a balance in teacher's deployment, this would create fair distribution of deployed teachers in both urban and rural areas (Ogboro & Adeyemi, 2017).

Hussein(2016) on the Effects of Employees Transfer on Secondary Schools Performance in Zanzibar indicated that, if a school is said to have a high employee's transfer relative to its competitors, it means that the employees of that school have a shorter average than those other schools in the same education setting. The employee's transfer may be harmful to school productivity if skilled teachers are often leaving and population contains a high percentage of novice workers. Teachers' Perspectives on Transfer of Teachers from Secondary to Primary schools in Tanzania showed that the transfer led to disruption to

some teachers like leaving their homes and families. However, transferred teachers were demoralized, whereby their teaching morale and commitment declined. Therefore, the study concludes that teachers' satisfaction is an important factor for the development of teaching professionals (Baruani2020).

3. Methodology

Descriptive survey design and mixed methods approach was employed. The survey research design enabled triangulation of the findings through the use of multiple methods (Shuttleworth, 2018). Key components of mixed methods approach, as with any other mixed methods approach, have to do with priority and sequence (Creswell & Creswell 2018). Questionnaire was used to collect quantitative data while qualitative data was collected using structured interview guide. The target population for this study were 135 primary schools in 25 wards in Hanang' district with 135 head teachers, 1003 teachers, 25 WEO and one DEO which makes a total of 1164 respondents. The sample size consisted 92 respondents (84 Teachers, 6 Heads teachers, 1 DEO and 1 WEO). Validity was established through research expert judgment whereas reliability was determined using test-retest technique in a pilot study and reliability index, $r = 0.91$ was obtained using Cronbach Alpha. The results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions. The calculation of sample size was based on Yamane (1967), Formula which states:
$$n = \frac{N}{1+N(e)^2}$$

Where: n=required sample size, N=total population and e= margin error (0.1 or 10%)

Therefore:

$$n = \frac{1164}{1 + 1164(0.1)^2}$$

$$n = \frac{1164}{1 + 1164 (0.01)}$$

$$n = \frac{1164}{1 + 11.64}$$

$$n = \frac{1164}{12.64}$$

$$n = 92.08 \approx 92$$

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Findings on the Factors for Teacher's Deployment from Secondary to Primary Schools in Hanang' District

The factors for teacher's deployment from secondary to primary schools in Hanang' district were identified in the first objective. Table 1 presents the summary of the respondent's responses and the results of quantitative findings using questionnaires.

Table 1: Quantitative Findings on the Factors for Teacher's Deployment from Secondary to Primary Schools

| Factors for Teacher's Deployment from Secondary to Primary Schools | Teachers n=84 f (%) |
|---|------------------------------------|
| Shortage of Teachers in Primary Schools | 71(85) |
| High enrolment in primary schools | 79(94) |
| Teacher-pupil ratio factor | 65(77) |
| Overstaffing of teachers in secondary schools | 57(68) |
| Improving quality education in primary schools | 77(92) |
| Aims at improving academic performance in primary schools | 80(95) |
| Improving knowledge sharing among teachers | 71(85) |
| Ensuring effective teaching and learning in basic education | 81(96) |
| Decreasing teachers' workload as new teachers have deployed | 73(87) |
| Natural attrition (death) factors | 77(92) |
| Retirement factor | 79(94) |
| Lack of funds from the government to employ new teachers | 75(89) |
| Political interference in education system | 68(81) |

f = frequency, % = percentages, values in brackets are percentage of teachers who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

According to table 1, over three quarters 71(85%) of teachers revealed that there is shortage of teachers in primary schools in Hanang' district, which is a factor for teacher's deployment. The results revealed that primary schools faced shortage of teachers which in turn compelled the government to deploy teachers from secondary to primary schools. These findings concur with the report by President's Office -Regional Administration and Local Government (PO-RALG) (2018) that revealed a significant shortage of 85,000 (43.6%) primary school teachers in Tanzania. To solve this problem, the government decided to deploy about 7,463 (8.78%) teachers from secondary to primary schools to address the severe shortage of teachers in primary schools. These findings are in agreement with United Republic of Tanzania (2020) in survey report of 2017 in some schools in Kagera, Simiyu and Katavi regions where Parent Teacher Ratio (PTR) of up to 1:500 was noted. These variations and inequities in teacher distribution within schools call for the government's combined efforts to address teacher allocation and reallocation by developing a Teacher Deployment Strategy.

From the results in table 1 on the factors for teacher deployment, 94% teachers revealed that there is high enrolment in primary schools in Hanang' district, therefore the government decided to deploy teachers from secondary to primary schools. This study finding conceded that there was high enrolment among primary schools due to fee -free basic education policy introduced by the government in the year 2016. Therefore, the government decided to apply teacher deployment from secondary to primary schools to meet the demand of primary school students. This finding is similar with the evidence from Chambulila (2013) that shows 1:51 national Pupil-Teacher Ratio (PTR) for primary education in 2018, while the overall government schools PTR is 1:54. This is outside the stipulated standard of 1:40. The finding implied that the introduction of free basic education resulted in high enrolment in primary schools which did not meet the demands of primary school pupils.

Moreover, results in table 1 indicates 77% of teachers revealed that, teacher-pupil ration is among the factors for teacher's deployment. These findings revealed that, the pupils' ratio exceeded the number of teachers. Therefore, the strategy taken by the government is to deploy teachers

from secondary to primary schools. These findings concur with a study conducted by Mrutu (2014) who revealed that there was unfair distribution of teachers in both urban and rural areas. It showed that in the urban areas, teacher-student ratio was equal to 1:27 which was better than the national ratio of 1:40, while in the rural areas, the teacher-student ratio is above 1:50.

The results in table 1 show that 68% of teachers indicated that, overstaffing of teachers in secondary schools is among the factors for teacher's deployment. The majority of teachers supported this statement that there are many teachers in secondary schools, especially in arts subjects. In particular, teachers prefer urban schools than rural schools because of availability of social services such as good road network, easy transport system, health services, availability of clean water, electricity, accommodation and banking services (Daily National Report 2018&Mang'oha, 2018). Therefore, this implies that there is overstaffing of teachers in secondary schools, and the government, through the Ministry of Education and Vocational Training decided to deploy the excess teachers from secondary to primary schools.

The results in table 1 revealed that, among the factors for teacher's deployment is improving the quality of education in primary schools. The majority of teachers revealed that, most of deployed teachers from secondary to primary schools possessed bachelor degree in education therefore their level of education would have to increase the quality education in primary schools. These findings are supported by the report of World Bank (2018). The report states that sound policies, with respect to teachers is a key to promoting learning, emphasizing the need to raise the selectivity of those who become teachers, provide support to new teachers, and devise ways to keep experienced teachers in the classroom, particularly in basic education.

Also, the results in table 1 revealed that 95% of teachers identified improving academic performance in primary schools as among the factors for teacher's deployment. The majority of teachers revealed that, academic performance is associated with effective teaching and learning which influence the quality and adequate teachers in schools; therefore, the strategy taken to improve academic performance in primary schools is to deploy teachers. These findings are in agreement with Education Sector Performance Report (2017/2018).The data shows that the percentage of schools with high performance was on a decreasing trend from 12.6% in 2015 to 11.0% in 2017. This trend might have been attributed to limited teaching and learning resources like adequate teachers, textbooks and basic school infrastructure.

In addition, the results in table 1 show that, among the factors leading to teacher deployment is improving knowledge sharing as 85% of teachers were in agreement. The majority of teachers observed that, teacher

deployment aims at improving knowledge sharing between deployed teachers from secondary schools and the none-deployed teachers in primary schools. The findings are in agreement with MoEVT (2018) that deployment of teacher from secondary to primary schools is a government plan to reduce shortage of teachers in primary schools, since each teacher has skills, ideas and knowledge they could share in teaching and learning.

Teacher deployment was also meant to ensure effective teaching and learning particularly in free fee basic education as supported by 96% of the respondents. Majority of teachers revealed that, quality education, especially in basic education needs adequate teachers to facilitate effective teaching and learning among children. This implies that, for ensuring quality, education which is associated with effective teaching and learning, the government decided to apply teacher deployment strategy from secondary to primary schools. The findings are supported by Ogboro & Nwadiani (2017) who observe that adequate deployment of teachers is very significant in achieving the educational objectives in education system. Deployment ensures that teachers required in each subject are deployed to schools to meet the approved standard of one teacher to 40 students in a class.

The results also show that 87% teachers indicate that decreasing teachers' workload in primary schools is among the factors for teacher deployment. The majority of teachers agreed that, primary schools are characterized by high number of pupils where there are inadequate teachers. Therefore, teachers' deployment from secondary to primary schools was seen as the solution for decreasing workload in primary schools. These findings concur with, the report by President's Office -Regional Administration and Local Government (2018) that revealed a significant shortage of 85,000 (43.6%) primary school teachers in Tanzania which results to teacher workload in primary schools. To solve this problem, the government decided to deploy about 7,463 (8.78%) teachers.

Furthermore, the results show that, natural attrition or deaths is among the factors for teacher deployment as it was approved by 92% of teachers. The majority of respondents indicated that, due to deaths among teachers in primary schools, the schools experienced shortage of teachers, therefore teacher deployment from secondary to primary schools could be a measure to curb the problem. These results concurred with Sinyolo (2017) on teachers' issues in African Countries like Gambia, Kenya, Lesotho, Tanzania, Uganda and Zambia reported an average rate of teachers' attrition to be 4% per annual rate.

Teacher's retirement in primary schools is another factor for teacher's deployment as 94% of teachers consented to the statement. The respondents indicated that, teacher retirement left a gap in teaching subjects. The findings are in agreement with (UNESCO, 2018) that, teachers are recruited at the age of 20 and they prefer to retire at the

age of 55 and 60 years. Retirement would be expected to account for loss of teaching force of almost 3% annually. Retiring teachers are highly experienced and typically are replaced with much less experienced teachers or with newly deployed teachers. Therefore, teacher retirements could reduce student achievement and hence low performance to learners (Wiswall et al., 2019).

The results in table 1 show that, among the factors for teacher's deployment is lack of funds from the government to employ new teachers as 89% of respondents agreed to the statement. The majority of respondents who were teachers revealed that in the past five years new employment among teachers was a challenge and the government decided to deploy teachers from secondary to primary schools to address the shortage. The findings concur with this revelation that, the government decided to deploy about 7,463 excess teachers for Arts Subjects in public secondary schools and many of them were sharing topics in teaching subject (Daily National Report, 2018; Mang'oha, 2018).

Political interference in educational system has been shown as a factor for teacher deployment as 81% of teachers indicated. The majority of teachers revealed that, there is no democracy and transparency in teacher's deployment such that, teacher deployment from secondary to primary schools was done involuntarily. The findings are in agreement with UNESCO report of (2018) which revealed that, deployment should be planned and track deployments can foster the equitable distribution of teachers according to schools' needs.

With regard to the theme Factors for Teachers' Deployment (FTD) from secondary to primary schools, during the interviews, the study discovered that there was overstaffing in secondary schools and the government policy of balancing teacher-pupil ratio and to reduce shortage of teachers in primary schools as a factor for deployment was taken into consideration. The DEO summarized that:

Hanang' district is faced with the challenge of inadequate teaching staff in primary schools, especially in rural areas while in secondary schools there are adequate teaching staff whereby

some teachers share the same subject, hence they had to be deployed to cover the deficit in primary schools and to implement the government policy of balancing teacher-pupil ratio of 1:40 (Personal Interview, 25th April, 2022).

The WEO comment on the case was captured as follows: Most of primary schools in Hanang' district face shortage of teachers, where the ratio is above 50 pupils per teacher (1:50), while in secondary schools, especially in arts subjects, teachers were sharing topics in teaching, therefore they were deployed from secondary to primary schools in order to solve this problem (Personal Interview, 26th April, 2022).

The findings are in agreement with the survey report of 2017, through the report made a significant verification of public servants particularly teachers in both secondary and primary schools. In this verification, the government found that there are about 7,463 excess teachers for Arts subjects in public secondary schools and many of them were sharing topics in teaching (Daily National Report 2018 & Mang'oha, 2018). These findings also concur with a study conducted by Mrutu (2014) who revealed that there was an unfair distribution of teachers in both urban and rural areas. It showed that in urban areas, teacher-student ratio was equal to 1:27 while in the rural areas, the teacher-student ratio is above 1:50.

4.2 Findings on the Influence of Teachers Deployment from Secondary to Primary Schools on their Job Performance in Hanang' District

The objective examined the influence of teacher's deployment from secondary to primary schools on their job performance in Hanang' District. Table 2 presents the summary of the respondents' responses and the results of quantitative findings using questionnaires.

Table 2: Quantitative Findings on the Influence of Teachers Deployment from Secondary to Primary Schools on their Job Performance

| Influence of Teachers Deployment from Secondary to Primary Schools on their Job Performance | Teachers |
|--|-----------------|
| | n=84 |
| | f (%) |
| Diminished hope for advancement hence low job outputs | 65(77) |
| Loss of loyalty and enthusiasm among deployed teachers | 71(85) |
| Necessary for broader job experience | 68(81) |
| Influence in the changes of classroom management | 79(94) |
| Provides teachers with changes in their departments | 77(92) |
| Influence staff teamwork and cooperation | 69(82) |
| Introduction of new and variety of teaching methods | 76(90) |
| Influence acquisition of new skills and knowledge | 72(86) |
| Influence early coverage of syllabus in teaching and learning | 70(83) |

f = frequency, % = percentages, values in brackets are percentage of teachers who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

The results in table 2 show that, teacher’s deployment influence the diminished of hope for advancement which results in low performance outputs as reported by 77% of teachers. The respondents indicated that, most of teachers deployed have inadequate skills in teaching primary schools hence they lose hope in adopting new teaching methods. The findings are in agreement with the Studies from different countries that indicated involuntary teachers’ transfers can cause stress to teachers leading to possible poor teaching performance (Wijayatunga, 2018). In table 2 the findings show that, 85% of teachers indicated that, teacher’s deployment results in loss of loyalty and enthusiasm among deployed teachers.

Also, the results show that, teacher’s deployment influences the necessity for broader job experience as 81% of teachers agree to the statement. The findings agreed with (Hussein, 2016) that teaching and learning has no end and it needs a broader experience to interact with a variety of learners, environment and other teachers. The results in table 2 show that teacher deployment influences the changes in classroom management as 94% of respondents agreed with the statement. The majority of teachers indicated that deployed teachers from secondary to primary schools have new methods, skills and knowledge in teaching and learning, therefore there could be new changes in managing students, and classroom setting as they apply their knowledge in their new station.

The results show that 90% of teachers indicated that, teacher’s deployment influence the introduction of new

and variety methods of teaching. This implies that the introduction of new and variety teaching methods as well as new teaching and learning materials is influenced by new teachers who introduce teaching methods used in secondary schools if they could be applied in primary schools to test new knowledge to the pupils. The findings are supported by URT (2018) reports that deployment of teachers from secondary to primary schools is a government plan to reduce shortage of teachers in primary schools.

The results in table 2 show that 83% of respondents indicated that teacher’s deployment influence early coverage of syllabus in teaching and learning especially in primary schools. The respondents indicated that in primary schools there is shortage of teachers whereby teachers are facing heavy workload in their teaching subjects. Therefore, this implies that, teacher’s deployment increased work-force in job performance among deployed teachers and non-deployed teachers which results in early coverage of teaching and learning activities. These findings are in agreement with URT (2020) that indicated 1:92 teacher-pupil ratio in primary schools, these variations and inequities in teacher distribution within schools call for the government’s efforts to address teacher allocation and reallocation by developing a Teacher Deployment Strategy.

On the theme the Influence of Deployment on Teachers Performance (IDTP), the findings revealed that, teacher

deployment influenced their performance. In this regard, the WEO explained that:

The deployed teachers felt that they were demoted. They believed that primary school is the lowest level and is only for those who pursued certificate studies and not for university graduates. Therefore, they were overwhelmed by inferiority complex and they did not perform their jobs accordingly but after some time some adjusted and worked with great efforts while others suffered from long term depression (Persona Interview, 26th April, 2022).

Additionally, the Head Teachers (HT) pointed out that:

The deployed teachers had the influence in administrative changes and improvement in school performance. Although some were not inclusive, felt demoralized and less cooperative at the first time but their working ability is great. The deployed teachers from secondary faced the challenge of adapting primary school teaching and learning environment since they claimed to have undergone specialization over their university studies. This is quite different with the system of primary schools where all teachers were trained to teach all subjects with no specialization (Personal Interview, 27th April 2022).

This study finding correlated with the study done by Malisa (2015) on Teachers' Retention Strategies. The study revealed that new teachers were neither provided with orientation nor induction courses, therefore this might be considered as a factor for teachers to feel demoralized due to lack of orientation/induction, which would lead to lack of awareness to job description, especially in their new working station. The current study found that there was lack of commitment in teaching and learning after being deployed from secondary to primary schools.

Majority of HTs commented that:

Although deployed teachers were punctual and they had the passion to work but there is lack of commitment in teaching and learning. This is because, no training and orientation course was conducted to deployed teachers to the adaption to deployment system (Personal Interview, 25th April 2022).

These findings are in agreement with Beng, et al., (2020) that the government shall facilitate proper training of teachers and recognize special teacher's education by pointing out the necessity of training of teachers for effective teaching and learning. The policy sets compulsory in-service training and re-training of practicing teachers to ensure teacher quality and professionalism. After recruitment, there is need for orientation course to teachers for psychological

preparation in their new environment in order to enhance their retention.

Moreover, the readiness to work among deployed teachers from secondary to primary schools was good in some teachers. The respondents said that, the deployed teachers from secondary to primary schools were ready to work though they felt downgraded and humiliated to teach in primary schools as most of them are bachelor degree holders.

Majority of HTs declared that:

Deployed teachers from secondary to primary schools were ready to work having been directly deployed but they felt the sense of downgrading, which lowered their job performance (Personal Interview, 26th April, 2022).

The finding of the study was confirmed by Baruani (2020) on Teachers' Perspectives on Transfer of Teachers from Secondary to Primary schools in Tanzania. The results showed that the transfer led to disruption to some teachers like leaving their homes, families and their teaching morale and commitments declined.

With regard to the lesson preparation, covering of subject content, methods of teaching, evaluation and assessment techniques among deployed teachers from secondary to primary schools, majority of HTs commented that:

Deployed teachers from secondary to primary schools are good in lesson preparation and it is advantageous to them since they have one area of specialization and they are assigned one or two teaching subjects. Therefore, they cover the content matter effectively (Personal Interview, 26th April, 2022).

The finding from the study concurred with Baruani (2020) that, teachers' transfer seems to be a common occurrence in Tanzania, sometimes transfer seems to be a demotion because of the model of preparing teachers at training colleges and universities which does not comprehend educational theories, philosophy, teaching methodologies and educational ethics at another level.

5. Conclusion and Recommendations

5.1 Conclusion

The study concludes that some teachers were dissatisfied with the process of deployment because they perceived it as a contempt to their profession for not being paid their transfer eligibilities since this was not voluntary transfer. Finally, teachers' deployment did not address the intended purpose of inadequate teaching staff in primary schools therefore the government and education stakeholders should employ more teachers as a lasting solution to poor staffing

5.2 Recommendations

Based on the research findings, the following recommendations are given forth;

- i. The government should establish orientation courses to deployed teachers before being deployed to another station. They are supposed to be trained through seminars, workshops and short courses. The orientation would strengthen teachers' commitment, which would have positive influence in their job performance.
- ii. The teacher education curriculum should be modified to adapt all teaching subjects pertaining primary education so that if deployment is done no damage in teaching system in primary schools will be experienced.

References

- Armstrong, M. (2016). *Human Resource Management Practice*. London: KOGAN SAGE Publishers.
- Barnes, et al. (2017). *The Cost of Teacher Turnover in Five School Districts*. National commission on Teaching and Americas School Districts and Schools. USA: Santa Monica Publisher.
- Baruani, T.H. (2020). Teachers' Perspectives on Transfer of Teachers from Secondary to Primary schools in Tanzania: The Case of Selected Transferred Teachers in Kigoma Municipality. *North American Academic Research*, Volume 3, Issue 11; November, 2020; 3(11) 269-275.
- Baruch, Y. and Holtom, B. (2008). *Survey Response Rate Levels and Trends in Organization Research*. *Human Relations*, 61(8), 1139-1160.
- Beng, H.S. et al., (2020). Teacher Recruitment and Retention: A Critical Review of International Evidence of Most Promising Interventions. *Journal of Education Science*, 2020, 10, 262.
- Best, J. and Kahn, J. (2017). *Research in Education (10th edition)*. New Delhi, India: PHI- Learning Private Limited.
- Blatchford et al. (2008). *Deployment and Impact of Support Staff in Schools*. Institute of Education: University of London Publisher.
- Carroll, J. M. et at., (2015). Frameworks for Sharing Teaching Practices. *Educational Technology & Society*, 8 (3), 162-175.
- Chambulila, C. (2013). *Quality Enhancement in Teacher Education: Tanzanian Teacher Educators' Conceptions and Experiences*. Åbo: ÅboAkademi University Press.
- Coyle-Shapiro, J, and Shore, L. (2007). The Employee Organization Relationship: Where do we go from here? *Human Resource Management Review*, 17(2), 1 66-179.
- Creswell, J.W and Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (5th edition)*. Los Angeles: SAGE, 2018. Print.
- Daily National Report, (2018). *Secondary Teachers to Teach at Primary Level*. <https://Dailynews.Co.Tz/Index.Php/Home-News/56965-7-000-Secondary-Teachers-ToTeach-At-Primary-Level>.
- Eder, P. and Eisenberger, R. (2008). Perceived Organizational Support: Reducing the Negative Influence of Co-worker Withdrawal Behaviour. *Journal of Management*, 34(1), 55-68.
- Guin, K. (2004). Chronic Teacher Turnover in Urban Elementary Schools. *Education Policy Analysis Archives*, Retrieved from <http://epaa.asu.edu/epaa/v12n42/>.
- Howgego, C. & Myers, J. (2014). *Inclusive Learning: Children with disabilities and difficulties in learning*. USA, HEART (Health& Education Advice & Resource Team): Oxford Publisher.
- Hussein, H.H. (2016). *Effects of Employees Transfer on Secondary Schools Performance in Zanzibar: A Case Study at South District, Unguja*. Tanzania: The Open University of Tanzania.
- Ingersoll, R. (2017). *Minority Teacher Recruitment, Employment, and Retention: 1987-2013*. Learning Policy Institute.
- Jordan. (2014). Ministry of Planning and International Cooperation. *National resilience Plan2014-2016*. <http://www.jordanembassyus.org/sites/default/files/NRP>.
- Keper, S. (2018). *Influence of school management board to secondary school student performance Migori district in Uganda*. Uganda: Makerere University Press.
- Kihonge, K.J. (2015). *Effects of Procedures for Internal*

- Deployment on Teachers' Motivation in Public Secondary Schools in Murang'a East District, Murang'a County, Kenya.* Kenyatta University: Department of Educational Management.
- Luschei, T.F. and Chudgar, A. (2015). *Evolution of Policies on Teacher Deployment to Disadvantaged Areas. EFA Global Monitoring Report 2015*: Paris: UNESCO.
- Lusingu, J. (2018). Factors for unequal distribution of primary school teachers in Ruangwa District council, Tanzania. *Journal of Education and Practice*, Vol.4, No.26, 2018.
- Malisa, A.S. (2015). *Teachers' Retention Strategies in Secondary Schools in Tanzania: A Case Study of Hanang District Council*. Tanzania: The Open University of Tanzania.
- Mang'oha, L. (2018). *Mtanzania 26th January, 2018. Walimu Walio zidi Sekondari, Kupelekwa Shule za Msingi*. Available at www.Mtanzania.Co.Tz.
- Mithamo, M.J. and Mutindi, M.J.U. (2016). The Effect of Deployment Practices on Employees' Performance; A Case Study of Coast Water Services Board. *International Journal of Science and Research*, Volume 5, Issue 2, February 2016.
- MoEVT. (2018). *Basic Education Statistics in Tanzania*. -es-Salaam: Ministry of Education and Vocational Training.
- Mrutu, E.M. (2014). *Issues to be considered during Distribution of Teachers in Tanzania Secondary Schools: A Case of Temeke*. Tanzania: The Open University of Tanzania.
- Mulkeen, A. (2015). *Teachers for Rural Schools: A Challenge for Africa Ministerial Seminar on Education for Rural People in Africa; Policy, Lessons, Options and Priorities*. Hosted by the Government of Ethiopia. Addis Ababa, Ethiopia: UNESCO.
- Nguon, S. (2018). *Teacher Management and Redeployment: Issues and Practical Ways Forward*. Cambodia: Ministry of Education, Youth and Sport Education Research Council.
- Ogboro, I. and Adeyemi, J.K. (2017). The Levels of Deployment, Utilization and Job Performance of Teachers in the Public Senior Secondary Schools in Edo State. *International Journal of Education, Learning and Development*, Vol. 5, No.2 pp.21- 34, April 2017.
- Ogboro, I. and Nwadiani, M. (2017). Deployment and Utilization of Graduate Teachers and Performance in Nigeria: Public Secondary Schools Experiences in Edo State. *American Journal of Educational Research*, Vol. 5, No. 8, 917-926.
- PORLAG, (2018). *Tanzanian Schools Face Shortage of 80,000 Teachers*. Dodoma: PORLAG.
- Richardson, E. (2018.) *Teachers of Refugees: A review of the Literature*. Education development Trust. I IEP-UNESCO (International Institute for Education Planning)
- Shuttleworth, M. (2018). *Quantitative Research Design*. Retrieved 11.8.2017 from Explorable.com: <https://explorable.com/quantitative-research-design>.
- Sinyolo, D. (2017). Teacher Supply, Recruitment and Retention in Six Anglophone Sub-Saharan African countries. *Education International*, 2017, p. 79.
- UNESCO, (2018). *Teacher Deployment, Teacher Retention*. Paris-France: UNESCO.
- UNESCO, (2019). *Teacher Policy Development Guide. International Task Force on Teachers for Education 2030*. France: UNESCO.
- UNESCO, (2021). *Teachers' Working Conditions in State and Non-State School. UNESCO Global Monitoring Report*. Paris: UNESCO.
- UNESCO, (2022). *Teacher Attrition in Sub-Saharan Africa: Neglected Dimension of the Teacher Supply Challenge; a Review of Literature*. UNESCO: UNECDOD Digital Library.
- URT, (2017). *Joint Review of the Primary Education Plan (PEDP)*. United Republic of Tanzania: MoEVT.
- URT, (2018). *Education Sector Development Plan (2016/17 – 2020/21)*. Tanzania Mainland: Ministry of Education, Science and Technology.
- URT, (2020). *Pre-Primary and Primary Teacher Deployment Strategy 2019 – 2021*. Tanzania: Ministry of Education, Science and Technology.
- USA, (2017). *National Centre for Education Statistics*.

Department of Education. Washington,
DC: SAGE Publications Inc.

- Wagner, J.A. (2010). Participation's Effect on Performance and Satisfaction: A reconsideration of Research Evidence. *Academy of Management Review*, 19: 312- 330.
- Walton, R.E. (2013). *From Control to Commitment in the Workplace.* *Harvard Business Review*, 63: 77-84.
- Wijayatunga, A.R. (2018). *Overstay Teachers Transfer in Public Schools in Sri- Lanka, Impact on Schools Management and Performance.* UK: University of Leicester Publisher.
- Wiswall, et al., (2019). The Dynamics of Teacher Quality. *Journal of Public Economics*, 100: 61-78.
- World Bank, (2018). *Efficient Deployment of Teachers: A Policy Note.* Washington: World Bank.
- World Bank, (2016). *The perception of stakeholders in deployment: Poland: IBMS Suppliers.*
- Yamane, T. (1967). *Statistics, An Introductory Analysis,* (2nd Ed). New York: Harper & Row.



Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi District in Singida Region, Tanzania

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Abstract: The study investigated Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi district, Singida Region. The study objectives were to; assess the effects of COVID-19 outbreak on students' education in secondary schools and determine the intervening measures to the effects of COVID-19 outbreak on students' education in secondary schools in Singida Region. The study adopted descriptive survey design. The sample size of 5 school heads purposively sampled, 45 teachers and 80 students selected by simple and stratified random sampling techniques from private and public secondary schools were involved in the study. Questionnaire, interview guide and observation checklist were used for data collection. Research experts evaluated the instruments to determine content validity. Credibility of qualitative data was ascertained by involving multiple analysis. Dependability was established through detailed reporting of the research process. Reliability (QT at $r = 0.85$ and QS at $r = 0.85$) of the questionnaires were tested in pilot study and found using Cronbach alpha coefficient. Quantitative data was analyzed using descriptive statistics in the SPSS version 22 and results were presented in tables of frequencies and percentages. Qualitative data was analyzed alongside research questions. The study revealed that inadequate syllabus coverage, failure to cover topics in time and increase of studying hours after re-opening the school were the effects of COVID-19 outbreak on students' education in secondary schools. The study recommended academic programmes that can be accessed by students both in urban and rural areas during pandemics.

Keywords: Corona, Disease, Outbreak, Students and Education

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1. Introduction

The outbreak of Corona Virus Disease (COVID) at the end of the year 2019 affected all the sectors worldwide, including the education sector (Nafisah et al., 2021). The first case of COVID-19 was reported on the 9th of December, 2019 in Wuhan, China and continued to spread

around the world causing massive illnesses and deaths (Huangetal, 2020). In January 2020, the World Health Organization (WHO) announced the outbreak of COVID-19 worldwide. Two months later, in March 2020, the disease was declared as a pandemic. COVID-19 threw its immense impact on all areas of life. It affected communication with each other, social life, rituals, and ways of worships and even way of dressing, with wearing

a face mask becoming a must and a necessary piece of attire (WHO, 2020). The field of education was no exception. Schools and universities found themselves compelled to adopt new ways of teaching, as students were unable to come to classes and share the space and place with other colleagues. Almost all educational institutions applied distant or virtual learning, that is, online learning as a substitute to face-to-face learning.

Up to August, 2020 the updated data indicated 21,836,828 COVID-19 cases around the world which included 773,196 deaths and 14,568,432 recovered (WHO, 2020). According to UNESCO (2020), COVID-19 pandemic has affected the provision and delivery of education in almost every country in the world. Moreover, Faustine (2019) points out that COVID-19 has affected both the economic and social sectors, including health and education. In the education sector, more than 90% of learners from elementary to university were affected across the world due to the pandemic. This is due to the closure of learning institutions mandated in different countries to render education services and loss of jobs on the side of parents (Masonbrink & Hurley, 2020; Putra et al., 2020; Tarkar, 2020; Singhal, 2020).

On 16 March, 2020, the Ministry of Health of Tanzania announced the first case of COVID-19 (Cao et al., 2020). The victim happened to be a female traveler aged 46 years who departed the country on 3 March, 2020 to Belgium and had visited Denmark and Sweden between the dates 5 and 13 March 2020. On the 15 March 2020, the lady flew back to Tanzania from Belgium and arrived at the Kilimanjaro International Airport (KIA) at 1600 hours using the Rwandan airplane (WHO, 2020). As of other countries, Tanzania had also prepared for the reception of travelers from abroad in terms of diagnostics and trained health care providers. Visitors were effectively screened for the symptoms of COVID-19 at the airport (Rose, 2020).

On May, 21st2020, the President of Tanzania announced that universities and advanced level would reopen by June 1st 2020, while secondary and primary school did not reopen until 29th June, 2020, after three months of closure due to the outbreak of corona virus. It was until the pronouncement by president that Tanzania reopened primary and secondary schools, being the first country in East Africa to reopen schools (TIE, 2020). Therefore, the state of the emergence of COVID-19 phase two in 2021, February, was pronounced and the necessary precautions were observed. Teaching and learning process proceeded. However, it is important to evaluate the impact of this phenomenon on different aspects of education industry including students' education. In whatever case, the post-COVID-19 assessment remains a hot topic of research by academicians, practitioners and policy makers alike as one of the resilience strategies for recovery of the education sector elsewhere and in Tanzania as well. This has prompted a need to carry out a study in order to ascertain

how the pandemic affected the delivery and acquisition of education among students.

1.1 Research Questions

The study was guided by the following research questions:

- i. What are the effects of COVID-19 outbreak on students' education in secondary schools in Ikungi district in Singida Region?
- ii. What are the intervening measures to the effects of COVID-19 outbreak on students' education in secondary schools in Singida Region?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. This study was grounded on the Social Impact Theory developed by Latene in the late 1990s (Hagger, 2015). The theory described social impact as a phenomenon in which people or organizations affect each other in social situations. According to the theory, the daily running and operations of one organization can affect the operation and running of another organization. Also the change of a social phenomenon can affect the running of an institution or organization. In this study, the eruption of COVID-19 at the end of the year 2019 was seen as a social phenomenon whose effects were evidenced in the provision of social services including education.

The social impact theory upholds that the greater the intensity of the change in one factor or organization, the greater the impact is likely to be observed in the second factor or organization (Lashayo & Johar, 2018). This implies that the greater the change the huge the impact would be on the other factor or organization. Relating the theory to the current study, the outbreak of COVID-19 resulted into the closing of all the learning institutions including secondary schools for at least three months (March, 2020 to July, 2020). During this time no learning was formally conducted in the schools and students had to go back to their home as a mechanism of containing the spread of the virus. As long as the schools were closed, there was likelihood that some students may have been affected. Therefore, the theory helped the researcher to find out the impact of COVID-19 to the provision of education.

2.1 Application of the Theory to the Current Study

This theory supports and promotes social learning as an important factor in forming one's own decisions since observing other people makes up a large part of our daily experiences. The point is that people should not commit to a career path, but act, perform, and learn. Based on the resulting experiences, our paths can be adapted and

changed. For instance, the outbreak of COVID-19 pandemic changed our way of living by observing social distance, hand washing and wearing face mask. Therefore, the theory holds that the world, our work, and individually, are subject to constant change through learning and experience. Our path through work and life should also be able to change flexibly to address this. Therefore, the theory will help the researcher to determine the effects of COVID-19 pandemic on students' education in Ikungi district. The researcher therefore assessed the extent to which the outbreak of the disease affected the delivery of education to the students in community secondary schools in Ikungi district, Tanzania.

2.2 The Effects of COVID-19 Outbreak on Students' Education in Secondary Schools

According to Cabrera (2019), in order to restrain infections, different countries in the world launched emergency policy initiatives based on suspension of classes and the closure of education centers to continue with teaching activities at home through the use of information and communication technologies. A study conducted by Reimers (2020) showed a dismissal or limited learning opportunities among students in Brazil, Japan, USA and Russia, where students compromised learning at the expense of other home related activities during the lockdown period. One particular issue that the COVID-19 pandemic has shown is the need for increased international and global perspectives to analyze the various impacts of pandemics in the short medium and long term. Several higher education organizations and associations, including student associations, and other organizations involved in higher education are conducting surveys with specific focus on a region or on specific issues arising.

The study conducted by Anderson (2020) found that children were infected with and affected by corona virus. In the United States, 93,605 students tested positive for COVID-19, and it was reported that 42% were Hispanic/Latino, 32% were non-Hispanic White, and 17% were non-Hispanic Black, emphasizing a disproportionate effect for children of color. Lodhi (2021) noted that COVID-19 infection itself is not the only issue that affected children's health during the pandemic. School-based health care and school-based meals were lost when virtual learning was adopted and children of lower socio-economic class were more severely affected by these losses. Although some districts were able to deliver school meals, school-based health care is a primary source of health care for many children and left some chronic conditions unchecked during the pandemic.

In a related study by Coe et al. (2020) in Cameroon, the introduction of remote, online and distance learning caused teachers being asked to deliver their lessons

through online platforms. However, the challenge experienced was that not all teachers and students own smart phones or computers, not all are knowledgeable in the use of online platforms. In addition, there is no access to the internet in remote areas, and, in general, broadband costs are very high, so not everyone can afford it.

The government of Tanzania and other stakeholders took steps in equipping schools with computers, supporting initiatives in installing virtual learning platforms, as well as supporting teachers with technological, pedagogical and content knowledge and skills for ICT integration (Mtebe & Raphael, 2017). Despite government's emphasis to higher learning institutions to effectively harness ICT applications in enhancing the learning environment, E-learning systems in general are still at infant stage in developing countries, including Tanzania (Mwakyusa and Mwalyagile 2016). This is due to technological challenges such as electricity connectivity to all secondary schools and unreliable internet services.

A study done by Goodman et al., (2021) indicated that most educational institutions around the world cancelled face to face instruction and moved to remote learning and teaching in March 2020 in an attempt to contain the spread of COVID-19. Parts of the (or the whole) formal education system did not re-open this academic year in some countries, whereas in others (parts of) the formal education system progressively re-opened.

2.3 The Intervening Measures to the Effects of COVID-19 Outbreak on Students' Education in Secondary Schools

Post-COVID-19 era has been marked by recovery and resilience strategies in education sector which has been dominated by Emergency Remote Teaching (or Emergency Remote Learning). This encompasses the idea that courses are offered through distance learning in response to a crisis, rather than having been planned or designed for the purpose of the normal distance education, and it refers to a abrupt transition from classroom-based teaching to distance education and/or virtual classrooms (UNICEF, 2020). Readiness in embracing Virtual Learning Education (VLE) systems through mobile platforms in higher education can be linked to willingness by students on the one hand, lecturers and institutional authorities on the other (Mwandosya et al., 2020).

UNESCO (2020), as part of advancing the Sustainable Development Goal of promoting wellbeing within schools, has developed strategic priorities, which are part of a comprehensive school health approach that encompasses policy and systems, skills-based health education, safe learning environments and links to health services. As examination of the available literature on well-being within African contexts shows, the

understanding of and interventions related to well-being within the school system remain adhoc, uncoordinated, sparse, and largely addressing perceived vulnerable groups, mostly outside of the school system. While many of these reports and studies provide critical starting points for understanding the contextual realities of school-age children within these contexts, efforts at enhancing their wellbeing remain inadvertently limited by the lack of both data and co-ordination of existing interventions.

Burns (2019) on focus on the most vulnerable pointed out that it is known that in many prolonged conflicts or crisis, majority who will be affected are children and young people who will be classified as vulnerable (Government of United Kingdom, 2020). For instance in Uganda, schools were closed for over two years and girls who were out of school were extremely occupied in house hold chores, boys from poor families and the children with disabilities could not access a fairly and equitably education. Therefore, there is need for a dedicated focus on protecting the most vulnerable and increase additional resources to support them (UK, 2020)

According Santally (2019), government and school owners should continue to motivate the teachers by paying them good salaries regarding the important work they under take before, during and after the pandemic. Teacher's motivation is essential factor for supporting them during and after crisis. Schools should continuously provide teachers with remote professional development opportunities to support schools recovery of the academic programmes. The government and the school owners are required to invest heavily on digital infrastructure in order to finance successfully education digital service platform to enable every student to use digital means to acquire education. This way, it reduced inequality and the gap could be reduced.

World Bank (2019), a critical challenge of the response to the rapidly evolving crisis is providing up-to-date and evidence-based information to countries to support them in making the difficult decisions they face in addressing the COVID-19 pandemic.

Education technology can be a powerful tool to implement the expansion and accessibility of digital learning platforms, including radio, TV and Online learning resources (which is here to stay). There is need to use data to identify and help at-risk children, personalize learning, and improved service delivery (World Bank, 2020). UNESCO (2020) suggests the use of a blended learning approach in traditional classroom in order to manage the circumstances caused by the pandemic as a result of COVID-1. In a context in which schools have been closed almost in 185 countries have caused the governments to order the transition to the e-training of the students and teachers on the use of different technological tools, in order to adapt the different elements of the curriculum to the new context of a pandemic. Education sector is facing a change in paradigm in which online training through ICT has ceased to be optional in the teaching methodology but

has become a necessity in this time of pandemic in order to continue with students learning process (Naresh, 2020). The possibilities of technology and innovations will assist in making sure learning continues to be possible for many children who may be out of the school due to various reasons For instance, in Tanzania and other low income countries, TV and radio broadcasting can be cheaper for many children to access than use of mobile phones through WhatsApp, online applications and normal text messages. Distributing of materials like study guides and text books could also be an important remedial measure (Barattucci, 2019). However, digital learning, because of certain practical subjects needs a face to face tuition.

3. Methodology

The study adopted descriptive survey design. The design allowed the researcher to collect data on events of COVID-19 outbreak that had taken place (Creswell, 2012). Therefore, respondents were given time to describe their experience regarding the effects of COVID-19 outbreak on students' education. The target population of the study included 35 heads of schools, 564 teachers, and 12,425 from form four students. The sample size of 5 school heads, 45 teachers and 80students in private and public secondary schools were involved in the study. School heads were selected using purposive sampling technique while for teachers and students the researcher employed simple random and stratified random sampling techniques. Questionnaires, interview guide and observation checklist were used for data collection. The research experts evaluated the instruments to determine content validity. Credibility of qualitative data was ascertained by involving multiple analysis. Dependability was established through detailed reporting of the research process. Reliability of the questionnaires were tested in pilot study and Cronbach alpha coefficient was found to correlate for QT at $r = 0.85$ and QS at $r = 0.85$. Quantitative data was analyzed using descriptive statistics in the SPSS version 22 and results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed alongside research questions.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 The Findings on the Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi District in Singida Region

In identifying the effects of COVID-19 outbreak on students' education in secondary schools in Ikungi district

in Singida Region, 80 respondents were given questionnaires. The findings from respondents were summarized in Table 1.

Table 1: The Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi district in Singida Region (n=80)

| Students' responses | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|--|----------------|-----------|-----------|----------|-------------------|
| Closure of schools | 34(42.5%) | 40(50.0%) | 1(1.25%) | 2(2.5%) | 3(3.75%) |
| Early pregnancies among girls students | 26(32.5%) | 44(55%) | 3(3.75%) | 5(6.25%) | 2(2.5%) |
| Early marriage among girls students | 33(41.2%) | 27(33.7%) | 10(12.5%) | 5(6.25%) | 5(6.25%) |
| Poor academic performance | 36(45%) | 24(30%) | 7(8.75%) | 3(3.75%) | 10(12.5%) |
| Economic constrains | 19(23.7%) | 49(61.2%) | 2(2.5%) | 5(6.25%) | 5(6.5%) |
| Lack of basic needs | 31(38.7%) | 38(47.5%) | 1(1.25%) | 7(8.75%) | 3(3.75%) |

Source: Field data (2022)

Study results indicate that about 42.5% of the respondents strongly agreed that COVID-19 outbreak in the year 2019-2020 negatively affected students' education due to closure of schools whereby majority of students fail to progress with their studies while 50.0% of students agreed COVID-19 outbreak affected students' education, meaning that after the closure of schools according to the order by the government, majority of students were sent back to their homes. This finding is in agreement with the Social Impact Theory developed by Latene (Hagger, 2015). According to the theory, the change of a social phenomenon can affect the running of an institution or organization. In this study, the eruption of COVID-19 at the end of 2019 was seen as a social phenomenon whose effects were evidenced in the provision of social services, including education. However, 1.25% of the respondents were neutral followed by 2.5% of the respondents who disagreed that closure of schools had no negative effect on students' education and finally 3.75% of the respondents strongly disagreed about the point of school closure as result of COVID-19 outbreak.

During the onset of COVID-19 outbreak majority of girl students were victims of early pregnancies. From the findings, 32.5% of the respondents strongly agreed, while 55% agreed as well. The respondents reported that COVID-19 resulted in early pregnancies in the female students because they were just at home without better security and care from their parents. A study conducted by Reimers (2020) showed a dismissal or limited learning opportunities among students in Brazil, Japan, USA and Russia, where students compromised learning at the expense of other home related activities during the lockdown period. This resulted in misconduct and abuse of their free time as most students resorted to misuse of social media and other means of social platforms thus

early pregnancies were encountered. In this regard, 3.75% of the respondents withheld their views about early pregnancy as a result of COVID-19. Finally, 6.25% of the respondents disagreed at the same time 2.5% strongly disagreed concerning the point of early pregnancies due to COVID 19 outbreak.

COVID-19 effects led to multiple problems to the female students, including early marriage among girl students whereby 41.2% of the respondents strongly agreed followed by 33.7% of the respondents who agreed that majority of female students become wives of people because majority of their time, they were not in school for studies. Even though the evidence is not conclusive, research suggests that students with a migrant background, and those who are socio-economically disadvantaged, would be slower learners and vulnerable to external forces such as early marriage. Nevertheless, 12.5% of the respondents were neutral only 6.25% of the respondents disagreed with the point, followed by 6.25% of the respondents who strongly disagreed as well.

During the onset of COVID-19 in the year 2019, all of secondary schools within Tanzania were closed so as to protect both teachers and students from massive infection of the pandemic. Therefore, 45% of the respondents strongly agreed that majority of students were faced by poor academic performance because by the time they were at home, they did not get any chance for tuitions or engaging themselves in meaningful activities due to certain health restrictions such as avoiding crowding of people. Similarly, 30% of the respondents also were in agreement. The findings receive support from a study by Lindiner et al., (2020) that reported weakness in distance education in terms of their secondary students' inability to manage their time wisely and work independently hence

poor academic performance. Nonetheless, 8.75% of the respondents were neutral followed by other 3.75% of the respondents who disagreed, and finally 12.5% of the respondents strongly disagreed that poor academic achievement was as a result of COVID-19.

COVID-19 outbreak brought a lot of problems worldwide Tanzania included; meaning that majority of people suffered a lot of heavy economic losses, job loss and closures of business due to the consequences brought by the pandemic. In this regard, 23.7% of the respondents strongly agreed that COVID 19 outbreak worsen their economic constrains because of severe restrictions in and out of Tanzania. This point was also supported by 61.2% of the respondents. In support of this finding, Social Impact Theory developed by Latene in the late 1990s described social impact as a phenomenon in which people or organizations affect each other in social situations (Hagger, 2015). According to the theory, the daily running and operations of one organization can affect the operation and running of another organization. Also, the change of a social phenomenon can affect the running of an institution or organization. In this study, the eruption of COVID-19 at the end of the year 2019 affect the running of private and public institutions thereby causing job loss. For instance, tourism industry was negatively affected, hotels were closed and parents lost their job hence making their

children vulnerable economically at school. On the other hand 2.5% of the respondents were neutral on their response followed by 6.25% who disagreed and 6.5% who strongly disagreed.

In addition, Tanzania, specifically in Ikungi district, found in Singida region, the effect of COVID 19 was evidenced as secondary school students lacked their basic needs. This sub-item received approval from 38.7% of the respondents who strongly agreed followed by 47.5% of the respondents who agreed as well. On the contrary, the findings from the field result indicate that 1.25% of the respondents were neutral followed by 8.75% of the respondents who disagreed and 3.75% who strongly disagreed.

4.2 Intervening Measures to the Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi District in Singida Region

In identifying the remedial measures on the Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi district Singida region, the respondents gave their views as indicated in table 2.

Table 2: The Intervening Measures to the Effects of COVID-19 Outbreak on Students' Education in Secondary Schools in Ikungi District in Singida Region

| Teachers' responses | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|--|----------------|-----------|----------|----------|-------------------|
| Adoption of virtual learning | 20(44.4%) | 17(37.7%) | 3(6.6%) | 2(4.4%) | 3(6.6%) |
| Provision of enough computers in schools | 25(55.5%) | 15(33.3%) | 1(2.2%) | 2(4.4%) | 2(4.4%) |
| Reliable electricity connectivity in secondary schools | 16(35.5%) | 24(53.3%) | 2(4.4%) | 1(2.2%) | 2(4.4%) |
| Provision of internet services | 15(33.3%) | 20(44.4%) | 5(11.1%) | 3(6.6%) | 2(4.4%) |
| Advocating for continue education after early pregnancies/delivery | 19(42.2%) | 20(44.4%) | 2(4.4%) | 1(2.2%) | 3(6.6%) |
| Parental awareness through sensitization | 18(40%) | 16(35.5%) | 2(4.4%) | 5(11.1%) | 4(8.8%) |
| Timely government financial support to schools | 20(44.4%) | 17(37.7%) | 3(6.6%) | 3(6.6%) | 2(4.4%) |
| Need for economic activities that will support parents | 14(31.1%) | 26(57.7%) | 1(2.2%) | 3(6.6%) | 1(2.2%) |
| Improved health care system | 21(46.6%) | 17(37.7%) | 2(4.4%) | 2(4.4%) | 3(6.6%) |
| Sensitization of political class to give support to schools | 15(33.3%) | 17(37.7%) | 5(11.1%) | 3(6.6%) | 5(11.1%) |
| Support from the parents | 20(44.4%) | 19(42.2%) | 3(6.6%) | 1(2.2%) | 2(4.4%) |

Source: Field data (2022)

Majority (82.1%) of respondents (teachers) were in agreement that as result of COVID-19 outbreak secondary education in Ikungi district Singida region become negatively affected therefore the mitigating measure of adopting virtual learning was seen to be positive step towards students' education. Only 6.6% of the respondents remained neutral while 4.4% disagreed followed by 6.6% who also strongly disagreed with the statement on adoption of virtual learning as an important intervening measure.

Additionally, 55.5% of the respondents revealed that provision of enough computers in schools could assist the students in their daily learning, therefore 33.3% of the respondents agreed whereby only 2.2% of the respondents remained neutral. Therefore 4.4% of the respondents disagreed while 4.4%. Respondents strongly disagreed. From the findings, 35.5% revealed that reliable electricity connectivity in secondary schools is one step for the improved academic achievement of students. In this regard, 53.3% of the respondents agreed while 4.4% of the respondents were undecided. Conversely, 2.2% of the

respondents disagreed followed by 4.4% who strongly disagreed to the statement.

The study also revealed that 33.3% of the respondents strongly agreed that there is need for the provision of internet services within secondary schools so as to uplift students' academic achievement post COVID-19. In addition, 44.4% of the respondents agreed as well while 11.1% of the respondents remained neutral. On the contrary, 6.6% of the respondents disagreed followed by 4.4% of the respondents who strongly disagreed as well. According to Owusu-Fordjour et al., (2020) in Ghana, almost all students were not satisfied with online teaching and learning during the COVID-19 pandemic. Most of the students had problem with internet and technological facilities. In addition, the respondents believed that most of the internet bundles were very expensive and they had financial problems buying internet bundles. Furthermore, the internet from the mobile companies was not stable and could not sustain effective online teaching and learning during the COVID-19 pandemic.

The study revealed that 42.2% of teachers indicated that advocating for continue education after early pregnancies/delivery was seen to be a solution towards those female students who became negatively affected during secondary schools closure as a result of COVID-19 outbreak. Similarly, 44.4% of the respondents agreed while only 13.2% of the respondents held contrary opinion. In support of the current finding, studies conducted in Nigeria revealed that girl child education was negatively affected by COVID-19 outbreak whereby many school-girls died due to failed abortion and many of them dropped from schools due to early pregnancy during the lockdown period (Aruna, 2022; Musa et al., 2021).

About 40% of the respondents strongly agreed that parental awareness through sensitization was a tool for maximum academic support to the students. In this regard, 35.5% of the respondents also agreed. The results indicated that 24.3% of the respondents disagreed with the statement. At an international level, there has been a widespread emphasis on the effective use of ICT in the process of teaching and learning activities in order to meet a demand of education so as to mitigate the shortage of resource persons and the outbreak of pandemics (UNICEF, 2020). The report indicates that parents' support is a vital ingredient in this respect.

The findings also shows that 44.4% of the respondents indicated that timely government financial support to the secondary schools found in Ikungi district is vital so as to boost academic achievement of students regardless of COVID-19 effects. The results also indicated that 37.7% of the respondents agreed while 17.6% of the respondents held contrary opinion. According to Mtebe and Raphael (2017) in a study conducted in Mwanza, Tanzania, the government should increase budget allocation to the ministry of education science and technology for increased capitation grants to schools. This will enable secondary schools to purchase vital ICT equipment.

On the other hand, the responses from open ended questions in the questionnaires identified other effects of COVID-19 outbreak on students' education in secondary schools in Ikungi district in Singida Region as follows; failure to cover topics on time, psychological effects on students such as anxiety, trauma and distress due economic hard times and unfair treatment (sexual harassment) by the society. Similarly, indiscipline cases among fellow students and financial challenges as result of COVID-19 outbreak were reported. Moreover, teachers mentioned academic decline due to COVID-19 outbreak and students' arrogance to their parents.

Regarding the challenges the students faced on their education in secondary schools due to COVID-19 outbreak in Ikungi district, students mentioned absenteeism from home and from school after opening, lack of moral support from teachers and parents, loss of interest in education, lack of support from the government

and lack of guidance and counseling from parents. Besides, teachers identified isolation among students due to keep distance containment measure and incomplete syllabus.

Concerning the possible intervening measures to the effects of COVID-19 outbreak on students' education in secondary schools in Singida Region, teachers identified enhancing safety emergency academic programmes that can be accessed by students both in urban and rural areas, government financial support through emergency budget and implementation of learning recovery programmes and intrinsic motivation from students.

Ingathering qualitative data from school heads (SH) during the interviews in five secondary schools within Ikungi district Singida region, the first question was; what were the effects of COVID-19 outbreak on students' education in secondary schools in Ikungi district in Singida Region?

According to the response from SH1;

Poor academic achievement, lack of syllabus coverage and delay in completion of studies were key effects of COVID-19 outbreak on students' education in secondary schools (Personal interview, 27th April, 2022).

This finding was similarly to that of quantitative data where respondents went further and identified early marriage among girl students and economic constrains to both parents and students as effects of COVID-19 outbreak.

While giving response to the same question, another interviewee put forth the following;

The effects of COVID-19 outbreak on students' education in secondary schools include; delay in completion of studies, low academic achievement, poor upbringing and inadequate syllabus coverage (Personal interview, 27th April, 2022).

The views of SH2 were supported in empirical literature review by Putri & Sutrisno (2022) in a study conducted in Bangladesh. The study reported that, early marriage rose by 13% during COVID-19 pandemic following the long-term closure of schools in the country. Findings from these study show that education for female students was negatively affected as some of them did not return to school after the pandemic due to early marriage and pregnancies.

When the views of SH3 regarding the effects of COVID-19 outbreak on students' education in secondary schools was sought by the researcher, the respondent opined that;

I noticed parental problems in child care. Most parents did not care to make follow up on their children's where about. They were left roaming in the village and

giving little attention to their studies. Similarly, back in school, there was shortage of time in completion of topics which affected students psychologically (Personal interview, 27th April, 2022).

These views were also echoed by SH4 who added that generally most secondary school student exhibited immoral behavior during COVID-19 outbreak. These findings positively resonates with studies conducted in Nigeria that revealed girl child education was negatively affected by COVID-19 outbreak whereby many school-girls died due to failed abortion and many of them dropped from schools due to early pregnancy during the lockdown period (Aruna, 2022; Musa et al., 2021).

On the second question; what challenges did the students face on their education in secondary schools due to COVID-19 outbreak in Ikungi district? According to the SH1;

The increase of studying hours after re-opening the school made teachers to arrive early in school and depart very late causing insecurity threat to both teachers and day scholars. Majority of students faced psychological stress because of COVID-19 effects faced by the students, also there was a delay in completing topics after spending three months at their homes and there was an increase of mortality rate due abortions (Personal interview, 27th April, 2022).

In addition, as observed by SH2 majority of male parents are alcoholic and they rarely found time to make follow up on students' academic performance even during the online studies after school closure. Economic problems among parents and students also accelerated poor performance in student's education as most parents could not afford basic for their students. Financial problem faced by parents resulted in lack of home learning materials by the students during closure.

Finally, on the third question; what are the intervening measures to the effects of COVID-19 outbreak on students' education in secondary schools in Singida Region?

In this regard, SH1 reported that;

The government should ensure that all secondary schools have safety material such as presence of sanitizers and running water for better teaching and learning environment (hygiene) (Personal interview, 28th April, 2022).

Similarly, the school head SH2 respondent that;

The parents of students in Ikungi ward should also buy sanitizers to their children so as to build a safe learning

environment for the students (Personal interview, 28th April, 2022).

Similarly, on the intervening measures to the effects of COVID-19 outbreak on students' education in secondary schools, SH4 and SH5 added that;

The government should ensure that all secondary schools are not closed again but sensitization on how to deal with COVID-19 should be provided to create awareness. Majority of low income parents should engage in small business to get financial income necessary in giving support to their students' education (Personal interview, 28th April, 2022).

4.3 The Findings from the Observation Checklist

The researcher requested from the school heads the details concerning number of early pregnancies among female students. The researcher found that three female students were found to be pregnant. Moreover, the researcher made an observation towards the academic performance of the students after the opening the school during post COVID-19. There was a slight decrease in performance, particularly for the female students who were found to be pregnant.

On economic constraints on the part of parents and students, the researcher noticed new admissions in school records and on further inquiry the researcher was informed they were transferred from private school because their parents lost their jobs hence could not afford the cost of private secondary education. Consequently, the researcher noticed minimal elements of parents' support to school management and students.

5. Conclusion and Recommendations

5.1 Conclusion

Based on the findings, the study concluded that the government should ensure that all secondary schools are not closed again but education system should adopt alternative teaching approaches that can be accessed by students, both in urban and rural areas such as virtual learning to mitigate on the effects of pandemics. Similarly, majority of low income parents should engage in small business to get money to support their students' education.

5.2 Recommendations

Following the findings and conclusions of this study the researcher made the following recommendations:

- i. Teachers in all public secondary schools and private secondary schools should improve teaching methodologies in case of outbreaks such as COVID-19 in order to mitigate the effects of such pandemics.
- ii. Teachers and parents as education stakeholders should be very close to the students and give them the necessary guidance and counseling in the wake of pandemics.
- iii. The government should provide financial support through an emergency budget that will enhance the implementation of learning recovery programmes in secondary schools.

References

- Anderson, R. (2020). *Enforced Remote Working and the Work Life Interface During Lockdown, Gender in Management*, Vol. 35 No 7/8, pp. 677-683. <https://doi.org/10.1108/GM-07-2020>.
- Aruna, J. (2020). Rise in Teenage, Pregnancy and Covid-19 Lockdown in Southern Senatorial District of Ondo State, Nigeria: *Indiana Journal of Humanities and Social Sciences*, 3 (2), 36 – 42.
- Burns, D. S. (2019). *Performance Analysis Report for 2019 School Certificate Examinations*. Chipata, Zambia.
- Coe et al., (2020). *Cutting-Edge Approaches for CNS Protection and Repair*. Edited by Johannes Boltze, Marritta Zille, Stephan Schilling, Books. Google.Co.tz.
- Creswell, J.W. (2012). *Education Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research (4th Ed.)* Boston, MA: Pearson.
- Faustine, M.M (2019). *COVID-19 Pandemic and Its Implication on Education System in Tanzania*. An Unpublished Med Thesis: Open University of Tanzania.
- Goodman, A., Joshi, H., Nasim, B., and Tyler, C. (2015). *Social and emotional skills in childhood and their long-term effects on adult life*. <https://www.eif.org.uk/report/social-and-emotional-skills-in-childhood-and-their-longterm-effects-on-adult-life>.
- Hagger, C. (2015). *Conservation of Resources Theory and 'Strength Model of Self-Contral: Conceptual Overlap and Commonalities: Editorial April 201*. *Stress and Health* 31(2):89-94.
- Huang et al., Y.H, Jiang, J. T. (2020). *SARS – COV detected in cerebrospinal fluid by PCR in a case of COVID – 19 encephalitis*. *Brain: behavior and immunity*. 87, 149.
- Mwakyusa, A. R. and Mwalyagile, I. M. (2016). COVID – 19 Spike – Host Cell Receptor GRP 78 Binding Site Prediction. *Journal of Infection* 80 (5), 55 y – 562.
- Lashayo, D. M. and Johar, I. (2018). Instructors Adoption of e-learning systems in Tanzania's universities: A proposed multi- factors adoption model. *International Journal on Informatics Visualization*. 2(2), 76-80.
- Lindner et al., (2020). *Gambling Trends in Sweden during the first phase of the COVID-19 outbreak*. Creative Commons Attribution-Noncommercial 4.0 International License.
- Lodhi, F.M. (2021). *An analysis of students' responses on virtual learning environment adopted due to COVID-19*. (Doctoral dissertation). Retrieved from <https://thesis.cust.edu.pk> (Masonbrink & Hurley, 2020);
- Masonbrink, B. and Hurley, M. (2020). *South Africa Responds to New Sars COV-2 Variant*. *The Lancets* 397 (10271), 267.
- Mtebe, D.E. and Raphael, S.W. (2017). *Unscheduled school closings and student Performance*. *Education, Finance & Policy*, 3(3): 316-338.
- Musa, V, Gene, D. and Rey, S. A. (2021). *The Risk of Corona Virus to Health Care Providers During Aerosol Greeting Procedures*. A Systematic Review and Meta-Analysis. *Annals of Thoracic*.
- Mwandosya, C. and Elliot, S. (2020) *Children's Social Behaviors as Predictors of Academic Achievement: A Longitudinal Analysis*. *School Psychology Quarterly*, 17(1): 1-23.
- Naresh, S. (2020). The use of Digital Transformation to Address Education Challenge Caused by COVID-19 in Developing Countries. *Social Sciences*, 9(6), 233-240.
- Owusu-Fordjour et al., (2020). *The Impact of COVID-19 on Learning- The Perspectives of the Ghana Students*. Cited 330. Google Scholar.com

- Putra, P. Cateo, F.Y.T and Gey, S. A. (2020). The Students' Learning Experiences During COVID-19. *Journal of American Science* 6(2) 10-36
- Putri, P. Lyrical, F.Y.T Syafruidi S.& Asian, A.(2020). Teaching and Learning Experiences During COVID-19. *A Journal of Educational Development*, 30(6), 12-30
- Rose, R.P. (2020). COVID-19 and Mental Health: A Review of the Existing Literature. *Assessment and Evaluation in Higher Education*, 33(3), 200-213.
- Santally, J. (2019). "School Effectiveness and the Development of Process Indicators of School Functioning". *School Effectiveness and School Improvement. An International Journal of Research. Policy and Practice*. 1(1) pp.61 – 80.
- Singhal, J. (2012). "School Effectiveness and the Development of Process Indicators of School Functioning". *School. Effectiveness and School Improvement. An International Journal of Research. Policy and Practice*. 1(1) pp.61 – 80.
- Tanzania Institute of Education (2020). *School Management Guide*. Dar es Salaam: University of Dar es Salaam.
- Tarkar, P. (2020). Impact of Covid-19 Pandemic on Education System, *International Journal of Advanced Science and Technology*, 29(9) 3812 – 3814
- The Government of the United Kingdom (GOV. UK) (2020). "Supporting Vulnerable children and young people during Corona Virus (COVID-19) OUTBREAK. Actions for education providers and other partners. Department of Education. <https://www.gov.uk/government/publications>.
- UNESCO (2020). "Global Education Monitoring Report 2020: Inclusion and education: All means all", UNESCO: Paris, available at <https://en.unesco.org/gem-report/report/2020/inclusion>
- UNESCO (2020). "Covid-19 School Closures: Why girls are more at risk", available at: <http://www.iiep.unesco.org/en/covid-19-school-closures-why-girls-are-more-risk-13406>
- UNICEF (2020). "State of the World Children's 2017: Children in a Digital Age", UNICEF: New York
- World Health Organization (2020). *The Risk of Corona Virus to Health Care Providers During Aerosol Greeting Procedures. A Systematic Review and Meta Analysis*. Annals of Thoracic.
- World Bank, (2020). *COVID -19 Impacts on Education: A Policy Note*. Washington: World Bank.
- World Bank, (2019). *COVID -19 Impacts on Girl Child Education: Poland: IBMS Suppliers*.



Influence of Incentives on Teachers' Performance in Public Secondary Schools in Longido District, Tanzania

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Abstract: *The study assessed the Influence of Incentives on Teachers' Performance in Public Secondary Schools in Longido District. The study addressed two objectives, namely to; identify the incentives given to teachers in public secondary schools and determine how incentives given influence teachers' job performance in public secondary school in Longido District. Expectancy Theory of Motivation guided the study. Descriptive survey design and mixed methods approach were adopted. Data were collected using questionnaires and interview guide. The sample size consisted of 91 respondents (81 teachers, 9 school heads and one DSEO). The instruments were validated through research expert judgment. Reliability ($r = 0.864$) obtained using Cronbach Alpha Method was determined using test-retest technique in a pilot study. Credibility of qualitative data was ascertained by involving multiple analysts. Dependability was established through detailed reporting of the research process. Quantitative data was analyzed using descriptive statistics in the SPSS version 22 and results were presented in charts and tables. Qualitative data was analyzed thematically alongside research questions. The study revealed that job promotion, housing facilities, traveling allowances, improved working environment, vacation/study leave and maternity leave are incentives offered in secondary schools. Moreover, performance targets, needs of teachers and good school management influence the provision of incentives to teachers. Incentives promote hard work among teachers; improve teachers' morale and performance. The study recommends that school heads and stakeholders in education should initiate income generating activities in schools and community support to school management in order to create a reliable source for teachers' motivation.*

Keywords: *Incentives, Performance, Teachers, Public and Longido District*

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1. Introduction

Incentives are considered as one of the most important factors that encourage workers to put forth great efforts and work more efficiently. It is because incentives and reward system direct workers capabilities into more efficiency in their work in an attempt to achieve the

institution's goals (Gana and Bababe, 2011). In addition, the absence of the suitable incentives may negatively affect the hardworking employee's performance; it may also weaken their productivity at work, which decreases the chances of attaining the promising goals of the institution (Palmer, 2012). Such incentives are a significant factor in encouraging employees and increasing their enthusiasm at work, which results in

improving the general performance and increasing the productivity. Incentives, also, help in attaining job satisfaction, which increases the interaction between the employee and the organization.

In the views of Barongo (2013), incentives to workers play an important role in ensuring that they perform their duties effectively and efficiently. Teachers are among the public servants who need incentives in their teaching job. The government of Tanzania pays the public servants' salaries according to their levels of education in various scales. For the teachers, their scale is termed as Tanzania Government Teachers' Scale (TGTS), which varies according to education and the number of years. However, there are other incentives which teachers need such as house allowances, teaching allowances and transport allowance. In order to make sure that teachers perform well their duties, job satisfaction is very important. Likewise, ensuring each employee's workplace goals and values are aligned with the government's intentions, it is important that there should be a high level of motivation that is expected to bring about productivity, improved work quality and financial gain across all government departments. According to Salanova and Kirmanen (2010) increasing motivation, commitment and engagement levels are key organizational aspects these days. The development of compensation policies has an important role in motivating workforce to deliver high levels of performance, discretionary effort and contribution.

In some schools, teachers are asked to use weekends and after school hours of profession development but there is no incentives for them. This will lead to discouragement of other people from joining this field due to dissatisfaction (Barongo, 2013). Due to absence of incentives, many teachers have been forced to supplement their meager income by offering private lesson or running their own business so that they can meet the family needs.

The Government of Tanzania continues with efforts to motivate its workforce because of the importance of incentives to the workers. The government has introduced Tanzania Public Service Pay and Incentive Policy with the purpose to compensate employees for the works they do, to motivate them to perform well, to retain them, and thereby avoid the need for expensive recruitment and training for replacement. The public service, like any other organization needs to compensate, motivate and retain its employees for the better performance of its organizations (Tanzania Public Service Pay and Incentive Policy, 2014).

Recent Government efforts to reform its pay and incentive system in Tanzania can be well explained in the context of macro-economic reforms that were started in the 1980s through to the 1990s. In 1994, the Government adopted Pay Reform as an integral component of Public Service Reform Program (PSRP). This was because many of the problems associated with poor performance of the public service were related to lack of an appropriate

compensation structure and weaknesses in the incentive regime. It ought to be said at the outset that Pay and Incentives problems in the Tanzania public service go beyond salaries (Tanzania Public Service Incentive Policy, 2014).

A successful organization is the one which can efficiently exploit its employees' skills and qualifications. Therefore, scholars have to work hard as to come up with a comprehensive description of how to enhance the professionalism of the employees and how the administration chooses active individuals, and also how to connect the institutions' goals to the personal objectives of the individuals, which will improve their performance. It is plausible to say that successful organizations set an active incentive system capable of affecting the employees' performance in a way that pushes them into working harder and maintaining the goals of the institution. In addition, it is noticeable that motivating employees may help them to overcome a lot of their obstacles at work (Palmer, 2012). On the other hand, the administrator should try to create confidence and an environment of tranquility, security and respect in an honest and actual manner. One must know that appreciating people's work and praising their achievements do not affect one's own success, so one must do this directly to those who deserve it or just in front of a group of people by praising their accomplishment (Locke and Braver, 2008). Through the need for incentives to Tanzania government workers, it brought about a need to investigate how incentives influence Teachers' Performance in Public Secondary Schools in especially in Longido District.

1.1 Research Questions

The study answered the following research questions.

- i. To Identify the Incentives given to teachers in Public Secondary school in Longido District.
- ii. To determine how Incentives given influence teachers' performance in Public secondary school in Longido District.

2. Literature Review

The study was also guided by Walberg's (2002) Theory of Educational Productivity.

2.1 Theory of Educational Productivity

The study was guided by Walberg's (2002) theory of educational productivity. This theory posits that psychological characteristics of individual students and their immediate psychological environments (presence of motivated teachers and resources/facilities) influence educational outcomes, that is, cognitive, behavioral, and attitudinal. Walberg (2002) identified nine key variables

that influence educational outcomes as: students' ability/prior achievement, motivation, age/developmental level, quantity of instruction, quality of instruction, classroom climate, parental involvement, home environment, peer group, and exposure to mass media outside of school.

The theory shows that psychosocial characteristics of classroom learning environments that include incentives given to both students and teachers demonstrate incremental validity in predicting students' achievement. These psychosocial characteristics such as self-concept, attitudes, behaviors, intrinsic motivation, and overall student engagement in learning are useful in curriculum evaluation studies and can provide teachers with useful information to arrange more optimally functioning classrooms. Walberg's (2002) theory insists that in order to increase educational productivity and efficiency, educational process goals as well as achievement goals must be considered.

Application of the Theory to the Current Study

Thus, the relevance of this theory is that educational productivity in terms of teacher's job performance is influenced by presence of motivated teachers and teaching/learning resources. Therefore, incentives to teachers influence educational outcomes, that is, cognitive and behavioural outcomes. Productivity in education is interpreted to include teacher's perception of the social environment, creativity, self-concept, participation in extra-curricular activities and interest in other subject matter. The theory guided the study to advocate for motivation of teachers through incentives in order to create social/friendly environment to teachers for improved job performance.

2.2 Incentives Offered to Teachers in Public Secondary Schools

Too (2017) reported that according to UK Department of Health, Education and Welfare, when employees are treated fairly and with respect, the quality of working life and performance is enhanced. Hall (2012) added that happy workers behave positively and are productive. As Scott (2013) suggest, job satisfaction is an indicator of good treatment which include incentives, appraisal and promotion. This will reflect how well the organization is functioning.

In developed countries, pay incentives have been found to be generally ineffective in increasing teacher motivation. Teacher motivation is based on intrinsic factors and that true job satisfaction is based on higher order needs (Sylvia and Hutchinson, 2014). Offering additional extrinsic motivation has even been found to improve the intrinsic motivation of teachers (Deci et al., 2019). Spear et al., (2010) highlights the wide range of factors that influence

teachers' job satisfaction and motivation in the United Kingdom. The main factor found to contribute to job satisfaction of teachers was working with children whereas job dissatisfaction was primarily attributed to work overload, poor pay, and perceptions of how teachers are viewed by society.

Azasu (2013) affirm that incentives by definition may not be guaranteed but mostly conditional on performance. The use of performance incentives such as in-service training opportunities and job promotion according to the author dates back to early 20th century in Sweden and conventional wisdom on the subject show that there is a positive association between incentives and company performance(Davidson, 2015);.

Adelabu (2015), on Teacher Motivation and Incentives in Nigeria found that poor teacher motivation results to poor teacher morale and low level of commitment to work. Moleni and Ndalama (2014) in the study on Teacher Absenteeism and Attrition in Malawi noted that absenteeism and attrition were largely influenced by teacher motivational factors with low salaries and poor working conditions coming out strongly as underlying causes of absenteeism and attrition. The study summarizes that poor teacher motivation result to an increase teacher absenteeism, high teacher turnover and professional misconduct which have affected performance and threaten to affect the achievement of quality education in Malawi. Furthermore, Businge (2014) conducted a study on development of staff. The author identified the impact of non-material incentives on the Rwanda Revenue Authority with the introduction of incentives like performance appraisal, agency autonomy, corporate values and reputation on effective human resource management and found that through this, the agency was able to increase the impact of Rwanda Revenue Agency in the nation's GDP from 9% to 13%.

Ude and Coker (2012) cited Tanzania where a public service incentive scheme tagged "Selected Salary Enhancement Scheme" (SSAEC) was instituted to motivate the civil servants. The scheme achieved its aim by adequately motivating the employees and also resulted in maximum impact on productivity. From the foregoing, salary enhancement results in maximum productivity.

Using evidence mainly from Sub-Saharan Africa, Davies (2013) explores the ramifications of "teacher defiance" in situations of poverty and in societies with strong traditions of patronage and male dominance. Perceptions and reports of teacher behavior are relevant to this study as possible effects of the level of motivation. While much of the VSO evidence, and that of Davies, is qualitative and subjective, study of teacher stress by Gorrell and Dharmadasa (2019) provides controlled, empirical findings about certain factors that may be important "de-motivators" for teachers in Tanzania. It shows that overcrowded classrooms, absent students and lack of teachers' texts can be very stressful

factors, especially for the less experienced teachers. They are related closely to another source of stress: the pressure to produce examination passes.

Bennell and Makyunuzi (2015) researched on "Is There a Teacher Motivation Crisis in Tanzania?" indicate that, teacher absenteeism, turnover, misconduct are the result of poor motivated teacher. The study explains that demoralized teachers are likely to find another occupation, be absent or late at work, and not do what is expected of them in their class in order to meet the learning needs of their students. MOEC (2013 and 2014); Davidson (2015); Sumra (2014) and HakiElimu (2015) show that in Tanzania, strong evidence exists that the vast majority of teachers are unhappy with their salaries, housing arrangements, benefits, workload, and status within their communities. These poor living and working conditions have, over time, seriously eroded many teachers' motivation to carry out their teaching and nonteaching roles in an acceptable manner. The study investigated poor living and working conditions their effects on teachers' motivation leaving the gap to be filled on the influence of incentives on teachers' performance.

2.3 Effects of Incentives on Teachers' Performance in Public Secondary School

Sharma (2014) in a study conducted in New Delhi observed that any fringe benefit attached either to official or extra work, has majorly the effect of causing individual sacrifice towards work. Therefore, incentives being put in place should meet the varied needs of the staff. The study observed that if the programmes are well conducted, it would help in addressing negative attitude and misconception that members of staff may have towards incentives. Delvecchio and Wagner (2017) observed the effects of different incentives on sales people and concluded that younger sales people react more dramatically and positively with higher intrinsic motivation when paid on plans with higher incentive proportion. A study conducted by Ojokuku (2011) in Nigeria also identified the effects of financial incentives on information and communication technology professionals. Profit sharing plans, premium pay and cash bonus are the types of financial benefits enjoyed by these professionals which enhanced their motivation to work.

Improving education quality in low-income countries is a top priority for the global human development agenda United Nations (2015), with governments and donors spending over a hundred billion dollars annually on education (World Bank, 2017). Yet developing country education systems have found it difficult to convert increases in spending and enrollment into improvements in student learning (World Bank, 2018). One reason could be that education systems face several additional constraints beyond limited school resources (Glewwe et al., 2016). Thus, simply augmenting school resources may

have limited impact on learning outcomes if other binding constraints are not alleviated at the same time.

According to Nadeem et al., (2011) social and economic conditions of teachers have an effect on their performance that is, low salary, lack of facilities, status of teachers in society, teachers mental health and morale, stress of work, relation with staff and head teachers, working environment are all those factors that have an strong impact on females teachers performance. The level of motivation of teachers reduced, when there is a poor social and economic condition in the place where the school is located. It was concluded that there is a significant relationship between these factors of motivation and the efficiency of female teachers. Alam, and Farid, (2011) found that mostly teachers experienced that they were paid less salary according to their knowledge, skills and capabilities for doing their job. Thus, respect should be given to teachers, provide them training to exceed their performance level and salaries should be designed according to their capabilities, experience and skills regarding job, it is important to establish and provide necessary social services near working areas especially for those schools located in rural areas.

Teachers' motivation is one of the important factors in realizing educational objectives in achieving high academic performance. Low teacher motivation has led to low student performance in academics (Barretts, 2015). Thus the learning environment and teachers' motivation upon knowledge development relatively need attention in our schools. Human resource as a factor of production is affected by adequacy and quality as reflected by the level of training and level of motivation (Matokeet et al., 2015). Therefore, it is necessary to consider working environment especially teachers' houses so as to make teachers happy.

Consequently, Juma, (2017) reports that employee involvement in decision making serves to create a sense of belonging among the workers as well as a congenial environment in which both the management and the workers voluntarily contribute to healthy industrial relations. In contrast, in low power distance culture, everyone is perceived to have the potential to contribute to the decision-making process. In fact, Noah (2018) argues that everyone is assumed to have equal rights. As such, employees consider it their right to participate in decisions that concern them. The employee's performance directly influences the organizational effectiveness. Man and woman should be motivated equally. Eliminate the inequality and give equal importance to both. The employee's performance increased when they are involved in decision making of the organization (Muhammad, 2012).

3. Methodology

The study employed descriptive survey design and mixed methods approach whereby the study collected quantitative and qualitative data in order to provide a comprehensive analysis of the study problem (Creswell and Creswell, 2018). Data were collected using questionnaires and structured interview guide. The sample size consisted of 91 respondents (81 teachers, 9 school heads and one District Secondary Education Officer). In this study, the head of Schools were purposively selected while teachers were selected using both stratified and simple random sampling techniques. The respondents were stratified based on gender Validity was established through research expert judgment whereas reliability was determined using test-retest technique and reliability index, $r = 0.864$, was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained by involving multiple analysts, whereas dependability was established through detailed reporting of the research process (Zamboni,2020). Quantitative data was analyzed using descriptive statistics in the SPSS version 22 and

results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Findings on the Incentives Given to Teachers in Public Secondary School in Longido District

The current study identified the incentives given to teachers in Public Secondary schools in Longido District. A total number of 81 teachers responded to the option that best described their views. Figure 1 presents the summary of the respondents' responses and the results of quantitative findings through questionnaires on the incentives given to teachers in Public Secondary schools in Longido District.

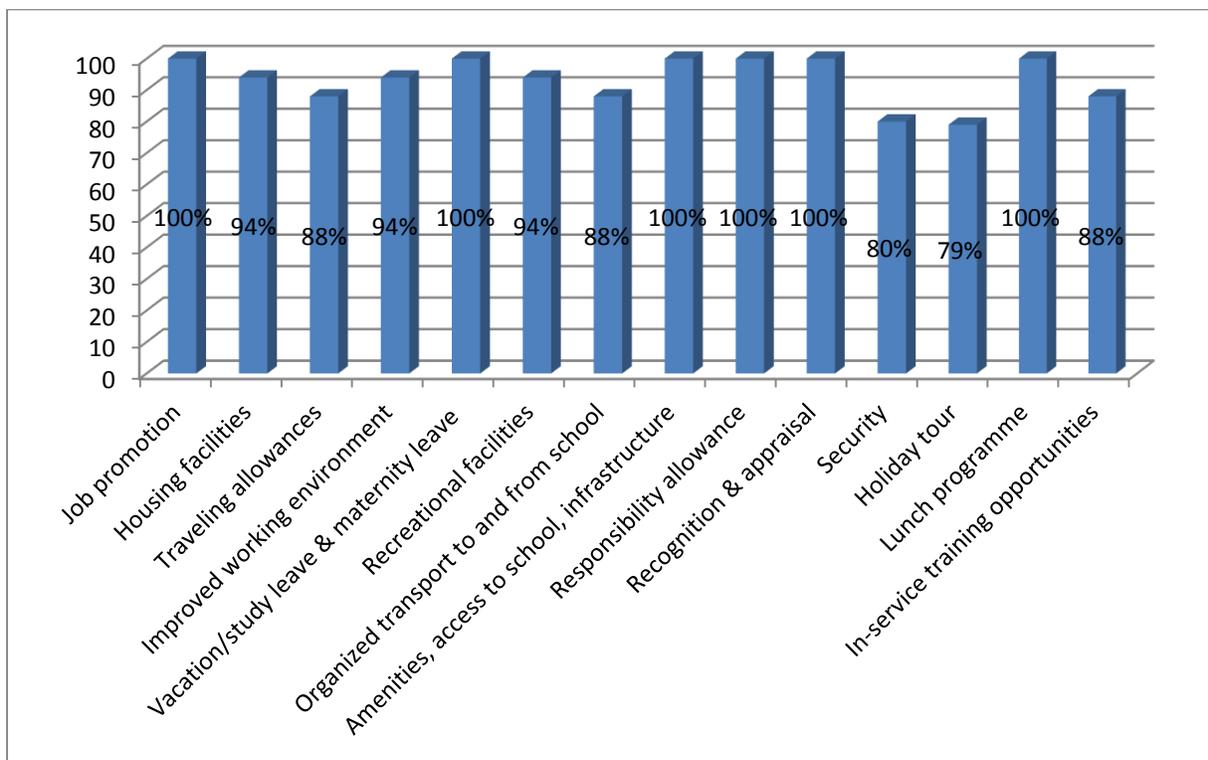


Figure 1: Incentives Given to Teachers in Public Secondary Schools in Longido District

Source: Field data (2022)

It is revealed from figure 1 that there was a disparity in the various incentives given to teachers in Public Secondary schools in Longido District. However, a number of incentives received approval across all the public Secondary schools that the researcher visited in

Longido District. For instance, all (100%) respondents indicated that provision of job promotion to the teaching staff was a common practice in all schools. The respondents in the schools visited by the researcher submitted that their schools, through the management

observe job promotion practice particularly for teachers who merit promotion due to their qualification and hard work. The school heads either promote them internally or propose their names for consideration during promotion exercise and also give release letter to those promoted outside the school. According to HakiElimu (2015), this practice influences teacher's performance in school because they believe that their efforts will bear fruits in terms of job group promotion or transfer laced with promotion. The finding is supported by Social Action Theory by Bowey as cited in Campbell (2003), which indicates that if a worker is not satisfied with the work situation, it will affect the services the worker renders to the institution. The theory postulates that naturally, workers are not interested in any activity for its own sake, but rather for what the activity will bring them such as job promotion.

In addition, while responding to open ended questions, some respondents mentioned that internal promotion of teachers as a result of exemplary performance should be a common practice in the teaching profession. They expressed concern that if the promotions are based on merit then the employer should be informed to confirm them. According to Mutie (2013), in his research on satisfaction of secondary school administrators and teachers in Kitui, Kenya, revealed that qualified teachers leave teaching because they are dissatisfied with poor pay and compensation, poor methods of promotion, inadequate opportunities for career advancement, poor public image and unsatisfactory conditions.

On the provision of Housing facilities, 94% of the respondents reported that their schools provide accommodation to teachers. However, 6% of the respondents indicated no provision of shelter in their institutions. In the open-ended questions, teachers voiced their opinion in support for housing facilities in all learning institutions in order to address accessibility challenges to schools in Longido District. Although some observed that the issue of housing was a challenge in their station, others explained that some newly recruited teachers who are young are normally housed together in the school compound or in the neighborhood. In fact some parents who have constructed houses next to school have been kind enough to either accommodate teachers at reduced rent or help them to locate land for construction of personal houses. Through this, they were able to fulfill the Maslow hierarchical of needs – shelter, identified in the theory of motivation (Campbell, 2013). The research also revealed that housing facilities do not exist in most (80%) of the institution under study. Moreover, not all the workers could access staff houses at the same time. This largely depended on one's position and length of stay in the institution particularly for senior staff while the young members of staff would share accommodation.

This offers the necessary explanation as to why the respondents in this study gave the practices the least

percentage of being practiced in their schools. Similarly, the fact that the study population was public schools in largely rural area with humble but limited resources may also account for this distributional percentage. In the views of Sumra (2014), institutions that practice holiday tours, the leadership argues that the schools charge parent's motivation fee. The funds collected are therefore used to motivate learners, teachers and all the education stakeholders in the school. Moreover, the provision of traveling allowances was given approval at the rate of 88% while 12% of the respondents held contrary opinion. The respondents indicated that provision of travelling allowance to the teaching staff was a common practice in all schools. Majority (88%) of the respondents submitted that their schools through the management observe this practice particularly when teachers are discharging their duties outside the school.

In regard to improved working environment, 94% of the respondents agreed the school management with support from the government and parents have contributed immensely to improved working surroundings. For example, through stimulus package for infrastructural improvement in schools, the government has allocated money to schools for building new classes, fencing and construction of toilets. Admittedly, through this initiative, the working environment in most schools has improved tremendously, a fact that has made some parents to also contribute their quota willingly to help in improving their community schools (Azasu (2013). The provision of annual leave, vacation/study leave, paternity and maternity leave was supported by all (100%) of the respondents. For instance, the respondents observed that maternity leave enables mothers to take care of their young ones while study leave enables them to further their knowledge to be in tandem with the ever-changing paradigm shift in education.

The study found that all (100%) respondents agreed that responsibility allowance is necessary in their working station hence should be practiced as often as possible. Similarly, the respondents who approved security were 80%, Holiday tour 79% and lunch programme 100%. The respondents put forth their views that lunch programme was organized in their stations. The respondents submitted that this programme is necessary for a number of reasons. For one, it enables teachers to attend promptly to their afternoon lessons; secondly, it enables learners to have increased contact hours with their teachers during and after lunch breaks. All teachers agreed with this observation, however, they pointed out that in most schools, the organization of the programme rest with the teachers and not the school management as it is otherwise expected.

According to the findings, recognition and appraisal was supported by all (100%) of the respondents. In the management of human resource, if the input/output ratios

are recognized by the managers by positive appraisal where necessary, and the same for those with whom we compare ourselves, then we view our treatment as fair. However, if the recognition and appraisal are not roughly equal, we believe that we have not been treated fairly and sense of inequity develops. One of the potential consequences of feelings of inequity is reduced motivation. For the case of teachers, reduced motivation results into poor work performance. However, if recognition and appraisal meets the expectations of teachers, then there will be increased work performance. This finding is in agreement with that of Onuma (2016) in Ebonyi State in Nigeria. The study revealed that teachers' performance appraisal by letter writing or verbally is a necessary ingredient in effective human resource management. The practice would eventually prepare the staff for promotion hence more responsibility. The finding in this study points out that most school managers are aware of this fact.

Basically, the study revealed that in-service training is for capacity building besides familiarizing the teaching staff with the latest emerging issue in education and paradigm shift in teaching methods. It is crystal clear that some teachers would organize for individual in-service training with an aim of putting themselves at an advantage position in terms of job group mobility or administrative duties. These findings are supported in the study by Mulenga and Kabombwe (2019), on Curriculum reform in education as a worldwide-practiced phenomenon that there could be other factors affecting the academic performance of students besides teacher's training.

According to the report, in-service of trained teachers enhances their performance of duty due to exposure to new skills and development. Similarly, the practice leads to discovery of new ideas, raises one's confidence in work, brings and adds new development in their field of specialization besides making the staff to become abreast with technological advancement. These views are similar to the findings by Saka & Salman (2014), in the study of staff promotion mentioned that in-service training is any systematic process used by an institution or employer to develop employees' knowledge, skills, behaviour or attitude in order to contribute to the achievement of the institutional goals. An effective training needs analysis is particularly necessary in today's changing work place since staffs are mostly exposed to new work challenges and flexible working conditions hence the need to update their skills on a regular basis, added Affullo (2015).

4.5 Findings on How Incentives Given Influence Teachers' Performance in Public Secondary School in Longido District

The study also determined how Incentives given influence teachers' performance in Public secondary school in Longido District. Figure 2 presents the summary of the respondents' responses and the results of quantitative findings through questionnaires on how teachers' performance in Public secondary school in Longido District is influenced by the Incentives given.

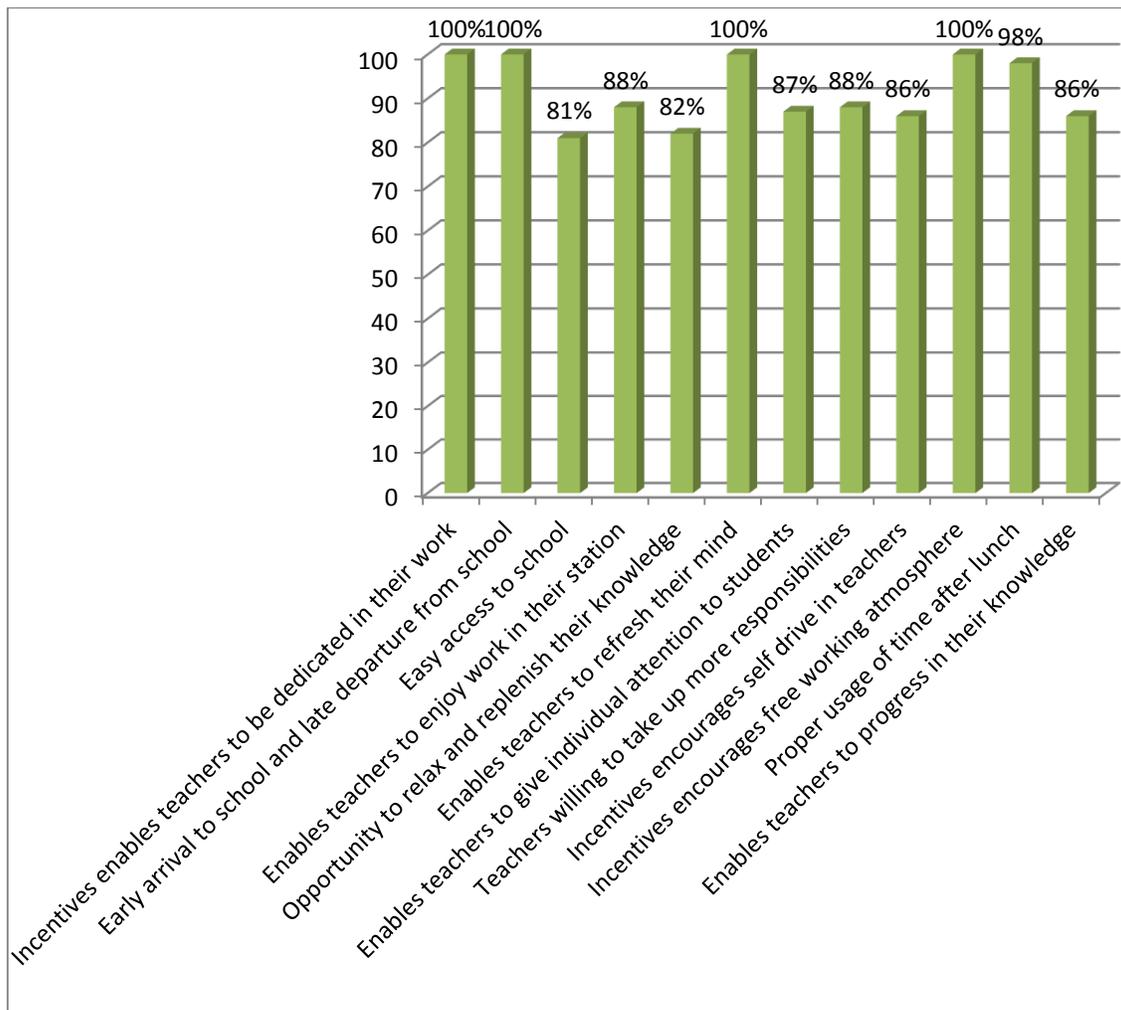


Figure 2: How Incentives Given Influence Teachers' Performance in Public Secondary School

Source: Field data (2022)

The results in figure 2 show that all (100%) respondents acknowledged that the various incentives given enables teachers to be dedicated in their work as seen in early arrival in school and late departure from school. The study established that whenever teachers are given incentives, it arouses their interest in work. The teachers exhibit a certain level of self dedication as they remain energized to pursue the objectives and goals of the institution with profound zeal. The findings concur with Platisa, Reklitish and Zimeras (2015) who conducted a study on job satisfaction and its dimensions on job performance in small and medium enterprise in Ibadan and Southwestern Nigeria where the researcher used a total of 105 respondents as sample size. The study found that significantly, job satisfaction and job performance, especially when employees feel that their work will be supervised and evaluated for the purpose of reward, more attention would be paid during performing activities. Correspondingly, the quality of supervisor-subordinate relationship significantly and positively affects the

employees' satisfaction and job performance based on the reward offered to those who are dedicated in their work.

When incentives such as means of transport or travelling allowance are provided, teachers will find it easy to access school. This item was supported by 81% of the respondents. In this regard, Allui and Sahni (2016) in an empirical study conducted on Strategic Human Resource Management in Higher Education Institutions in Saudi Arabia pointed out that means of transport to a working place is a motivating factor. However, in places where accessing working station is difficult, it becomes a deterrent to effective job performance.

Similarly, 88% of the respondents singled out that incentive enable teachers to enjoy work in their station while 82% of teachers (respondents) observed that incentives give teachers the opportunity to relax and replenish their knowledge. Given opportunity, teachers would join further training to either replenish or increase their knowledge. From the findings, ordinarily, workers

are not interested in any activity for its own sake, but rather for what the activity will bring them. Social Action Theory by Bowey asserts that people would be more apt to listen and co-operate with those who promised some kind of immediate reward than those who promised some better times in the future (Campbell, 2013). If all the available permutations of incentives are given to teachers, it is evident that teachers will give their best at place of work. This finding concurs with the studies carried out in USA on welfare practices which establish that in-service of trained teachers is based on the assumption that a well-trained labour force is remarkably labor productive. The study by Lafasto (2008) indicated that in-service training gives employees an opportunity to recharge therefore, averting the problem of burn-out among the employees. The study reveals that teacher training only does not adequately prepare teachers for managerial responsibilities; therefore, in-service training is a necessity. In addition, remarkable results cannot be achieved by a single training of a teacher or a school principal. Remember a good leader is born and nurtured. Therefore, both inborn and nurtured skills and knowledge are necessary for a good leader (Mullins, 2020).

Besides, the study found that incentives such as holiday tours enable teachers to refresh their mind while lunch programme enables teachers to give individual attention to students due enough and adequate time for afternoon lessons. Furthermore, the respondents reported that if teachers are motivated, they will take up more responsibilities therefore, incentives encourages self-drive in teachers, proper usage of time after lunch and enables teachers to progress in their knowledge. This findings are supported by Olembo (2010), on Management of Education in Tanzania asserted that the performance and productivity of workers towards achieving the common objectives and goals of an institution will increase thanks to popular welfare practices put in place. The study revealed that soft loan given to the teaching staff is aimed at showing management appreciation to the teachers for the work done throughout the year. To put it in the right context, Mulwa (2010), it is comforting to workers that if they work hard to improve performance at the end of the year, something would be given to them without placing request.

Findings from qualitative data indicate that there are a number of Incentives given to Teachers in Schools (ITS). In this regard, one respondent observed that:

The incentives given to teachers are job promotion, housing facilities, traveling allowances, maternity leave, study leave, paternity leave, lunch programme and in-service training opportunities (Personal Interview, May 27, 2022).

The comment by school head indicates that various incentives are given to teachers in secondary schools in Longido District. Similarly, on the same theme (ITS),

another school head also identified professional development through seminars, recognitions, rewards and in-service training as some incentives given to teachers in secondary schools. A circular from the ministry of education addressed to school heads informing them to identify teachers from their stations to attend a compulsory workshop and in-service training clearly explain the need for this practice. In support of the findings, a study conducted in the real estate sector by Azasu (2013) identified the various incentives and benefits used in Sweden to include variable pay, asset loan, paid paternity and maternity leave, lunch allowance and travel insurance. The author also noted that training is not popularly used but the firms are willing to give allowance for self-initiated training an incentive that was discovered to be more motivating to the employees.

On the theme Need Assessment for Provision of Incentives to Teachers (NAPIT), a participant had this to put forth;

The provision of incentives to teachers such as job promotion is given after three years, maternity leave after two years and others according to need assessment (Personal Interview, May 27th, 2022).

This observation was made by District Secondary Education Officer (DSEO). Another respondent pointed out that incentives are allocated based on the analysis of the effect it is likely to achieve on the performance of teachers. Scheid (2020) concluded that if the school management overcomes bureaucracy in provision of incentives to teachers and the teachers in turn give their best, then this is just the beginning of a blueprint for successful management.

Moreover, on the theme Contribution of Incentives to Teachers' Performance (CITP), the findings from qualitative data indicate that;

Incentives promote hard work among teachers; improve teachers' morale and performance (Personal Interview, May 28, 2022).

The observations made by the respondents is similar to the quantitative findings in figure 2 where all (100%) respondents acknowledged that the various incentives given enables teachers to be dedicated in their work as seen in early arrival in school and late departure from school. In addition, the respondents reported that if teachers are motivated, they will take up more responsibilities therefore, incentives encourages self drive in teachers, proper usage of time and enables teachers to progress in their knowledge.

In this regard, Allui and Sahni (2016) in an empirical study conducted on Strategic Human Resource Management in Higher Education Institutions in Saudi Arabia pointed out that means of transport to a working

place is a motivating factor. However, in places where accessing working station is difficult, it becomes a deterrent to effective job performance.

5. Conclusion and Recommendation

5.1 Conclusion

For all intents and purposes, in order to make an institution stronger, more effective, productive and better able to cope with the challenging environment in which it doubtlessly exist, provision of incentives to teachers in public secondary schools is necessary. The study concludes that when employees are treated fairly and with respect, the quality of working life and performance is enhanced. Job satisfaction is an indicator of good treatment which includes incentives, appraisal and promotion. This will reflect how well the organization is functioning. Happy workers motivated through incentives such as health insurance, pension, responsibility allowance, travelling allowance and improved working environment behave positively and are productive.

5.2 Recommendations

Based on the research findings, the following recommendations are given forth;

- i. The school Heads and stakeholders of public secondary schools should initiate income generating activities in schools and community support to school management in order to create a reliable source for teachers' motivation.
- ii. Teachers should be placed on meaningful salary scale and given opportunities to further receive training in their various disciplines for better performance to be achieved.

References

- Adelabu, F. (2015). M.E (2005). *Social Science Research, Concept, Methodology and Analysis: 2nd Ed.* Uganda: Makerere university.
- Afullo, O.P.T. (2015). *Role of the Teacher in Management of student Discipline in public schools in Bondo District.* Unpublished Master's Thesis, Maseno University, Maseno.
- Allui, A. and Sahni, J. (2016), 'Strategic Human Resource Management in Higher Education Institutions: Empirical Evidence from Saudi', *Procedia - Social and Behavioral Sciences*, 235, 361-371.
- Alam, Z. and Farid, B. (2011). *A Handbook of Human Resource Management Practice.* London: Kogan Publishers.
- Azasu, S. (2013). *Incentive Plans Within Real Estate Firms – A Partial Review of Existing*
- Gorrell, W. and Dharmadasa, J. (2019), *A hand of Business Management.* Kampala: New vision printing House.
- Barongo, E.K. (2013). *The Role of Financial Incentives on Employees' Motivation in Financial.*
- Bennell, P. and Makyunuzi, Y. (2015). Teacher motivation and job satisfaction: a study employing the experience Sampling method. *Journal of Undergraduate Sciences*, 3(1), 147-154.
- Businge, P. (2014). *Development of your Staff*; (Online): Available. www.staffdevelopment.com.
- Campbell, M (2013). *Human Resource Management.* London: Thomson Publishing.
- Clarke, V. and Braun, V. (2013) Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26 (2). pp. 120-123. ISSN 0952-8229 Available from: <http://eprints.uwe.ac.uk/21155>
- Creswell, J. W. and Creswell, J. D. (2018). *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches.*(5th Edition). SAGE Publications, Inc.
- Delvecchio, D. and Wagner, N. (2017). *Managing Corporate Reward Systems and Its Applications.* New Jersey: Pearson, prentice hall.
- Davies, G. (2013). *The Quality of Primary Schools in different Development Context.* Paris: UNESCO.
- Davidson, E. (2015). *The Pivotal Role of Teacher Motivation in Tanzania.* Dares Salaam, Tanzania: HakiElimu Working Papers
- Deci, H , D., Singer, J.E. & Van Cott, H. (Eds). (2019). *Enhancing Organizational Edition.* San Fransisco: Jossey-Bass A Wiley Imprint.
- Gana, A. Band Bababe, F. B. (2011). *The Effects of Motivation on Workers Performance (A Case Study of Maiduguri Flour Mill Ltd.* Nigeria: Borno State.

- HakiElimu, (2018). *The Impact of the Implementation of Fee-Free Education Policy on Basic Education in Tanzania: A Quantative Study*: Website: www.hakielimu.org
- HakiElimu (2015). *Living and working of Teachers in Tanzania* www.hakielimu.org
- Hall, V. (2012). *Gender and Educational Management: Redefining Theory, Policy and Practice*. London: Paul Chapman Publishing.
- Glewwe, S. Henry, G. and Shaffer, V. (2016). *The Motivational Properties of Tangible Incentives*. Sage Jersey: Prentice Hall
- Juma, F. (2017). *Girls and Women Education in Kenya: Gender Perspective and Trends*. Nairobi: UNESCO.
- Kajubi, K. (2011). *Economic Survey Report*. Nairobi: Government Printer.
- Kajubi, H. (2011). *Performance, Capital Structure and Home Country: An analysis*. Malaysia. *Journal of Education and Practice*
- Lafasto, P. (2008). *School Improvement after Inspection. School and LEA Responses*. London: Sage Publications.
- Marketing Resource Center (2019). Human Motivation Management. *Marketing Review* 50(4), 370-396.
- Moleni, J. and Ndalama, G. (2014). *Strategic Compensation: A Human Resource Management Approach*, New Medium Scale firms Entrepreneurial Firms. *International Journal of Economics* 1(4)37-
- Ministry of Education and Culture (2014). *Joint review report of the primary Education Development Plan*. Government printers: Dar es Salaam.
- Muindi D.S (2012). *Equity in learning: The gender dimension*. Tanzania: Dar es salaam International University
- Matokeet, I. M. and Kabombwe, Y. M. (2015). *Understanding a Competency-Based Curriculum and Education: The Zambian perspective*.
- Muhammad, K. (2012). *Equity policy: A framework of Questions, Equity, Reality Issues and their Implications*: Cape Town: UTC Press.
- Mulenga, Y. and Kabombwe, F. (2019). *Elements of Education & Social Sciences (3rd Edition)*. London: Sage publications.
- Mullins. L.J. (2020). *Organisational Behaviour in the Workplace*, (12th Edition), Pearsons: Inc
- Mulwa, E. (2010). *The Image of Education in 21st Century*. <http://www.emergingpracticesineducation.co.ke>.
- Mutie, E. K. (2013). *Facet and Overall Satisfaction of Secondary School Administration and Teachers in Kitui District Kenya*. Unpublished M.Ed. Thesis. University of Saskat chewan, Saskatoon: Canada.
- Nadeem, E, Maurice, C. and Jese, G. (2011). *Teacher Motivation and Incentives in Malawi Centre for Educational Research and Training*. Lilongwe, Malawi: University of Malawi.
- Noah, G. (2018). *Enhancing Organizational Edition*. San Fransisco: Jossey-Bass A Wiley Imprint.
- Palmer, M. (2012). *Philosophy of Education. An Introduction to Concepts Principle and Practice*; Dar es Salaam: Dar es Salaam University Press.
- Olembo G.A. (2010). *Management in Education* . (2nd ed.). Nairobi: Educational Research and Publication -ERAP.
- Onuma, N. (2016). Principals Performance of Supervision of Instruction In Secondary Schools In Nigeria. *British Journal of Education* 4(3), 40-52.
- Ojokuku, N. (2011). *Managing Corporate Reward Systems*, Lagos: Pumarck Nigeria Limited Palmer, J. (2012). *Schools that Learn a Fifth Discipline Field book for Educators*. New York: Double Day Publishing Group.
- Platasa, L. Reklitish W. and Zimeras D. W. (2015) *Motivation and Work Behavior*. 7th ed Boston: McGraw-Hill.
- Robbins, S., Judge, T., and Sanghi, S. (2009). *Organizational Behavior (13th Ed.)*. New Delhi: Pearson Education.
- Rowan, G.A. (2016). *Philosophy and Education in Africa: An Introductory text for students of Education*. Nairobi: Trans Africa press.
- Saka, D. and Salman, Z. (2014). *An Introduction to History of Education (Revised Edition)*. Nairobi: University of Nairobi.

- Salanova, H.P and Kirmanen, G. (2010). *The World Crisis in Education.From the eighties*.New York: Oxford University press.
- Scheid, C.J. (2020). *The Bully in the Book and in the Classroom*. Toronto: The Scarecrow Press. Inc.
- Scott, L. W. (2013). *Motivation and Work Behavior*. 9thed Boston: Mc Graw-Hill.
- Sumra, J. J. G. (2014). *Human Resource Management Theory and Practice*. London: Palgrave Macmillan.
- Sharma, B.A. (2014). *Education in Africa*. New Delhi: Sterling Publishers Ltd.
- Spear, P, Reklitish, T. and Zimeras, U. (2010). *Defining and Measuring Productivity*. SAGE Publications, Inc.
- Sylvia, D. and Hutchinson, B (2014).*Enhancing Organizational Edition*. San Fransisco: Jossey-Bass A Wiley Imprint.
- Tanzania Public Service Pay and Incentive Policy, 2014).*Ministry of Education, Science and Technology: Education Sector Development Plan (2016/17 – 2020/21)*.Tanzania Mainland.
- Too, R. (2018). *Economic Survey Report*. Nairobi: Government Printer.
- Teacher Service Commission, (2012). *Kenya Education Report*. Nairobi: Government Printer.
- United Nations (2015). The *Quality Imperative;Education For All*. EFA Global Monitoring Report, Paris: France.
- Walberg's, F. C. (2002). *Managing Human Resources Productivity Quality of Work Life and Profit*. New York: McGrain Hill.
- Wilson, P. (2019). *Planning Teacher Demand and Supply*. Paris: UNESCO.
- World Bank, (2018).*World Development Report*. New York: Oxford University Press.
- World Bank, (2017). *World Development Report*. New York: Oxford University Press.
- Zamboni, J. (2020). *What is the Meaning of Sample Size?*. *Sciencing.com*. Amazon Book Clubs, Amazon Ware House.



Effectiveness of Education Curriculum in Promoting Self Employment among Form Four Secondary School Leavers: A Case of Arusha District Council

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Abstract: *The study assessed the Effectiveness of Education Curriculum in Promoting Self Employment among Secondary School leavers in Arusha District Council. The objectives were to; examine the effectiveness of current secondary education curriculum to support self-employment among Secondary School leavers and to identify the shortcoming of current secondary education curriculum in supporting self-employment among Secondary School leavers in Arusha District Council. Discovery Learning Theory guided the study. The sample size consisted of 97 respondents (82 Secondary School leavers, 6 village executive officers and 10 parents). Convenient, purposive and snowball sampling techniques was used to select the respondents. Descriptive survey design and mixed methods approach were employed. Questionnaire and interview guide were used to collect data. Validity was established through expert judgement. Reliability index($r = 0.860$) was obtained using Guttman Split-Half Coefficient. The credibility of qualitative data was ascertained by involving multiple analysis whereas dependability was established through details reporting of research process. Quantitative data was analysed using descriptive statistics in the SPSS version 25 and results were presented in tables of frequencies and percentages. Qualitative data was analysed alongside research questions. The findings revealed that the curriculum system of education does not prepare the students to acquire skills that would help them for self-employment and competitive international jobs. The study further established that the curriculum was too theoretical rather than practical. The study recommends the need for financial support, improvement of infrastructures and skills in ICT in secondary school curriculum in order to enhance quality education for self-employment.*

Keywords: *Curriculum, Self-Employment, Education, Arusha and School Leavers*

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1. Introduction

Education is considered as a powerful tool for empowering the youth with skills and knowledge essential

for personal and society development (Abdurakhmanova, et al., 2020). Besides increasing skills, formal education also increases the chances for an individual to either be employed or to employ him or herself (Dvoulety, 2018). Due to its importance on personal and national

development, education sector has been marked as a priority in almost all countries in the world (Ouma et al., 2017). Deliberate efforts are being undertaken by governments to ensure that the citizens are provided with quality education. One feature for quality education is its ability to enable individuals to be self-reliant. According to Muleka (2021) the idea of education for self-reliance aims at making one free from economic and cultural dependence on others. Thus, education at all levels should aim at liberating an individual through by providing skills and knowledge which will enable him or her to effectively function in the society.

The ordinary secondary education curriculum in Tanzania runs for four years (from form one to form four) and the average age for students to be enrolled into secondary education is 14-17 years (Abdulrahman, 2018). There are seven core subjects which every student has to study across the four years. These subjects include basic mathematics, Kiswahili language, English language, civics, history, biology and geography (URT, 2017). Other subjects include Physics, Chemistry, Bookkeeping, Commerce and Agriculture, which are studied depending on the school philosophy and students' options. All these subjects are aimed at preparing the students to join the world of work by equipping them with abilities for self-study, self-confidence, self-advancement in new frontiers of science and technology, academic and occupational knowledge and skills (URT, 2015). Thus, after completing secondary education, one is expected to have accumulated academic, social and technological skills which would enable him or her to join the world of work by either being employed by others or self-employed. However, there is no adequate research on whether individuals who complete secondary education have the required skills for self-employment so as to respond to the challenges of unemployment in the country.

According to Leonor (2018), Unemployment among Secondary School leavers and university graduates is now a major problem. For instance, in Tanzania, youth unemployment, especially in urban areas, is alarming (Balvanz, 2019). Due to lack of employment opportunities in the country, Secondary School leavers need to become self-employed for them to earn their living. The issue is how well secondary education has provided them with the necessary knowledge and skills for successful self-employment. Thus, there was a need for a study on the effectiveness of education curriculum in promoting self-employment among Secondary School leavers in Arusha District Council.

1.1 Research Questions

The study was conducted to provide answers to the following research questions:

- i) How effective does the secondary education curriculum prepare Secondary School leavers for self-employment?

- ii) What are the shortcomings of the current secondary education curriculum in enhancing self-employment skills among Secondary School leavers?

2. Literature Review

2.1 Discovery Learning Theory

Discovery Learning Theory was developed by Jerome Bruner (1960). The theory sees learning to be inquiry based whereby learning takes place in problem solving situation where the learner uses his or her own past experience and existing knowledge to discover facts and relationships to be learnt. According to the theory, learners interact with the world by exploring and manipulating objects and performing experiments. This helps the learner to remember the concepts and develop critical thinking rather than rote learning.

The theory calls for teachers and learners to work together on different tasks for effective learning (Dvoulety, 2018). Therefore, the theory upholds that effective learning takes place through a positive interaction between learners and teachers during the teaching and learning process. Furthermore, the theory puts forward that the teachers should allow learners to discover new things by themselves instead of feeding them with everything. Learners should be given opportunities to complete meaningful tasks using a number of activities, including role play and solving real live problems. By emphasizing the importance on active involvement of learning in the teaching and learning process, the theory calls for teachers to use learner centered pedagogy while teaching.

2.1.1 Application of the Theory to the Current Study

The theory is relevant to the current study because it emphasizes the application of learner centered pedagogy that will enable the learners to discover different skills which will enable them to be well adapted in their environments and thus that the skills and knowledge learnt in school can be applied in real-life situation. Therefore, the theory helped the researcher in determining whether secondary education curriculum enabled the Secondary School leavers to be skilled on self-employment.

2.2 Contribution of the Current Secondary Education Curriculum for Self-Employment

In Australia, Jackson and Bridgstock (2021) conducted study to investigate what actually works to enhance graduate employability. The study found out that embedded and extra-curricular internships, as well as

extra-curricular activities were considered more useful for gaining experience and skills and believed to be important for enhancing employability among graduates. The study by Jackson and Bridgstock (2021) showed positive effect of embedded and extra-curricular internships and extra-curricular activities. That means, curriculum should consist of such activities that will help students to gain experience and skills which are very important to make them employ themselves after graduation.

In the early 2000s Tanzania reformed her curricula at primary, secondary and teacher education levels in order to provide education that prepares individuals who can fit into today's world of work and who can cope with the rapidly growing socio-economic, scientific and technological developments, which are taking place at global, regional, and national levels (Ministry of Education and Vocational Training (MoEVT, 2007a, 2007b). This reform involved a change from content-based teaching to be underlined by a shift in paradigm from traditional to a more progressive view of education. The traditional view, which underpins content-based curricula) focuses on knowledge acquisition as the main goal of education. This view leads to a classical concept of knowledge as school-based or discipline-based, and does not insist on the integration of school knowledge and real life situations.

In Tanzania, Mayega (2020) conducted study to explore stakeholders' views of vocational education and training in promoting diverse job skills to Secondary School leavers in Tanzania: A case of Dodoma Municipality. The study revealed out that current secondary school students were completing form four education with hardly any skills or competences for life application. Moreover, it also revealed out that students were dissatisfied with the on-going academic based-curriculum which did not meet their needs and interests. The study also concluded that vocation education and training subjects are needed in secondary school curriculum since the current education system has failed to equip students with diverse job skills that could make them compete in the world of work.

Wandela (2020) conducted a study to explore students' perception of higher education in selected universities in Tanzania. The study employed mixed research approach whereby data were collected from 53 respondents through questionnaire and interview in which purposive sampling technique was used to select sample. The study revealed that the education system does not provide students with the opportunity to develop critical thinking skills and originality important for employing themselves.

2.3 Shortcomings of Educational Curriculum in Guiding Secondary School Leavers for Self-Employment

Mahmood & Aziz (2018) conducted a study to analyse curriculum development process at secondary level:

Analysis of existing situation in Pakistan and proposing a model. The study employed quantitative research design using cross-sectional survey design whereby data were collected from 2200 respondents through using questionnaire, in which stratified random sampling technique was used to select the sample. The study revealed that curriculum was not based on the ideology of the country and students' abilities. Furthermore, the study revealed that adequate resources were not provided for the implementation of the curriculum.

Haryani et al., (2021) conducted a study in Indonesia to analyse teachers' resources for integrating the skills of creativity and innovation, critical thinking and problem solving, collaboration, and communication in science classrooms. Data were collected from 28 respondents through interviews and focus group discussion. The study found out that science subjects were integrated with learning skills and innovation. Mahmood & Aziz (2018) also found out that teachers use multiple resources to help them prepare for implementation of the skills of creativity and innovation, critical thinking and problem solving, collaboration, and communication into teaching practices, including various professional development (PD) programs, various teacher collaborations, curriculum guidelines, and open resources. The study conducted by Tugaraza (2015), with all of this considered, Tanzania has become one of the most progressive nations in Africa to implement special needs policy. Their policy on Disability as of 2012 emphasized that educators should be well versed on identifying students' developmental needs and being able to create a curriculum and classroom setting that is inclusive. The study by Haryani et al., (2021) showed Indonesian curriculum, all science subjects were integrated with skills of creativity and innovation which have positive effect on youth to be creative and have skills that help them to employ themselves after graduation.

Baghdady & Zaki (2019) conducted a study to explore secondary education governance in sub-Saharan Africa. The study adopted library research method whereby data were collected through reviewing different related articles and reports. The study found out that lack of funding, lack of necessary infrastructure in rural areas, lack of enough qualified and motivated teachers and education officers, the difficulty of implementing and institutionalizing effective accountability systems and the need for constant monitoring and evaluation were the reason for poor governance of education system. As Bertram (2012) explains, generally speaking, policy makers and government officials tend to conceive policies as a set of rational activities and assume that these are correctly implemented, whereas academic researchers may be more concerned with issues like complexity, re-interpretations or contradictions.

Catherine and Mkulu (2022) conducted a study to examine contribution of secondary education towards economic growth in Ngora District in Tanzania. The study adopted

mixed research approach using convergent parallel design whereby data were collected from 113 respondents through questionnaire and interview, in which both probability and non-probability sampling technique were used to select sample. The study found out that current secondary education curriculum do not provide practical application of the knowledge gained in classrooms that help students to possess creative and innovative skills.

3. Methodology

Descriptive survey design and mixed methods approach were employed. Questionnaire and interviewguide were used to collect data. Total population of 4335 that is, 2756 Secondary School leavers, 67 village executive officers and 1512 parents was targeted. The selection of sample was based on the Yamane (1967) formula of sample size which states: $= \frac{N}{1+N(e)^2}$
 Where: n= required sample size N=total population e= margin error (0.1 or 10%).

$$\text{Therefore: } n = \frac{N}{1+N(e)^2}$$

$$n = \frac{4335}{1 + 4335(0.1)^2}$$

$$n = \frac{4335}{1 + 4335 (0.01)}$$

$$n = \frac{4335}{1 + 43.35}$$

$$n = \frac{4335}{44.35}$$

$$n = 97.74 \approx 98$$

The total sample size was 98

Therefore, the sample size for the study consisted of 82 Secondary School leavers, 6village executive officers, and 10 parents selected from Arusha district council. The sample was representative of the population as suggested

by Denscombe (2014) that a sample of 20% cases and above can be representative in a descriptive study. Convenient, purposive and snowball sampling techniques as shown in table 1 were used to select the sample size.

Table 1: Sample Size Frame

| Respondents | Target Population | Respondents Participated | Sampling Procedures |
|----------------------------|-------------------|--------------------------|------------------------------------|
| Form-four Leavers | 2756 | 82 | Snowball Sampling |
| Village Executive Officers | 67 | 6 | Purposive Sampling |
| Parents | 1512 | 10 | Convenient Sampling |
| Total | 4335 | 98 | Snowball, Convenient and Purposive |

Source: Researcher, 2022

Validity was established through expert judgement while reliability was determined using spilt-half technique and reliability index, $r = 0.860$ was obtained using Guttman Split-Half Coefficient. The credibility of qualitative data was ascertained by involving multiple analyses whereas dependability was established through details reporting of research process. Quantitative data was analysed using descriptive statistics in the SPSS version 25 and results were presented in tables of frequencies and percentages. Qualitative data was analysed by content analysis alongside research questions.

4. Results and Discussion

Discussions of the findings were based on research objectives as follows:

4.1 Effectiveness of the Current Secondary Education in Supporting Self-employment among Secondary School leavers

The researcher asked participants (form four Secondary School leavers) to indicate whether the current curriculum is relevant for self-employment to ordinary level student leaders in Arusha District Council. The summary of the findings are presented in table 2.

Table 2: Quantitative Results Effectiveness of the Current Secondary Education Curriculum in Supporting Self-employment among Secondary School leavers

| Effectiveness of the Current Secondary Education curriculum | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | |
|--|----------------|------|-------|------|---------|------|----------|------|-------------------|------|
| | f | % | f | % | f | % | f | % | f | % |
| Equips leavers with skills needed in today's economy | 5 | 6.0 | 6 | 7.3 | 12 | 14.6 | 33 | 40.2 | 26 | 31.7 |
| Education equips leavers with skills which assure their job positions | 17 | 20.7 | 13 | 15.8 | 19 | 23.1 | 23 | 28.0 | 10 | 12.1 |
| Most of leavers are now employed in different companies | 21 | 25.6 | 26 | 31.7 | 11 | 13.4 | 12 | 14.6 | 9 | 10.9 |
| Prepares leavers for adult life | 19 | 23.1 | 22 | 26.8 | 20 | 24.3 | 11 | 13.4 | 10 | 12.1 |
| Helps leavers to engage in proper mastering business skills | 16 | 19.5 | 16 | 19.5 | 25 | 30.4 | 15 | 18.2 | 8 | 9.7 |
| Leavers are competent enough to receive satisfactory wages and salaries | 8 | 9.7 | 10 | 12.1 | 10 | 12.1 | 22 | 26.8 | 20 | 24.3 |
| Enhances Leavers with skills which enable them to compete in the international labour market | 2 | 2.4 | 4 | 4.8 | 5 | 6.0 | 33 | 40.2 | 30 | 36.5 |

Key: "f" stands for Frequency, "%" stands for Percentage

Source: Field data (2022)

The results in table 2 indicate that the majority of participants found that curriculum system does not effectively equip Secondary School leavers with skills needed in today's economy for self-employment. From the respondents, the results demonstrated that the curriculum system implemented in secondary schools contributes in creating a large number of dependants in the country. Numerically, the results demonstrated that 11(13.3%) of the respondents agreed with the statement, 12(14.6%) of the respondents were neutral while 59(71.9%) disagreed with the statement. According to the findings, it clearly shows that curriculum system of Tanzania education does not prepare the students to acquire skills that would help them to cope with today's economy, since it is memory oriented rather than skill oriented. These are supported by Catherine & Mkulu (2022) on the study to examine contribution of secondary education towards economic growth. The study also found out that there was low contribution in education achieved in secondary by Secondary School leavers which cannot cater for their economic income. The knowledge achieved

is limited to practical implementation of the knowledge gained in the classroom hence it does not equip secondary school leavers with skills needed in today's economy.

The findings show that for most secondary school four leavers, education doesn't equip them with skills which guarantee them employment in the competitive world today. Some of the Secondary School leavers who are employed are not competent in discharging their duties in their job position even if they are employed. These are in line with Mayega (2020) who conducted a study to explore stakeholders' views of vocational education and training in promoting diverse job skills to Secondary School leavers in Tanzania. The study revealed that current secondary school students were completing form four education with hardly any skills or competences for life application. Moreover, it also revealed that students were dissatisfied with the on-going academic based-curriculum which did not meet their needs and interests. The study also concluded that vocation education and training subjects are needed in secondary school curriculum since

the current education system has failed to equip students with diverse job skills that could make them compete in the world of work.

In addition, the findings show that 21(25.6%) of the respondents strongly agreed that most of the secondary school leavers are now employed in different companies, 26(31.7%) of the respondents agreed with the statement, 11(13.4%) were neutral while a total of 21(25.6%) held contrary opinion. The nays observed that those employed in different companies did not have basic skills in their field but they relied upon the company for further training. This finding is supported by Wandela (2020) who found that education system in Tanzania does not provide students with the opportunity to develop critical thinking skills and originality, which are important for self-employment. At ordinary level, the situation is not better because the curriculum emphasizes theory than practical skills.

On the sub-item education prepares secondary school leavers for adult life, a total of 41(49.9%) of the respondents agreed, 20(24.3%) were undecided, 11(13.4%) strongly disagreed and lastly 21(25.5%) disagreed with the statement. The respondents mentioned that form four Secondary School leavers learnt adult life after completing secondary school education largely due to personal experience. This is done through the community teaching different cultural practices that have positive impacts toward mastery of adult life (MoEVT, 2017). The curriculum system in Tanzania ordinary level, to a less extent, increases students' awareness, creates self-employment, increases innovation, enhances development, reduces crime and immorality and reduces poverty. To expound it further, Mahmood & Aziz (2018) conducted a study to analyse curriculum development process at secondary level. The study revealed that curriculum was not based on the ideology of the country and students' abilities. Moreover, the study revealed that resources were not provided for the implementation of the curriculum. Furthermore, the study revealed that, most of Secondary School leavers acquire life skills and knowledge after leaving the school since the education curriculum lacks sufficient skills and knowledge to curb the life challenges, especially economic situation.

Additionally, 16(19.5%) of the respondents agreed, 25(30.4%) were neutral, 15(18.2%) of the respondents strongly disagreed and 8(9.7%) disagreed that education helps leavers to engage in proper business mastering skills. Mastery of business skills among Secondary School leavers are more assisted in curriculum system through business subjects like book keeping and commerce. However, few students select these subjects in secondary school. Those who have selected the subjects do not give it the serious attention required for self-employment after school. This finding is in agreement with Hargreaves (2011) that reported Business subjects in school are pivot on skills development in students. For example, the teaching of Agricultural Science, Music, Physical

Education, fine Arts and Business studies were important to empower students in school on variety of skills in order to develop independent living skills. Mba, et al., (2020) concur with the findings in a study conducted to assess re-modelling curriculum in business education for gainful self-employment. The study established that business education curriculum should be practical and ICTs - based as this will be a solution to unemployment and poverty.

Secondary school leavers are competent enough to receive satisfactory wages and salaries received a total approval rating of 18(21.8%) while those who held contrary opinion were 42(51.1%). Only 10(12.1%) of the respondents were undecided. The respondents lamented that their wages were meagre and not commensurate with the current inflation. Through this, it clear that the school curriculum does not prepare the leavers to be competent enough to receive satisfactory wages and salaries. The school system did not prepare Secondary School leavers for better remuneration when employed. To say the least, the employers also do not value the knowledge possessed by Secondary School leavers while giving wages and salaries. These are in line with Baghdady & Zaki (2019) who found out that lack of funding, lack of necessary infrastructure in rural areas, lack of enough qualified and motivated teachers and education officers, the difficulty of implementing and institutionalizing effective accountability systems and the need for constant monitoring and evaluation were the reasons for poor governance of education system. The study further reported that, these difficulties in implementing secondary school curriculum make Secondary School leavers to receive unsatisfactory wages for self-employment; therefore most of them remain dependants.

On the statement education enhances secondary school leavers with skills which enable them to compete in the international labour market, 6(7.2%) of the respondents disagreed, while 5(6.0%) of the respondents were undecided. However, 66(76.7%) of the respondents disagreed. High number of respondents disagrees with the statement because the system does not prepare the students to work effectively in international jobs and vacancies. In Arusha District Council, the researcher found that many Secondary School leavers graduated at ordinary level secondary education are unable to compete in the international labour market. The situation causes them to suffer from unemployment because they are not able to engage in different microeconomic activities in the district and beyond. To put it in the right context, Hoxhaj (2018) found that unemployment was caused by youth's failure to bridge the gap between the labour market requirement and the skills acquired in school. In addition, during the interviews on the Effectiveness of the Current Secondary Education Curriculum in Supporting Self-employment among Secondary School leavers, local leaders and parents pointed out that;

“Although the current curriculum is too theoretical and does not help student to be

innovative and creative, it has some positive aspects for the Secondary School leavers. Such aspects are sources of knowledge among the children, promoting cultural heritages and source of good moral values in the society. However, students employment when they complete school is a question of how they put into practice different skills such as reading, writing & counting and ability to develop self-confidence especially in order to compete fairly with others in the global market” (personal interview, 25th May, 2022).

Therefore the information obtained while collecting qualitative data from local leaders and parents suggest that the current curriculum is not entirely bad. It has some good aspects such as reading, writing and counting skills. In as much as it requires some improvements, the good aspects should be retained. In support of the finding, Datzberger (2018) argued that secondary school curriculum, was not

attuned to the needs of the local economy and, in its present form, also not designed in a manner to provide useful employment skills. The study reported that, secondary education curriculum provide most of the learners with aspects of history and basic skills but it lacks the important knowledge and skills for self-employment among Secondary School leavers.

4.2 Findings on the Shortcomings of the Current Secondary Education Curriculum in Enhancing Self-Employment Skills among Secondary School leavers

The researcher investigated the shortcomings of the current secondary education curriculum in enhancing self-employment skills among Secondary School leavers in Arusha District Council. The summary of the findings are presented in table 3.

Table 3: The Shortcomings of the Current Secondary Education Curriculum in Enhancing Self-employment Skills among Secondary School leavers

| Shortcoming of Secondary Education Supports Employment to Secondary School leavers | Strong Agree | | Agree | | Neutral | | Disagree | | Strong Disagree | |
|---|--------------|------|-------|------|---------|------|----------|------|-----------------|------|
| | f | % | f | % | f | % | f | % | f | % |
| Education is too theoretical rather than practical | 43 | 52.4 | 30 | 36.5 | 9 | 10.9 | 0 | 0.0 | 0 | 0.0 |
| Poor learning environment and facilities | 23 | 28.0 | 31 | 37.8 | 19 | 23.1 | 5 | 6.0 | 4 | 4.8 |
| Learners acquire partial required knowledge | 21 | 25.6 | 26 | 31.7 | 11 | 13.4 | 12 | 14.6 | 9 | 10.9 |
| Education does not meet the requirements of the fast growing science and technology | 50 | 69.9 | 20 | 24.3 | 10 | 12.1 | 1 | 1.2 | 0 | 0.0 |
| Education prepares job seekers and not job creators | 32 | 39.0 | 22 | 26.8 | 26 | 31.7 | 1 | 1.2 | 1 | 1.2 |
| Business education is not given enough priority in secondary school curriculum | 29 | 35.3 | 19 | 23.1 | 21 | 25.6 | 11 | 13.4 | 2 | 2.4 |
| Mismatch between learning activities and the needs of the labour market. | 40 | 48.7 | 30 | 36.5 | 10 | 12.1 | 2 | 2.4 | 0 | 0.0 |

Source: Research Field (2022)

Education is too theoretical rather than practical received approval as follows; 43(52.4%) strongly agreed, 30(36.5%) agreed, 9(10.9%) were neutral. It is important to note that none of the respondents voiced their opinion to the contrary. From the foregoing, it is crystal clear that

indeed the current education system is majorly theoretical with little practical if any. The findings showed that the curriculum of secondary education prepare Secondary School leavers to be employed simply because it is theoretically oriented. It prepares the Secondary School

leavers to memorize but not to practice. The government, together with other stakeholders should prepare ordinary curriculum based on practically oriented skills.

On poor learning environment and facilities, the study found that environmental condition is not favourable for learning and teaching activities in secondary ordinary level. In fact, the researcher was informed of congestion of students in schools, inadequate infrastructures and dilapidated facilities. All these negatively affected the learner's ability to acquire right skills needed in the contemporary society today. The findings are in agreement with study by Makunja (2016) who found that, teachers faced a variety of challenges which impeded on effective implementation of teaching and learning. Therefore educational planners should ensure that areas planned for construction of schools should be spacious enough to accommodate rooms for life skills necessary for self-employment.

In addition, on learners acquire partial knowledge, was strongly supported by 21(25.6%) of the respondent, 26(31.7%) of the respondents agreed, 11(13.4%) were neutral with the statement while 12(13.4%) indicated strongly disagree and the last 9(10.9%) disagreed with the statement. The findings from Secondary School leavers especially in Arusha District Council painted the picture that students acquire partial knowledge which is not adequate to help them cope with the life after completing secondary schools in case of lack of employment. They fail to be innovative and creative in their surrounding environment to engage in different economic activities. The current education system does not meet the requirements of the fast growing science and technology was strongly supported by 50(60.9%) of the respondents, 20(24.3%) agreed while 10(12.1%) were neutral. The development of science and technology in today's world requires serious review in the education provided to the students. In short, education curriculum in Tanzania doesn't meet the demand for science and technology (Brocco and Giorgio, 2016). Consequently, it prepares jobless and complainants form four Secondary School leavers for the simple reason that the curriculum is outdated and does not withstand today's demand. During interviews, local leaders observed that, it is time for curriculum review in secondary school ordinary level education.

Moreover, another statement provided by the researcher to the respondents was on business education. After assessing the knowledge of Secondary School leavers, the researcher observed that Business education in secondary school curriculum system does not emphasis much on business knowledge. Many students do not like to study these subjects since it has low motivation. There is a general believe that initiating business requires big capital which most Secondary School leavers do not have. The government together with ministry of education and vocational training should take into consideration the need

to make students motivated to study business subjects. This is supported by Wandela (2020) who noted that, not only secondary education curriculum but also higher education is too theoretical that does not help student to be innovative and creative such that students are incapable of competing in business and entrepreneurship which are the major activities for self-employment.

Lastly, regarding mismatch between learning activities and the needs of the labour market, 40(48.7%) strongly agree with the statement, 30(36.5%) agreed, 10(12.1%) of the respondents were neutral and 22(2.4%) strongly disagreed. System of education in Tanzania did not prepare the beneficially to meet the demands of labour market especially international labour market. In agreement with the findings, Cobbold (2017) reported the reasons for the failure of an educational program include lack of appreciation of the implication of phenomenon of curriculum implementations as well as pre-implementation preparation by both experts outside the schools system and educators. Therefore, learning outcomes should match with the needs of labour market in order for the education curriculum to be relevant.

The respondents remarked that secondary school curriculum should consider entrepreneurship skills. In this regard, 37(45.1%) of the respondents mentioned that in order to promote self-employment among Secondary School leavers, the curriculum should be Competence based, 57(48.7%) of the respondents highlighted that curriculum should be based on practice rather than theoretical to emphasis more learning by doing rather than learning by memorizing. In agreement with the findings, Malik (2018) in a study conducted in Indonesia revealed out that curriculum should focus on themes and students should tackle issues collectively instead of teaching subjects in isolation and focusing on the mastery of contents.

Moreover, 40(48.7%) of the respondents mentioned that secondary school curriculum should implement knowledge in agriculture as a major economic activities practiced in Tanzania. The national statistics show that more than 80% of the country's population depend on agriculture. Consequently, the respondents observed that the curriculum should encourage agricultural activities. In addition, 43(52.4%) of the respondents mentioned that secondary school education should be based on establishments of Projects, different projects like vocational project to make sure students are more productive after leaving secondary school. The last group of 41(50.0%) of the respondents remarked that curriculum should be based on innovation;, meaning innovation should include the improvement of science and technologies as a mother of innovation and discoveries.

5. Conclusion and Recommendations

5.1 Conclusion

The findings expounded that the current curriculum does not meet the demands of Secondary School leavers since it is more theoretical rather than practical, poor learning environment and facilities, learners acquire partial required knowledge and education does not meet the requirements of the fast growing science and technology. Similarly, the study established that education prepares job seekers and not job creators, business education is not given enough priority in secondary school curriculum, there is mismatch between learning activities and the needs of the labour market, increase dependent and curriculum does not match with world market. Consequently, curriculum does not prepare students to be self-employed. All these cause underdevelopment among the Secondary School leavers.

Basing on the findings, it was found that there is a need of curriculum reforms so as to prepare students to be self-employed. The current curriculum should be updated with the world of science and technology. It should emphasize more in learning by doing. It should focus on entrepreneurship skills, innovations, comprises and focuses on business subjects and science subject should be given priority. However, even for arts subjects, a favourable curriculum would pave the way for gradual mind revolutions among the Secondary School leavers in Tanzania.

5.2 Recommendations

The Ministry of Education and Vocational Training should work out in making changes in current curriculum to cope with the world of science and technology because today's world is the world of innovations and discoveries. Computer skills and information technology should be considered in the curriculum. This may help the Secondary School leavers to be self-employed and reduce youth unemployment. Furthermore, agriculture, business, entrepreneurial and innovative skills should be prioritized in the curriculum. Entrepreneurship and encouraging income-generating activities in schools is the best practice in enhancing entrepreneurship education in secondary schools.

References

Abdulrahman, A. (2018). Implication of Motivation Theories on Teachers Performance in the Context of Education System in Tanzania. *International Journal of Secondary Education*, 6(3), 46. <https://doi.org/10.11648/j.ijsedu.20180603.11>.

Abdurakhmanova, et al., (2020). Unemployment among younger and older individuals: Does conventional data about unemployment tell us the whole story? *Journal for Labour Market Research*, 52(1), 3. <https://doi.org/10.1186/s12651-018-0237-9>.

Baghdady, A., and Zaki, O. (2019). *Secondary education governance in sub-Saharan Africa*. Qatar: World Innovation Summit for Education.

Balvanz, P., et al (2019). Microfinance and health interventions: Factors influencing loan repayment success with young men in Dar es Salaam, Tanzania. *Journal Global Public Health*, 14(2), 254–270. <https://doi.org/10.1080/17441692.2018.1501079>

Bertram, C. (2021). *Bernstein's theory of the pedagogic device as a frame to study History curriculum reform in South Africa*. *Yesterday & Today*, 7, 1-11. Retrieved from, <http://www.scielo.org.za/scielo.php?pid=S22203862012000100002>.

Bridgstock, G. J. J. (2021). *Good education in an age of measurement: Ethics, politics, democracy*. Boulder, CO: Paradigm.

Catherine, H., & Mkulu, D. G. (2022). Contribution of secondary education towards economic growth in Ngara District, Tanzania. *International Journal of Educational Policy Research and Review*, 9(1), 14–26.

Cobbold, C. (2017). Moving from Page to Playground : The Challenges and Constraints of Implementing Curriculum in Ghana. *Journal of Research on Humanities and Social*, 2(17).

Datzberger, S. (2018). Why education is not helping the poor. Findings from Uganda. *World Development Journal*, 110(124–139).

Dvoulety, A. M. (2018). A neglected opportunity: Entrepreneurship education in the lower high school curricula for technology in South Africa and Botswana. *African Journal of Research in Mathematics, Science and Technology Education*, 2018.

Denscombe, O. (2014). Determinants of Self-employment With and Without Employees. *Journal Empirical Findings from Europe*, 19, 405–426.

Hargreaves, G. (2011). Instructional leadership challenges and practices of principals in rural schools.

- Journal of Research and Rural Education*, 34(2), 1-21.
- Haryani, E., et al., (2021). Analysis of Teachers' Resources for Integrating the Skills of Creativity and Innovation, Critical Thinking and Problem Solving, Collaboration, and Communication in Science Classrooms. *Journal Pendidikan IPA Indonesia*, 10(1).
- Hoxhaj, M. (2018). Youth Unemployment in Albania, Causes and Consequences on Euro Economical. *Euro Economic Journal*, 3(18).
- Jackson, D., and Bridgstock, R. (2021). What actually works to enhance graduate employability? The relative value of curricular, co-curricular, and extra-curricular learning and paid work. *Journal of Higher Education*, 81(4), 723–739.
- Leonor, M. D. (2018). *Unemployment, Schooling and Training in Developing Countries*. Tanzania, Egypt, the Philippines and Indonesia. Routledge.
- Mahmood, M., & Aziz, S. (2018). Curriculum development process at secondary level: Analysis of existing situation in Pakistan and proposing a model. *Journal of Research in Social Sciences*, 6(2), 64–82.
- Makunja, G. (2016). Challenges Facing Teachers in Implementing Competence-Based Curriculum in Tanzania: A case of Community Schools in Morogoro Municipality. *International Journal of Education and Social Science*, 3(5); 30-37.
- Maluleka, K. J. (2021). Education for self-reliance and its relevance to lifelong learning in the previously colonized countries. *International Journal of Lifelong Education*, 40(2), 129–141. <https://doi.org/10.1080/02601370.2021.1899320>.
- Mayega, J. L. (2020). Stakeholders' Views of Vocational Education and Training in Promoting Diverse Job Skills to Secondary School leavers in Tanzania: A Case of Dodoma Municipality. *Ruaha Journal of Arts and Social Sciences*, 6(1), 113–131.
- Mba, R. N., et al (2021). Re-modelling Curriculum in Business Education for Gainful Self-Employment in Nigeria. *Journal of Educational Realities-JERA*, 11(1), 1–7.
- Ministry of Education and Vocational Training (2007a). *Curriculum for diploma in teacher education programme in Tanzania (Edition of 2013)*. Dar es Salaam, Tanzania: Government Press.
- Ministry of Education and Vocational Training (2007b). *Curriculum for ordinary level secondary education in Tanzania (Edition of 2013)*. Dar es Salaam, Tanzania: Government Press.
- Ministry of Education and Vocational Training (2011). *Taarifa ya utafiti kuhusu kushuka kwa kiwango cha ufaulu wa mihani wa kidato cha nne 2010*. Dar es Salaam, Tanzania: MoEVT.
- Muhangi, G. T. (2019). Secondary education in Uganda: Resource mobilization and efficiency. *Journal of Education and Practice*, 10(20), 79–90.
- Ouma et al., (2017). "Children with Language Impairment in Tanzania: A Qualitative Study about How Special Education Teachers Experience Working with Children with Language Impairment in Pre-Schools. Norway: Norwegian University of Science and Technology.
- Tungaraza, F. D. (2012). "Sixty Years of Special Needs Education in Tanzania: Celebrating Audacity, Commitment and Resilience". *Journal of Education*, 2(12).
- United Republic of Tanzania. (2015). *Sera ya elimu na mafunzo [Education and training policy]*. Dar es Salaam, Tanzania: Government Press.
- United Republic of Tanzania. (2017). *Elimu kwa Jamii [Education to the Society]*. Dar es Salaam, Tanzania: Government Press.
- Wandela, E. L. (2020). Students' Perception of Higher Education: What Selected Universities in Tanzania. *Journal Jordan University College*, 22(11–2), 11–3.



Influence of Guidance and Counseling Services on Teacher's Job Performance in Public Secondary Schools in Arusha District Council

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Abstract: This study investigated the influence of guidance and counseling (G&C) services on teacher's performance in public secondary schools in Arusha District Council. The objectives of the study were to; identify teacher's behavior that requires G&C services in public secondary schools and examine G&C services offered to teachers that influence their performance in public secondary schools in Arusha DC. Cross sectional survey design and mixed methods approach were employed. Behavioral Theory guided the study. Sample size of 116 (105 teachers from 5 schools selected by simple and stratified random sampling technique and 4WEO, 5 school heads, one TSC officer and one DSEO purposively selected) respondents. Questionnaire was used to collect quantitative data while interview guide was used to collect qualitative data. Validity was established through expert judgment whereas reliability was determined using test-retest technique and reliability index, $r = 0.76$, was obtained using Guttman split-half. Descriptive statistics was used to analyze quantitative data in the SPSS version 20 and results were presented in charts. Qualitative data were analyzed thematically alongside the research questions and presented in narrative forms. The findings revealed that teacher's absenteeism, unethical dressing style, lack of respect, unethical language, lack of commitment, sexual misconduct, lack of dedication, alcoholism, corruption and drug abuse requires G&C services. In addition, the G&C services on conflict management, effectiveness in work performance and against bad behavior influence teacher's performance. The study recommended G&C services on physical, mental, emotional and social stress as the mitigating measures to increase teachers' performance.

Keywords: Guidance, Counseling, Performance, Teachers and Schools

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1. Introduction

A teacher is a core and potential person for implementing the curriculum. In order for teachers to work efficiently, they need to be physically, mentally, economically, emotionally and socially at ease. Similarly, teachers need

to follow professional code of conduct (Onoyase, 2018). Teaching is a profession that calls for a high degree of discipline, ethics and morals. Claire (2018) reported a case of teacher's misconduct in Georgia who was fired after being caught drunk at school by his administrator. The teacher was found reclined on the chair with both feet on the desk and was asleep in class while students were

attending to their lesson. Tao (2016) conducted a study on teacher's absenteeism as one of the misconduct which needs guidance and counseling services so as to enhance teachers' performance. Absenteeism is among the chronic misconduct in developed and developing countries.

Guidance and counseling (G&C) are two closely related terms; Guidance is the process of showing the right way for an individual to fulfill certain targets (Subasinghe, 2016). According to Collins (2017) counseling is a professional relationship between the trained counselor and the client aimed at helping the latter to solve problems. Teachers Service Commission (TSC) has reported to have fired 52 teachers after they were found guilty of misconduct. According to TSC, those teachers received a strict disciplinary hearing by the commission between July 2019 and December 2020. The report indicated that most of them were male teachers who were found guilty of sexual offences (Betweli, 2020). Katerega (2021) asserted that G&C services orient teachers to the school culture and introduce them to norms of the teaching profession.

Application of G&C services makes the teachers to realize their mistakes and therefore take corrective measures. Hogan (2018) argued that, the heads of school need to make use of G&C as well as other strategies early before the misconducts bring significant effects in job performance. G&C services in schools has been focused on students only, forgetting the core players in the process of implementing education curriculum that is, a classroom teacher who occasionally encounters challenges which minimize their efficiency in job performance (Ngumi et al., 2016). For example, when teachers are guided by the school head, some improve their behavior and possibly respond to the required professional conduct and ethics. It was therefore necessary to carry out a study to find out the Influence of Guidance and Counseling Services on Teachers' job Performance.

1.1 Research Questions

Give a preamble: The following research questions guided the study:

- i) What are the teachers' behavior that requires G&C services in public Secondary Schools in Arusha District Council?
- ii) What are the G&C services offered to teachers that influence their performance in public secondary schools in Arusha District Council?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was guided by Behavioral Theory.

2.1 Behavioral Theory

This theory is based on the belief that, behavior can be learnt and changed. Classical conditioning is one of the behavioral therapy that stems from early theorists, Ivan Pavlov's research, which focused on the effect of learned responses. For example, a dog salivating when hearing a bell is an indicator of behavioral change (Toshalis, 2015). Similarly, effective guidance and counseling would change the misconduct exhibited by a teacher. The effectiveness may be either after repeated guidance and counseling sessions or a single session of G&C.

2.1.1 Application of the Theory to the Current Study

The theory is applicable to the current study because it emphasizes shaping teachers' behavior through G&C services, which in turn can improve the job performance of teachers in public secondary schools. The theory can be used to enhance teacher's behavior. For example, Behavioral theory helps in work performance and changing in behavior through conditioning. In this case, if teachers with psychological stress are offered guidance and counseling services, they will most likely change their behavior.

2.2. Teachers Behavior that Requires Guidance and Counseling Services

Drunkenness is among the teachers' misconduct which need G&C services. Kwalevele (2016) pointed out that in the year 2004, the US department of education released a report that looked at sexual misconduct done by teachers in the classroom. The report concluded that roughly 10% of students experience sexual misconduct by their teachers.

Teachers' absenteeism is noted to be the leading common type of teachers' misconduct in public secondary schools. The study done by Nzeako (2016) found out that teachers absenteeism was the major problem facing effective running of institutions and teachers cannot teach their subjects properly and effectively. Therefore, this leads head teachers to apply G&C services to rectify the problem of teachers' absenteeism. The application of G&C has proved to be effective and efficient in other countries like Nigeria and Kenya. Sexual misconduct is among the most serious offences which teachers commit, especially male teachers. According to Ngung'u (2017), Sexual misconduct is a broader term that includes sexual abuse and also includes acts that are not criminal but against school ethical codes.

Jilanga (2016) conducted a study on indiscipline behavior among teachers in public secondary schools, in Bariadi town council. A total number of 61 sample that is, 50 teachers, 10 school heads, one DEO were included in the

study. Simple random and purposive sampling techniques were employed to select the respondents. The study found that teachers' indiscipline such as lateness to school, abusive language, unethical dressing and drug abuse are among the misconduct in public schools which affect the curriculum implementation. However, if the head teachers finds the strategies to deal with this misconduct, including the application of G&C, it will increase efficiency of teachers. A study done by Mfaume & Bilinga (2016) on the prevalence of teacher professional malpractice in Tanzania revealed that, absenteeism, abusive and violence behavior, sexual abuse were among the prevalent form of teachers malpractice in public secondary schools. The study concluded that teacher's malpractice is still a problem in rural and urban schools in Tanzania. Collaborative effort should be done by the government and other stakeholders in order to promote desirable behavior in schools.

Jilanga, (2016) adds that G&C services were among mitigation strategies which need to be applied to help teachers observe code of conduct. In Tanzania the code was developed by the Teachers Service Commission (TSC) an autonomous body under the president's office (United Republic of Tanzania, 2003). The code of conduct requires teachers to be responsible to children under their care, the community which surround them, the employer and the state. The study involved 75 respondents including TSC officer, DSEO, School Inspectors, teachers and students. Data were gathered using focus group discussion, interview, questionnaire, non-participant observation and documentary analysis. Temu (2020) in the study conducted in Tanzania pointed out that corruption is among the misconduct for teachers in public secondary schools and is one of the global issues. The study was conducted in public secondary schools to examine corruption in public schools. It was found that corruption in schools drops the quality of teaching and student learning outcome. The study pointed out that male teachers take advantage of female students to engage into sexual act for the sake of being assisted in their subjects during private tuition.

A related study by Mabagala (2017) was conducted on Prevalence of Teachers Professional Misconduct in Public Secondary Schools in Nzega District. The study was done in 10 selected public schools and sample of 150 respondents were included in the study, mixed research approach were employed and data were collected using closed and open-ended questionnaires. After the analysis of data it was discovered that there was sexual misconduct among teachers and students. According to Roberson (2015), all employers have employee absenteeism challenge. Employees' absenteeism is unapproved employee absence as well as approved absence in case where the approval was granted by the employer. Unauthorized absence from work without an acceptable reason or medical certificate during working hours constitutes either desertion or absenteeism (Mwesiga, &

Kireti, 2018). Absence without leave is the most common type of misconduct that employees commit and one of the strategies of dealing with teachers' absenteeism is application of G&C services. According to TSC discipline and punishment authority, teacher's absenteeism which does not exceed five days should be punished through a warning or restriction of Salary increment.

2.3 Guidance and Counseling Service Offered to Teachers that Influence their Performance

According to Nwino (2015), psychological Stress (physical, emotional, mental, and social stress) is also among the problem which public secondary school teachers come across. The study was carried on the Stress among Secondary School Teachers in Nigeria and Suggested Intervention. Descriptive survey design was employed and the study included all 20 public secondary schools with total respondents of 533 teachers that is, 212 male and 321 female teachers. The accessible population was 376 from selected schools, purposive and stratified sampling was used to obtain the sample. The results of the findings showed that the secondary school teachers had high level of stress and the difference in the level of stress was reported between male and female teachers. Male teachers had high level of stress than female teachers. Jarvis (2018) added by saying that stress reduce the work performance of teachers and the impact of poor work performance of a teacher is observed in student poor academic performance. The study recommended the use of G&C services on physical stress, mental stress, emotional stress and social stress as among the mitigation for stress management of teachers in Public secondary school in order to increase teacher 'performance.

Mgeni (2017) conducted a research on assessment of the availability of G&C facilities in secondary schools in Malaysia. The researcher used pure quantitative approach and description survey design to carry out the research; pilot was conducted to test validity and reliability of the instruments. Data was analyzed using percentages and descriptive analysis and the findings revealed that G&C services offered were educational guidance, career guidance and psychological and social guidance. Cooper et al., (2015), performed a study on Perceptions of Teacher Counselors on Assessment of Guidance and Counseling in Secondary Schools in Botswana Gaborone. The Qualitative approach was employed to explore the views of teacher counselors on the examination of G&C in secondary schools. The study found that if it can be observed, it can improve students and teachers attitudes. Students would take subject seriously and it would also encourage behavioral change among teachers. Nkechi (2016), conducted a study on the Role of G&C in Effective Teaching and Learning in Schools in Nigeria. The study used review research techniques because it is an opinion paper. The study acknowledges the fact that it is necessary

for counselors to build confidence of the child to trust him / her to be able to give him/her the rightful information needed in helping the child (students). The study recommended that: School children should constantly visit the guidance counselor for therapy if they have issues that are of burden to them. The guidance counselor should see the school child as his / her child, friend, and someone that needs help as in a medical doctor-patient relationship. The study extrapolates that this should also apply to school head – teacher relationship during G&C session in public secondary schools.

Teachers need various G&C services in order to increase job efficiency though most of the administrators neglect these services. Among the services is career related stress management (Steiner, 2021). Mabela (2016) studied the Role of School Management in Handling Career Related Stress among Secondary School Teachers in Tarime District Council. After the analysis of data the study found that male teachers, diploma secondary school teachers with four to seven years work experience have high career related stress and this is because most of them found themselves into the teaching professional unwillingly because they had no other option and teaching was the last choice. The most effective instrument to help these teachers adjust themselves to the teaching profession is application of G&C services.

Another service provided to teachers to increase job performance is financial related stress management. Magwa (2015) pointed out that financial related stress is among the problems which face most of the teachers in public secondary schools. The study was conducted on the causes of financial stress and intervention strategies used by teachers in public secondary Schools in Nakuru County, Kenya. The study adopted descriptive survey design, stratified, purposive, and simple random sampling to select the study sample. Data were gathered using questionnaire. After the analysis of data, the finding revealed that financial worries are a leading stress factor among teachers and can affect mental wellbeing, which in turn leads to health problems as well as affecting work attendance and performance. Asiano (2017) further states that teachers experience financial stress but do not seek professional G&C services, the study recommended that teachers should be provided with G&C services as a mitigation measure against financial stress.

Greenberg (2016) pointed out that the reason for teachers' financial stress among others are due to high debt from Bank and SACCO'S loans, and diseases in the family to the extent of being powerless to sustain daily expenses. The effect of this is unsettled mind and poor attendance as well as poor job performance. When employee experience increased financial related anxiety, stress level increase and manifest in poor performance or missed days at work. Therefore, there is need to manage

financial stress in order to enhance teacher's work performance.

In Tanzania, public secondary school teachers experienced financial related stress. A study done by Thomas (2021) on the causes of financial stress among teachers in public secondary school in Ludewa District Tanzania revealed that public school teachers engage in bank and Sacco's loan beyond their ability. Some teachers have been taken to the court or sold their properties after being unable to pay bank loan thereby ending up with financial stress. The study suggested that teachers should seek advice from their supervisors before taking loans from any financial institutions.

Jonyo (2015) pointed out that the mitigation measure is for the school to have G&C committee to help teachers cope with various challenges but also teachers' employers and institutions to include financial G&C for teachers in the school programme to help teachers who do not have enough knowledge on financial management to utilize effectively their funds and avoid stress that can interfere with their performance.

3. Methodology

Cross sectional survey design and mixed methods approach was employed. This type of research design allowed the researcher to survey different number of schools in order to get information at one point in time. Creswell (2014) emphasized that cross sectional survey research design is good for collection of information in relatively short period of time and making prediction. Targeted respondents were 1112 from 33 public secondary schools, 1050 teachers, 27 Ward Education Officer (WEO), one District Secondary Education Officer (DSEO), one TSC Officer and 33 school heads. The researcher selected a sample size of 116 respondents (105 teachers from 5 schools selected by simple and stratified random sampling technique, 4 WEOs, 5 school heads, one TSC officer and one DSEO purposively selected. Questionnaire was used to collect data from teachers while interview guide was used to collect data from DSEO, WEO, and TSC Officer. Validity was established through research expert judgment on the area of study whereas reliability was determined using test-retest technique and reliability index, $r = 0.76$, was obtained using Guttman split-half. Credibility of qualitative data was ascertained by involving multiple analysis, whereas dependability was established through detailed reporting of the research process. Descriptive statistics was used to analyze quantitative data in the SPSS version 20 and results were presented in charts and tables, while qualitative data were analyzed thematically alongside the research questions and presented in narrative forms.

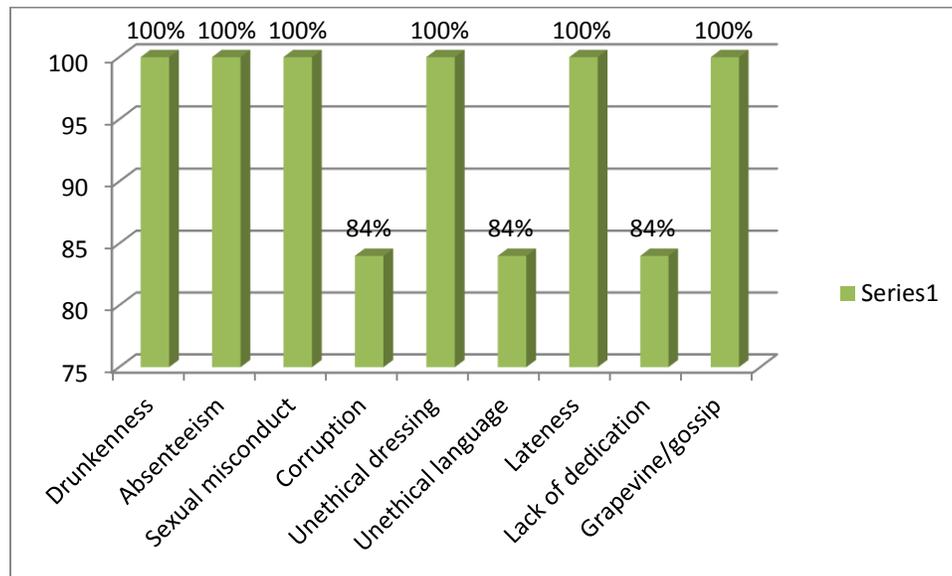
4. Results and Discussion

The findings were discussed with regard to research objectives as follows;

4.1 Findings on Teacher's Behavior that Requires G&C Services in Public

Secondary schools in Arusha District Council

The research question responded to was: What is the teacher's behavior that requires Guidance and Counseling services in public Secondary Schools in Arusha DC? The summary of the findings is captured in figure 1.



Source: Field Data (2022)

Figure 1: Teacher's Behavior that Requires Guidance and Counseling Services in Public Secondary Schools

Figure 1 presents teachers' responses on the teacher's behavior that requires G&C services in public Secondary Schools. All (100%) respondents agreed that drunkenness, absenteeism, sexual misconduct, corruption, unethical dressing, lateness and grapevine/gossip are some of the teacher's behavior that requires G&C services in public Secondary Schools. For instance, the researcher established that there are some teachers who are addicted to alcohol and drugs. Such an addiction requires concerted efforts that include G&C from school leadership. Therefore, education officials and TSC should help school heads to address the teacher's behavior. Claire (2018) reported a case of teachers' misconduct in Georgia who was fired after being caught drunk at school by the administrator. The teacher was found reclined on the chair with both feet on the desk and was asleep while students were in class. Therefore, drunkenness is a serious case that can make one be fired from his or her position.

Moreover, the researcher noted absenteeism, lateness and unethical dressing among teachers. At the time of collecting data, some teachers had not reported on duty while others reported late. Jilanga (2016) conducted a study on indiscipline behavior among teachers in public secondary schools, in Bariadi Town Council. A total number of 120 sample were included in the study, simple random sampling technique were employed, study found

that teachers' indiscipline such as lateness to school, abusive language, unethical dressing and drug abuse are among the misconduct in public schools which affect the curriculum implementation. However, if the head teachers find the strategies to deal with this misconduct, including the application of G&C, it will increase efficiency of teachers. At the time of collecting data, the researcher noticed a female teacher dressed in attire that was so demeaning to the teaching profession. Consequently, G&C was necessary to correct the female teacher. The study done by Nzeako (2016) found out that teachers absenteeism was the major problem facing effective running of institutions and teachers cannot teach their subjects properly and effectively. Therefore, this suggests that the head teachers should apply G&C services to rectify the problem of teachers' absenteeism.

About unethical dressing among teachers, the study found that 100% of the respondents opined that indeed teachers, particularly newly recruited female teachers, should be guided on the proper dressing code befitting teachers. Although one school head pointed out that some female teachers have formed the habit of putting on some funny attire, however, they normally conform to the expected dressing code when guided. The findings are also in

agreement with Behavioral Theory. The theory emphasizes shaping teachers' behavior through G&C services, which in turn can improve the job performance of teachers in public secondary schools (Toshalis, 2015).

Another study by Ngung'u (2017) also reported that sexual misconduct is among the most serious offence which teachers commit especially male teachers. Sexual misconduct is a broader term that includes sexual abuse and also includes act that are not criminal but against school ethical codes. In other words, in states where the legal age of consent is 16 it is not technically illegal for a school employee to have sexual contact with a student aged 16, however, sexual contact is prohibited by school policy. In support of the current study findings, in Tanzania, Teachers Service Commission (TSC) fired 52 teachers after they were found guilty of misconduct. According to TSC, those teachers received a strict disciplinary hearing by the commission between July 2019 and December 2020. The report indicated that most of them were male teachers who were found guilty of sexual offences (Betweli, 2020). In a related study by Mabagala (2017) on Prevalence of Teachers Professional Misconduct in Public Secondary Schools in Nzega District where data were collected using closed and open-ended questionnaires. After the analysis of data it was discovered that, there was sexual misconduct between teachers and students. However, the rate of occurrence is minimal due to various measures taken by the government through the TSC.

Additionally, 84% of the respondents singled out unethical language and lack of dedication as other teacher's behavior that requires G&C services in public Secondary Schools. Some teachers are fond of using foul language while addressing students even on minor mistakes that requires correction with love and care. Corruption as teachers' behavior that requires G&C was supported by 84% of the respondents. Indeed corruption is a vice that negatively affect the teaching profession. Through corruptions, examination standards are compromised, award of scholarship to students are skewed and effective curriculum implementation is hardly achieved. In concurrence with the findings, Taaliu (2017)

supported by pointing out that, in Kenya corruption among teachers includes extortion of money, teachers cheating by giving students exam in advance and bribery. In Tanzania Young citizens are made to believe that the best way of making it is through shortcut by bribery, nepotism and favoritism. On one of the solution the administrator should apply in public secondary schools is to use G&C especially to male teachers and students Mgeni (2017).

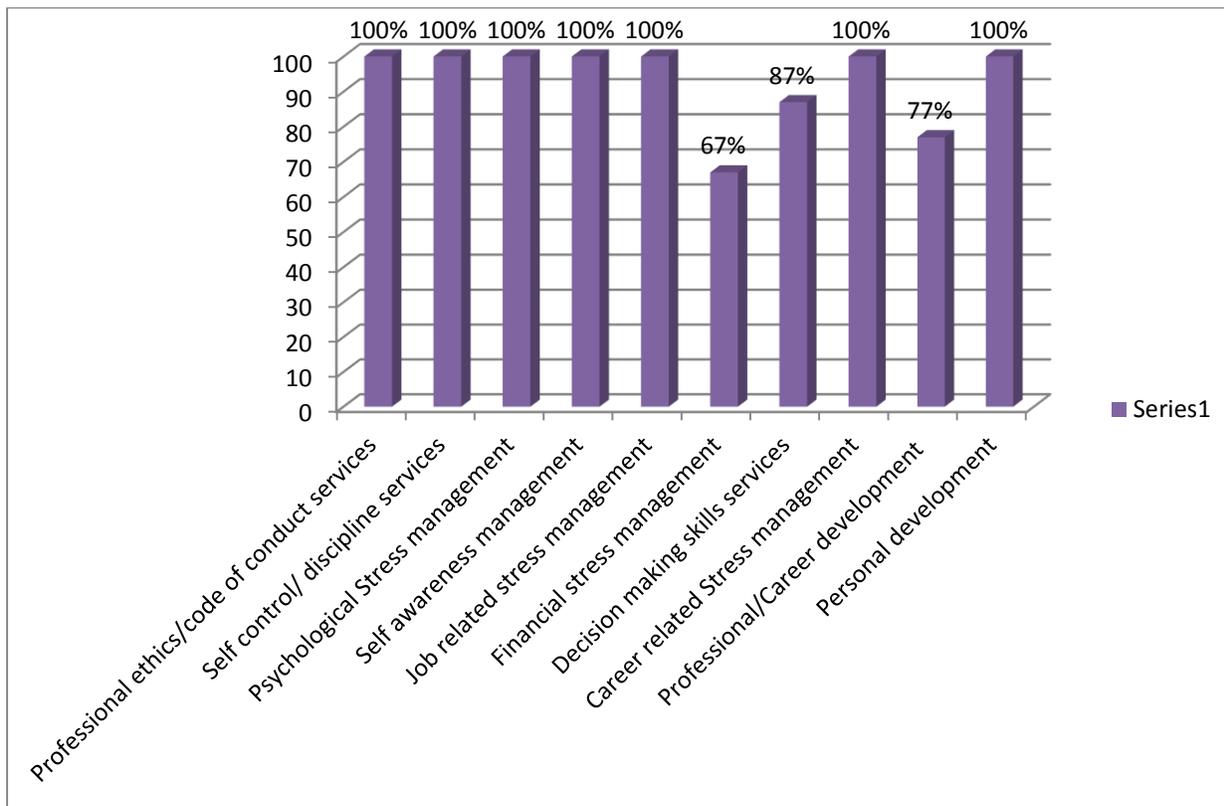
The findings from qualitative data on the theme Teacher's Behavior that require G&C the findings from qualitative data indicate that;

Teacher's absenteeism, unethical dressing style, lack of respect, unethical language, lack of commitment, sexual misconduct, lack of dedication, alcoholism, corruption and drug abuse requires G&C services (Personal Interview, 26th May, 2022).

This observation was made by DSEO. The respondent pointed out the teachers' behavior that requires G&C services in public secondary schools in Arusha district council. Another study by Kwalevele (2016) also reported that sexual misconduct is among the most serious offences which teachers commit, especially male teachers. According to Ngung'u (2017), sexual misconduct is a broader term that includes sexual abuse and also includes act that are not criminal but against school ethical codes. Therefore, the onus of good professional conduct is upon all teachers; female and male, old and young.

4.2 Findings on G&C Services Offered to Teachers that Influence their Performance in Public Secondary Schools in Arusha District Council

The research question responded to was: What are the G&C services offered to teachers that influence their performance in public secondary schools in Arusha district council? Figure 2 presents the summary of the findings.



Source: Field Data (2022)

Figure 2: Guidance and Counseling Services Offered to Teachers that Influence their Performance

In Figure 2 the findings show that, all(100%) of respondents indicated that, professional ethics/code of conduct, job related stress management and career related stress management are among the G&C service offered to teachers that influence their performance in public secondary schools. Teachers felt that G&C services will keep teachers abreast with professional requirement. From the open ended questions in the questionnaire, teachers admitted that there is a need to uphold professional ethics among teachers as captured in TSC code of conduct. This will help them increase their efficiency and effectiveness at work place. In support of the findings, Steiner (2021) reported that teachers need various G&C services in order to increase job efficiency though most of the administrators neglect these services. Among the services is career related stress management. Mabela (2016) conducted another related study on the Role of School Management in Handling Career Related Stress among Secondary School Teachers in Tarime District Council. After the analysis of data the study found that male teachers and diploma holder teachers with four to seven years work experience have high career related stress and this is because most of them found themselves into the teaching professional unwillingly because they had no other option and teaching was the last choice. The most effective mechanism to help these teachers adjust themselves to the teaching profession is application of guidance and counseling services.

Concerning professional ethics/code of conduct services, the study found that due to domestic and job related stress, some teachers forget to observe professional ethics. For instance, female teachers facing marital changes may opt to be uncooperative to colleagues, unsympathetic to students and suffer from burnout thus reluctantly implement curriculum. Similarly, due to domestic challenges such as family financial demands, male teachers may resort to misconduct such as taking too much alcohol and lack of respect for school leadership. On the other hand, newly recruited teachers may exhibit professional misconduct due to lack of knowledge on teacher's code of conduct. Therefore, the task is left to the school heads to use G&C services to help teachers fit into the system. In support, Mabagala (2016) conducted a study in Tanzania on prevalence of professional misconduct. The study aimed to investigate the prevalence of professional misconduct among public secondary school teachers in Nzega District. The findings indicated low teachers' professional misconduct. However, financial mismanagement, negligence of duty, and absenteeism were identified as the common professional misconduct acts in secondary schools in Nzega District. Nonetheless, the study showed that poor remuneration, failure to fulfill teachers' needs and lack of motivation were among the sources for teachers' the misconduct. Based on the findings, the researcher recommended to the government, through the Ministry of Education and

Vocational Training (MoEVT), to respond to teachers' needs in timely manner and conduct regular seminars on the teacher professionalism.

Regarding self-control/ discipline services, all (100%) respondents were in agreement that it is a necessary G&C service that can influence teacher's performance. In fact, the study established that mature and experienced teachers who observe self-discipline are able to guide others. Such teachers would help the management to guide the young members of the teaching staff. In other words, self-control is a virtue for maturity and the necessary experience in the teaching profession. The findings are also in agreement with Behavioral Theory. According to Toshalis (2015) Behavioral Theory helps in work performance and changing in behavior through conditioning. In addition, all (100%) respondents gave affirmative approval that G&C in secondary schools should be geared towards psychological stress management. Most teachers suffer silently from psychological stress as a result of poor health, economic constraint and working environment. To support the current findings Mabela (2016) conducted a study on Significance of Imparting G&C Programmes for Adolescent Students in India. The main objectives of the G&C programmes should be the maximum development of the individual and the entire programme should be organized keeping in mind this purpose. The study recommended that guidance should be conceptualized in a broader and more comprehensive and holistic view, incorporating vocational and other aspects of development, Provision of a systemic approach which analyzes issues within a broader social system. In the opinion of Atsuwe, & Achegbulu (2018) guidance should be a preventative activity while counseling fulfills a primarily curative function. Guidance and counseling should be an integral part of the education process and that more time and resources should be allocated G&C of both students and teachers in education institution.

Guidance and counseling given to the teaching staff should also be based on self-awareness management. In this regard, all (100%) of the respondents were in agreement. Every teacher should be able to effectively and efficiently manage their affairs. Ordinarily, teachers should take control of their behavior and conduct. As a trained teacher, one should understand his or her strengths and vice versa. On areas of their weaknesses, there is need to seek assistance and they should explore on their strengths. These findings were supported by Behavioral and Kantianism theory. Behavioral theory is based on the belief that, behavior can be learnt and changed. The theories can be used to enhance change behavior in teachers (Toshalis, 2015). For example, Behavioral theory helps in work performance and changing in behavior

through conditioning. In this case, if teachers with psychological stress are offered G&C services, they will most likely change their behavior.

A financial stress management skill has been a thorn to most employees. According to teachers, limited fiancés and tough economic times have caused unbearable stress in their financial management. Most (67%) of the respondents admitted that for sure G&C in financial management will help them improve first in managing finances and eventually in job performance. However, 33% of those with contrary opinion felt that not only G&C in financial management is needed but also financial assistance to the teaching staff will be appreciated. In agreement, Mabagala (2016) indicated that the teachers' professional misconduct was evidenced in most public secondary schools. However, financial mismanagement, negligence of duty, and absenteeism were identified as the common professional misconduct acts in secondary schools in Nzega District.

Furthermore, G&C services in decision making skills were supported by 87% of the respondents. However, only 13% of the respondents disagreed. The researcher found that some teachers are indecisive in making certain decisions that either affect them directly or affect the students. While responding to open ended questions, the respondents posited that teachers require adequate knowledge on decision making skills on how to handle cases involving students, parents and colleague teachers. For instance, a teacher should make the right decision on how to handle discipline case involving a student whose genesis is family conflict back at home. A respondent reported that in such a scenario, there is need to get more details from parents in order to make a fair decision concerning the student. Ability to make the right decision at the right time is a fundamental principle necessary for all teachers. In support of this finding and basing on Kantian theory of ethics which indicate that deciding whether an action is wrong or right, the intention of the action should be put into consideration. Professional/Career development as a G&C service is necessary to influence teachers' performance as supported by 77% of the respondents, while 23% held contrary opinion. Through G&C, comprehensive advice on career development was given to teachers. In the open ended questions, the respondents pointed out that there are less behavioral problems among the teachers in the school for those who have been properly inducted on professional/career requirements. The said teachers are more focused on career development and their performance has shown an increasing trend in performance as a result of G&C. In this regard, Ndambuki (2016) argued that proper development, coordination and implementation of the G&C services in schools assists teachers to understand their own growth and development and to acquire social and life skills that would enable them to fit into the society.

On G&C services offered on personal development, all (100%) of the respondents consented. The researcher was informed that some of the respondents, particular female teachers, have formed their own groups with leadership hierarchy whose mandate is to champion individual as well as group development. It is worth mentioning that the group has been robust in encouraging their male counterparts to emulate them. In most schools where primary data was collected, this group has received support from the leadership and school welfare association. In a nutshell, these findings are in agreement with Kant theory that argues, if someone is made happy in terms of personal development by hurting others, their happiness is morally bad. So we evaluate happiness by morality (Tluway, 2015). Having a morally good intention is pre-conditioned to happiness. The theory emphasizes teachers to think before they act on anything.

During the interviews, the findings from qualitative data on the theme Guidance and Counseling that Influence Teacher's Performance, a participant had this to put forth; G&C services offered that influence teacher's performance include; services on financial management, professional ethics, and family management, career related stress management, self-discipline and self-development (Personal Interview, 26thMay, 2022).

Therefore, in the views of TSC officer and school head, other guidance and counseling services offered include guidance in conflict management, guidance on effectiveness in work performance and against bad behavior. According to Maisha (2020), G&C is a process of helping an individual to become fully aware of his/her self and the ways in which the individual is responding to the influences of his/her environment. It further assists to establish some personal meaning for their behavior and to develop and classify a set of goals and values for future behavior.

5. Conclusion and Recommendations

5.1 Conclusion

The study concluded that the G&C services provided in public secondary schools include; job related stress management, management of finances, decision making skills services, and professional ethics. The study also found that teacher's absenteeism, unethical dressing style, lack of respect, unethical language, lack of commitment, sexual misconduct, lack of dedication, alcoholism, corruption and drug abuse require guidance and counseling services in public secondary schools. In addition, the study recognized that G&C services offered to teachers to influence their performance include guidance in conflict management, guidance on effectiveness in work performance and against bad

behavior. Therefore, guidance and counseling is a process of helping teachers to become fully aware of his/herself and the ways in which they are responding to the influences of their environment in order to improve their job performance in public secondary school in Arusha district council.

The study established that teachers, like other human beings are bound to make mistakes of omissions and commissions. However, when guided, some have improved in their behavior and subsequently in their job performance. Consequently, the study confirms that work cannot be accomplished without adoption of guidance and counseling services in school setting basically to influence teacher's performance.

5.2 Recommendations

Based on the research findings, the following recommendations are given forth;

- i. There is need to employ strategies such as monitoring of teachers in the process of supervision of curriculum implementation in order to enhance their job performance.
- ii. Heads of schools should use different strategies in curbing teachers' moonlighting problems such as teachers' folio inspection, provide incentives, special recognition and warning letters where necessary.

References

- Asiano, F.A. (2017). *Causes of Financial Stress and Intervention Strategies used by Teachers in Public Secondary Schools*. Kenya: Laikipia University.
- Atsuwe, B.A and Achegbulu, O.A. (2018). *The Influence of Guidance and Counseling on Academic Performance of Secondary Schools Student*. Makurdi Local Government Area, Benue State: International Journal of Educational Studies, 05 (02) 71-78.
- Betweli, O.K. (2020). *Curbing Teachers Misconduct in Public Primary Schools*. Sumbawanga Municipal and Rural District. Tanzania Head of Schools Strategies and Challenges..
- Claire, (2018). *School Discipline Laws and Regulations*. Formal Evidence Reporting of Conduct Violation: Georgia Co.ltd
- Collins, G.R. (2017). *Christian Counseling (3rded .)* Dallas: Thomas Nelson Publisher

- Cooper, M., Hough, M. and Loynd, C. (2015). *Scottish Secondary School Teachers' Attitudes Towards Guidance and Counseling*. Offprints/ECE2013_0392.pdf.
- Creswell, J.W. (2014). *Research Design: Qualitative, Quantitative, and mixed methods approaches*. New Delhi, India. Tata McGraw-hill Publishing Company Ltd.
- Nkechi (2016). Guidance and Counselling teachers in Nyamira district, Kenya: *Journal of Education and Practice*,
- Greenberg J.S (2016). *Comprehensive Stress Indent Management (7th Edition)*. USA: McGraw-Hill Higher Education.
- Hogan, T. Ricci, C. and Ryan, T.G. (2019). *Respecting Students: Abusive Classroom Teacher Verbal Behaviour*, *Journal of Pedagogical Research*, 3(3), 151-165 <http://dx.doi.org/10.33902/jpr.v3i3.139>.
- Jarvis, M. (2018). *Teacher Stress: A Critical Review of Recent Findings and Suggestions for Future Research*. <http://www.isma.org.uk/stressnw/teachstress1.htm>
- Jilanga, E. L. (2016). *Indiscipline Behaviour among Teachers in Tanzanian Public Secondary Schools: A Case Study of Bariadi Town Council*; Published Masters dissertation; The University of Dodoma.
- Jonyo, E.A. (2015). *Effects of Occupational Stress on Work Performance of Police Officers in Nakuru County*. *iosr journal of computer engineering* 6 (115-134).
- Katerega, A. et al., (2021). *Teachers' Handling of Ethical Dilema in Rubaga Division (Uganda): Complexities and Education Management*, *implication American journal of Education Research*, 9(4), 194-202.
- Kwalevele, J. (2016). *The Role of Head Teacher in the Provision of Guidance and Counseling in Community Schools in Bunda District*. *Management and Planning St. Augustine University Tanzania*
- Mabagala, M. (2017). *Prevalence of professional Misconduct in Nzega District Tanzania Public Secondary Schools*. *African Journal on Teacher Education*. ER.ajote.vil.3459, VoL- Do-10.21083
- Mabela, J. (2016). *Roles of School Management in Handling Career-Related Stress Among*
- Magwa, S. (2015). *Managing Sexual Abuse of Students by Teachers. A case study of Masvingo District Secondary Schools*. Zimbabwe: International Journal of Education Learning and Development, 2, (2), 11-21.
- Maisha, S. (2016). *Child Sexual abuse by Teachers in Secondary Schools in the Masvingo District, Zimbabwe: Perceptions of Selected Stakeholders*; Published doctorate dissertation, University of South Africa.
- Mgeni, L. D. (2020). *An Assessment of Stakeholders' Conception Towards Teachers' Professional Misconduct in Tanzania: the case of Njombe town Council*; (Published Master dissertation), The University of Dodoma.
- Mfaume, H. Bilinga, M. (2017). *Prevalence of Teachers Professional Malpractices in Tanzanian Public Secondary Schools: What ought to be done?* *Journal of Education and Training Studies*, 5 (2).
- Mwesiga, V. and Kireti, A. (2018). *Effective elements of new principal induction programs in large urban school districts*. (Doctoral dissertation). <https://thesis.cust.edu.pk>.
- Ndambuki, P. (2016). *Guidance and Counseling for Schools and Colleges*. Kenya: Oxford University Press.
- Ndung'u G.W. (2017). *Teacher Indiscipline and the Effectiveness of Disciplinary Measures Employed By Head Teachers in Public Secondary Schools*. Githunguri Kiambu County, Kenya (Doctoral dissertation, MA. dissertation, Kenyatta University. <https://ir.library.ku.ac.ke/bitstream/handle/123456789/18886/Teacher%20indiscipline..pdf>).
- Ngumi et al., (2016). *The Role of Guidance and Counseling Services in Enhancing Discipline in Secondary Schools*. Kobatek District: *Journal of Education and practice*. ISSN 2222-1735 (paper) ISSN 2222-288X Volm.7. No13
- Ngung'u, G. (2017). *Teachers Indiscipline and Effectiveness in Disciplinary Measures Employed by Head teachers in Public Secondary Schools*. Kenya: Githunguri Kiampa Count
- Nkechi, P. (2016). *Perceptions of teachers and school*

- management teams of the leadership roles of public-school principals. *South African Journal of Education*. 39(2), 1-14.
- Nwino, P.O (2015).Stress Among Secondary School Teachers in Ebonyi State, Nigeria: Suggested Intervention. Mileu: *Journal of Education and practice*/55N.2222, 1735 (paper) Vol.6, No 26, 2015
- Nzeako, H. (2016).*Stress Among Teachers in Secondary Schools: A Case of Selected Secondary Schools in Tarime District, Tanzania*. Dodoma: The University of Dodoma .<http://hdl.handle.net/20.500.12661/1240>
- Onoyase, A. (2018). *Principals' Perception of Misconduct among Secondary School Teachers in Delta State: Implications for Counselling Practice*; International Journal of Higher Education, 7(5) 150-157 <http://ijhe.sciedupress.com>
- Roberson, K.(2020). Effectiveness of Guidance and Counseling Services on Student Well Being. A Comparison between Public and Private Schools. Kilimanjaro Region.(Masters dissertation)
- Steiner, M., Steenkamp, D. and Tangi, F. (2021).*Relations of Corporal Punishment to Academic Results and Achievements in Secondary Schools in Tanzania*;International Journal of Education and Research, 7(8), 85-104.
- Subasinghe, W. (2016). *An Introduction on Educational Guidance and School Success in Highr Learning*. Moshi, Tanzania Safi Publisher and Trading.
- Taaliu, S.T. (2017).*Corruption in Schools and Universes in Kenya-Social Science*, 5,227-234. Source, <http://www.scrip.org/Journal/ss> doi.org/10.4236jss.2017.53020.
- Tao, S.(2016). *Applying the Capability Approach to School Improvement Intervention in Tanzania*. Institute of Education, London: University of London
- Temu, G.D. (2020). *Assessment of Teachers' Absenteeism on Pupils' Learning in Public Primary Schools*. Longido District: Masters Dissertation, Open University of Tanzania.
- Toshalis, M. (2015). *Make me Understanding and Engaging Student Resistance In School*. Cambridge , M.A: Harvad Education Press.
- Tluway, F. (2015). *The Contribution of Head of Schools in Curbing Teachers Misconduct*. Tanzanian Public Secondary Schools. University of Dodoma.
- Thomas, A. (2021). Perception of Secondary School Teachers on Sources of Stress and Strategies. A Case in Ludewa District Tanzania
- United Republic of Tanzania. (2003). *Education and Training Policy*. Ministry of Education and Culture; Dar es Salaam: Adult Education Press.



Conflicts among Teaching and Non-Teaching Staff and its Influence on their Work Performance in Public Secondary Schools in Arusha

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Abstract: This study investigated the conflicts among teaching and non-teaching staff and its influence on their work performance in public secondary schools in Arusha District. The objectives were to; identify the causes of conflict among teaching and non-teaching staff in public secondary schools and to find out the intervening measures on conflict among teaching and non-teaching staff in public secondary school in Arusha District. The study was guided by Conflict Theory. Concurrent triangulation research design and mixed methods approach were adopted. Sample size consisted of 169 where 110 teaching staff, 50 non-teaching staff, 5 school heads and 4 Ward Education Officers. Respondents were obtained through simple random sampling and purposive sampling techniques. Data collection was done through questionnaires, and interview schedule. Validity was established through expert judgment whereas reliability was determined using test-retest technique. Reliability index, $r = 0.75$, was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained through multiple analysts, whereas dependability was established through reporting of research process. Descriptive statistics was used to analyze quantitative data in the SPSS version 20 and results were presented in tables, while qualitative data were analyzed using content analysis. The results show that poor communication, discrimination, limited resources, intimate relationship, difference in opinions, overlapping responsibility and bad working environment are the main causes of conflict among teaching and non-teaching staff. The study recommended mediation, regular meetings, collaboration, seminar and workshops as measures to address conflicts among teaching and non-teaching staff in public secondary schools.

Keywords: Conflicts, Teachers, Performance, Schools, None-teaching Staff

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1. Introduction

Conflict is a struggle or contest between people with opposing needs, ideas, beliefs, values or goals. Similarly, Isabu (2017), referred to conflict as a disagreement or struggle between two or more people in a relationship. In

the same vein, Bakala (2020) asserted that conflict is unavoidable in any given organization, consequently managers should be able to recognize the source of conflict in terms of constructive and destructive effects and hence being able to handle conflict accordingly before it is too late. Conflict is a general scenario experienced in

the management of any social institution (Nyasio, 2015). It is considered as one of the major problems in the management of schools worldwide. In human life, conflict has become unavoidable and most organizations and individuals have invested sufficient resources in place to curtail such an occurrence (Nguvumali, 2016). The modern conflict theories state that a conflict with a low or medium intensity and short duration could stimulate teacher's creativity and their overall professional performance while a conflict with a high intensity and long term duration is not beneficial neither to the organization nor people involved in conflict. Atieno (2016) stated that, conflict is a state of opposition, disagreement or incompatibility between two or more people or groups of people which is sometimes characterized by physical violence or assault.

Literature has shown the existence of conflicts in different institutions, including secondary schools worldwide. Conflicts in schools existed in both developed and developing countries. For instance, in the developed countries like USA conflicts in school manifest in different scenarios. For example a study by Limbo (2018) pointed out existence of several conflicts in schools in state of California. Tracing the history of the conflicts; the study found that racial segregation, and discrimination and prejudice in California schools were the main sources of the problem. Educational stakeholders in both developing and developed countries have made a number of reforms to improve education but teaching and learning in schools continues to experience a number of challenge (Paschal and Mkulu, 2020). One among the things that shake school goal in today's communal world is the school interpersonal conflicts among the members of school community.

Tanzania is not exempted from conflicts in its schools. In recent years, a series of conflicts were observed in Kagera region, Iringa region, Kilimanjaro region, Tabora region and Arusha region. In Arusha district, there have been a number of reported incidences on conflicts among teaching and non-teaching staff. For instance, Ekpong (2021) reported the incident of conflicts between teachers and watchmen in one of the public secondary school in Arusha district. This conflict occurred due to persistence late reporting of teachers in school every day and head of school ordered the watchmen to close the gate at 07:30 am. Thereafter, teachers decided to force their way in the school. This resulted in fighting among teachers and watchmen, which in turn led to some teachers arrested by police and sent to Arusha central police station. Also, the emerged conflict affected negatively the whole process of teaching and learning. Moreover, in Arusha district, the dominance of conflicts among teaching and non-teaching staff is increasingly and negatively affecting work performance among staffs and the rights of students to learn in safe environment (Kaufman, 2016). From the foregoing, there is need to conduct a study to investigate the conflicts among teaching staff and non-teaching staff

and its influence on their work performance in public secondary schools.

1.1 Research Questions

The research questions were;

- i. What are the causes of conflicts among teaching and non-teaching staff in public secondary schools in Arusha District?
- ii. What are the intervening measures to the conflicts among teaching and non-teaching staff in public secondary schools?

2. Literature Review

The researcher reviewed the Conflict Theory to guide the study.

2.1 Conflict Theory

The theory posits that the key source of conflict in the society is strictly economic (Glesne, 2015). The theory further argued that in all stratified societies there are two major social groups, a ruling class and a subject class. The ruling class exploits and oppresses the subject class. As a result there is a basic conflict of interest between the two classes. This constant competition between groups forms the basis for the ever-changing nature of society. The theory ultimately attributes humanitarian efforts, altruism, democracy, civil rights and other positive aspects of society to capitalistic designs to control the masses, not to inherent interests in preserving society and social order (Ignace, 2015).

Among the classical philosophers, Plato and Aristotle stated the following about conflict. They said "order makes the good life and disorder the opposite, conflict is a threat to the success of the state and should be kept off an absolute minimum and removed all together if possible. Firstly, the theory seeks moral ends from the emancipation of humanity from false claims of universality. According to Glesne (2015), Universality is when one group takes power and seeks to justify it on the grounds that it represent. Secondly, the theory acknowledges the role of oppression and seeks to balance the scale through advocacy and resources. It points out the inconsistencies in resources amongst those who have power or resources and those who do not. Thirdly, the theory sees social life as a competition and focuses on the distribution of resources and power. Furthermore, the theory views social and economic institutions as tools of struggle among groups or classes.

2.1.4 Applicability of the Conflict Theory

Thus, the study opted to use conflict theory since the theory maintains that all members in school setting do not have the same powers, values, interest or expectations.

According to conflict theory, inequality exists because those in control of a disproportionate share of society's resources actively defend their advantages. Those with the most resources exercise power over others. Conflict theorists note that unequal groups usually have conflicting values and agendas, causing them to compete against one another (Ignace, 2015).

2.2 Causes of Conflicts among Teaching and Non-Teaching Staff in Public Secondary Schools

A study by Matenga (2015) on tracing the history of conflicts in California schools, found out that there are interpersonal conflicts among teachers as well as between teachers and students. The study reported that racial discrimination and favouritism among individuals are the main sources of such interpersonal conflicts in school setting. A research by Ozgan (2016) found that in the United States of America (USA) high schools, conflicts are caused by resource sharing, discrepancies in priorities, discrepancies in values and ideas, disparities in job necessities and complex inferiority.

A study by Mwidege (2021) on conflict management in secondary schools in Tanzania employed ex-post facto design and qualitative approach. The findings revealed that there are common causes of conflicts in secondary schools such as poor physical working conditions, lack of proper communication, negligence of duty, indiscipline among workers, low salary, and shortage of teaching and learning resources. The study by Ntide (2015) also revealed that most of the school conflict is caused by lack of proper communication, lack of transparency of school budget in term of income and expenditure as well as overlapping responsibilities.

Nyasio (2015) affirmed that there are some common factors for conflicts in the workplace such as communication breakdown, age differences, inadequate resources, difference in opinions as well as intimate relationship. The study employed semi-structured questionnaires which were both open and closed-ended questions and documentary analysis to obtain data.

2.2.3 Intervening Measures on the Conflicts among Teaching Staff and Non-Teaching Staff in public Secondary Schools

Crossfield and Bourne (2018) in Jamaica conducted a study on management of interpersonal conflicts between principals and teachers in selected secondary schools. The study revealed several measures that can be used to manage interpersonal conflicts in school setting. The measures include collaboration, negotiation, mediation, communication and avoiding certain actions. Sompa (2015) conducted a study on management strategies of interpersonal conflicts between teachers and head teachers

in selected secondary schools of Lusaka province in Zambia. The findings concluded that head teachers were able to supervise conflict through different supervision strategies such as discussion, education, guidance and counseling as well as collaboration.

Similarly, in Charsadda district, Pakistan, Shah et al., (2018) carried out a comparative study to evaluate the view-points of conflict resolution among both public and private high school principals. The research adopted a descriptive research design and used questionnaire as data collection tool. The analysis showed that the principals of the two groups of schools used similar methodology to contain conflicts in their institutions. They employed collaboration strategy, which was their favourite conflict management style. Furthermore, the research suggested that the appropriate form of managing conflict must be followed by all the principals based on the circumstance at which conflict occurs. It also suggested that before employing any management strategy, it is necessary to identify the root causes of that conflict at hand so as to be effective and efficient when addressing them.

A study by Yassin and Khalid (2015) investigated conflict management styles that are frequently used by the professionals working at various organizational hierarchies to reduce the conflict to save the organizational environment. The results of the study showed that teachers mostly used the avoiding conflict management style. Moreover, professors used compromising conflict management style but assistant professors used accommodating and lecturers used avoiding conflict management style. According to Messanga (2021) on effectiveness of managerial strategies in Handling interpersonal conflicts in public secondary schools in Tarime urban, Mara region-Tanzania, the study revealed managerial strategies applied by the heads of school in handling interpersonal conflict in school setting, such strategies included meeting, negotiation, communication, collaboration, mediation, guidance and counseling, education, scolding and warning.

3. Methodology

In this study, concurrent triangulation research design was used. This design enabled researcher to collect both qualitative and quantitative data at the same time (Creswell and Creswell, 2018). Similarly, the study adopted mixed methods approach to collect data. The study targeted a population of 134 respondents, which comprises; 33 heads of schools, 1050 teaching staff, 231 non-teaching staff, 27 Ward Educational Officers in 33 public secondary schools. The selection of sample size was based on Vasileiou (2018) who stated that, a sample of 10% to 30% of the target population is representative enough for the research study. Therefore, the study involved a total of 169 respondents from 05 public secondary schools in Arusha District, 110 Teaching staff

out of 1050 which is 10% , 50 non- teaching staff out of 231 which is 21.6%, 05 heads of schools out of 33 which 15% and 4 ward educational officers (WEO) out of 27 which is 14%. Respondents were obtained through simple random sampling and purposive sampling techniques. Data collection was done through questionnaires, and interview schedule. Validity was established through expert judgment whereas reliability was determined using test-retest technique. Reliability index, $r = 0.75$, was obtained using Cronbach Alpha Method. Credibility of qualitative data was ascertained through multiple analysis, whereas dependability was established through reporting of research process. Descriptive statistics was used to analyze quantitative data in the SPSS version 20 and results were presented in tables, while qualitative data were analyzed using content analysis.

4. Results and Discussion

Discussions of the findings were based on research objectives as follows:

4.1 Identifying the Causes of Conflicts among Teaching and Non-Teaching Staff in Public Secondary Schools in Arusha District

The objective identified the causes of conflicts among teaching and non-teaching staff in public secondary schools in Arusha district. Tables 1 and 2 summarize the findings.

Table 1: Responses from Non-Teaching Staff on the Causes of Conflicts in Public Secondary Schools in Arusha District (n=50)

| Statements | Frequency | Percentage (%) |
|-----------------------------|-----------|----------------|
| Limited resources | | |
| SA | 15 | 30 |
| A | 33 | 66 |
| U | 2 | 4 |
| Poor communication | | |
| SA | 10 | 20 |
| A | 40 | 80 |
| Discrimination | | |
| SA | 12 | 24 |
| A | 36 | 72 |
| U | 2 | 4 |
| Unfairly treatment | | |
| SA | 12 | 24 |
| A | 36 | 72 |
| U | 2 | 4 |
| Personal Preferences | | |
| SA | 3 | 6 |
| A | 5 | 10 |
| U | 2 | 4 |
| D | 21 | 42 |
| SD | 19 | 38 |

KEY: Strong Agreed (SA), Agreed (A), Undecided (U), Disagreed (D), Strongly Disagreed (SD)

Source: Field data (2022)

The results in table 1 indicated that the respondents identified the causes of conflicts as follows; 80% of the respondents identified poor communication, 72% of the respondents mentioned discrimination and unfairly treatment while 66% agreed that limited resources cause conflicts in Public Secondary Schools. These results are supported by the finding in a study carried out by Nyamajiwa (2016) in Zimbabwe. The study reveals that competition over resources is among causes of conflict in school organization. The findings indicated that lack of transparency over school resources affects the relationship between management and subordinate in the school

organization. In the same vein, a study by Angela (2015) in Kinondoni municipality revealed that majority of school conflicts is caused by lack of proper communication and commitment.

From table 1, other causes of conflicts in secondary schools identified by the respondents include personal preferences as supported 10% who agreed while 30% strongly agreed. For instance, some non-teaching staff complained that the school administration openly motivates the teaching staff and ignores them. When they present their cases relating to domestic matters, the school

heads do not give them adequate attention compared to teachers. However, 4% of respondents were undecided on the element of limited resources, discrimination, unfair treatment and personal preferences. On the other hand, 42% of the respondents disagreed on the issue of personal preferences while 38% strongly disagreed on personal preferences. Thapa (2015) observed that school heads should realize that their success as managers is hinged on support by both auxiliary and teaching staff. Therefore, open discrimination will certainly negatively affect their success. There is need for transparency over the use of school resources that would eventually affect the relationship between management and subordinate in the school.

In addition, 20% strongly agreed on poor communication, 24% strongly agreed on the element of discrimination, 24% strongly agreed on unfair treatment. A related study by Valente and Lourenco (2020) enumerated causes of conflict such as lack of emotional intelligence, personality traits, poor communication and lack of support from colleagues. A study by Bakala (2020) on conflict management practices in secondary schools in Linnu Woreda, Addis Ababa concluded that conflicts in secondary schools are caused by discrimination, unfair treatment of individuals, incompatible goals and values, discrimination, disciplinary problems, competition for limited resources, overlapping responsibility and bad working environment. Another study by Angela (2015) in Kinondoni municipality revealed that majority of school conflicts is caused by lack of proper communication and non-commitment.

The researcher also established that personal preference causes conflict between the teaching and non-teaching

staff. In this regard, Kaluma (2017) conducted a study on conflict management in secondary schools in Tanzania in Shinyanga municipal council. The study concluded that conflicts in secondary schools are caused by a number of factors including, personal preference, goals not accomplished, scarce resources, poor communication, favouritism, conservatism and delay in decision making. Furthermore, the study suggested that there should be appropriate techniques and strategies to address emerging conflict in a school before it affects school organization.

The study by Yambo (2016) contends that conflict is an inevitable outcome of human interaction and is commonly caused by a variety of factors such as poor interpersonal relationship, subjective attitudes, and inadequate resources. Similarly, Nyasio (2015) affirmed that there are some common factors for conflicts in the workplace such as conflicting needs, conflicting styles, conflicting perceptions, conflicting goals, conflicting different personal values and unpredictable policies.

Finally, the findings are in congruent with the conflict theory by Karl Marx in 1818-1883. According to conflict theory, inequality exists because those in control of a disproportionate share of society's resources actively defend their advantages. Those with the most resources exercise power over others (Ignace, 2015). Conflict theorists note that unequal groups usually have conflicting values and agendas, causing them to compete against one another. This constant competition between groups forms the basis for the ever-existing conflict in the society. Further, the responses from teaching staff regarding intervening measure to the conflict in public secondary schools are summarized in table 2.

Table 2: Responses from Teaching Staff on the Causes of Conflicts in Public Secondary Schools in Arusha District (n=110)

| Statements | Frequency | Percentage (%) |
|-----------------------------------|-----------|----------------|
| Intimate relationship | | |
| SA | 20 | 18.2 |
| A | 62 | 56.4 |
| U | 7 | 6.4 |
| D | 12 | 10.9 |
| SD | 9 | 8.2 |
| Differences in opinions | | |
| SA | 27 | 24.5 |
| A | 73 | 66.4 |
| U | 8 | 7.3 |
| D | 2 | 1.8 |
| Overlapping responsibility | | |
| SA | 27 | 24.5 |
| A | 73 | 66.4 |
| U | 8 | 7.3 |
| D | 2 | 1.8 |
| Bad working environment | | |
| SA | 23 | 20.9 |
| A | 83 | 75.5 |
| U | 3 | 2.7 |
| D | 1 | 0.9 |

KEY: Strongly Agreed (SA), Agreed (A), Undecided (U), Disagreed (D), Strongly Disagreed (SD)

Source: Field data (2022)

The findings in table 2 show that, 74.6% of the respondents reported that intimate relationship is cause of conflict in education institution, 6.4% were undecided while 19.1% disagreed that relationship is a source of conflict in secondary institutions. Those who supported the item felt that it is important to observe professional ethics all the time and teachers should keep professional distance from female students. Some none teaching staff accused male teachers of having affairs with female students. This accusation was also confirmed by female teachers as a source of conflict between teaching and none teaching staff. In support of this finding, Hallak (2018) identified relationship as the main factor contributing to conflict in the school system. The relationship could be between school head and the secretary, male and female teachers or male teachers and female none teaching staff. On the issue of differences in opinions as one of the causes of conflict between teaching and none teaching staff, 24.5% of the respondents strongly agreed, 66.4% agreed, 7.3% were undecided while only 1.8% strongly disagreed. In addition, 24.5% of the respondents strongly agreed that overlapping responsibility is a source of conflict among teaching and none teaching staff. In this regard, 66.4% agreed, 7.3% were undecided while 1.8% strongly disagreed. On bad working environment as among the causes of conflict in school setting, 20.9% strongly agreed, 75.5% agreed, 2.7 were undecided while only 9% disagreed. The respondents reported that some staff members work in an improved environment unlike others. The findings are in congruent with the conflict theory by

Karl Marx in 1818-1883. According to conflict theory, inequality exists because those in control of a disproportionate share of society's resources actively defend their advantages (Glesne, 2015). Those with the most resources exercise power over others. Conflict theorists note that unequal groups usually have conflicting values and agendas, causing them to compete against one another. This constant competition between groups forms the basis for the ever-existing conflict in the society.

In the same vein 20.9% of the respondents agreed that poor working environment causes conflict among teaching and none teaching staff. Moreover, 75.5% were in agreement with the statement, 2.7% were undecided while 9% held contrary opinion that environment is not a cause for conflict among teaching and none teaching staff. Some members of staff are given incentives to appreciate their performance. The issue of poor working environment was also mentioned as a factor for conflict in public secondary schools. The findings agreed with related studies done by Tshuma (2016) and Bolarinwa (2017) respectively, which looked at factors influencing teachers' level of satisfaction. The findings indicate that poor working environment; differences in opinions and relationship are causes for conflicts among the teaching and none teaching staff.

The research discovered that teachers and heads of schools may face shortage of skills and exposure about how to

handle interpersonal conflict in public secondary schools. Any conflict situation is bound to inhibit the smooth running of the school and by extension its overall performance. Generally, conflict will exist or will occur even if the organization had paid the great sacrifice to prevent it. Though in contemporary view, conflict is seen to be good as it brings positive changes and vice versa is true (HakiElimu, 2014).

The response from the respondents in the open ended questions indicated that lack of respect among teachers and the non-teaching staffs, poor living standard of teachers and non-teaching staff and hard economic time as a result of global pandemic and conflict has contributed towards conflict in secondary schools. For instance, some teachers look down upon non-teaching staff such as security men/women while some well-established senior teachers, mostly female teachers do not respect their struggling male counterparts. This is common among female teachers married to senior government officials, they are untouchable, and they neither respect school head nor colleague teachers/non-teaching staff. Consequently, a conflict emerges in public secondary schools in Arusha District due to their conduct towards workmates.

Moreover, the findings are supported by Kaluma (2017) who conducted a study on conflict management in secondary schools in Tanzania in Shinyanga municipal council. The study concluded that conflicts in secondary schools are caused by number of factors including, personal preference, goal excluded, scarce resources, poor communication, favouritism, conservatism and delay in decision making. Furthermore, the study suggested that there should be appropriate techniques and strategies to address emerging conflict in a school before it causes harm to school organization.

Findings from qualitative data indicate the causes of conflicts among teaching and non-teaching staff and its

influence on their work performance in public secondary schools in Arusha District. In this regard one of the head of school in the interview session reported that;

There are several causes of conflicts among teaching and non-teaching staff in school setting such as lack of proper communication channel, irresponsibility, limited resources, and poor delegation of duties, poor perception and discrimination (Personal interview, 27th -05-2022).

The respondent noted that poor communication channel and discrimination are potential sources of misunderstanding in the institution. If not well handled, it could lead to stress among teachers and none teaching staff. Bonkovskaya (2017) conducted a related study on development of conflict management strategies to increase the organizational effectiveness in West Africa. The finding shows that in spite of manager's satisfaction by the level of productivity of their employees, stress at work was sighted as a contributing factor towards disagreements. If the manager ignores those kinds of complaints it could lead to potential conflict.

4.2 Intervening Measures to the Conflicts among Teaching and Non-Teaching Staff in Public Secondary Schools in Arusha District

The objective suggested the intervening measures to the conflicts among teaching and non-teaching staff in public secondary schools in Arusha District. Table 3 and table 4 present the summary of the respondents' responses and the results of quantitative findings through questionnaires.

Table 3: Responses from Teaching Staff on the Measures to Resolve Conflict in Public Secondary Schools in Arusha District (n=110)

| Statements | Frequency | Percentage (%) |
|--|-----------|----------------|
| Mediation | | |
| SA | 25 | 22.7 |
| A | 79 | 71.8 |
| U | 4 | 3.6 |
| D | 2 | 1.8 |
| Use regular meetings with conflicting parties | | |
| SA | 22 | 20 |
| A | 81 | 73.6 |
| U | 6 | 5.5 |
| SD | 1 | 9 |
| Motivation | | |
| SA | 31 | 28.2 |
| A | 68 | 61.8 |
| U | 7 | 6.4 |
| D | 2 | 1.8 |
| SD | 2 | 1.8 |

KEY: Strongly Agreed (SA), Agreed (A), Undecided (U), Disagreed (D), Strongly Disagreed (SD)

Source: Field data (2022)

The results in table 3 indicated that, 22.7% strongly agreed and 71.8 % agreed that mediation is a good step towards resolving conflicts. In this regard, 3.6% were undecided while 1.8% completely disagreed that mediation is a measure to resolving conflict in public secondary schools in Arusha District. The researcher found out that in most cases, school heads employed diplomatic approach to solving conflicts among teaching and non-teaching staff. School heads normally sermon the aggrieved parties for a meeting in the office where they pour their hearts out regarding the conflict. Guidance and counseling is then offered to the individuals or groups with different issues. A study by Shahmohammad (2015) on conflict management among secondary school students supported this finding by suggesting that the mediation as one of the methods for reducing conflict not only at work place or home but also in school setting. Similarly, Gyan (2016) carried out a study on conflict resolution in Ghanaian senior High school and the findings revealed that the use of stimulation techniques is among the measures that can be used in conflict resolution in school setting.

In addition, 20 % of respondents strongly agreed while 73.6% agreed that the use of regular meetings with conflicting parties will help to address the underlying issues. Meanwhile, 5.5% of the respondents were

undecided while 9% strongly disagreed. In the same vein, in Kenya a study by Ramani & Zhimin (2016) on conflict resolution mechanisms in Public secondary schools in Nairobi province, found out that it is important for school administrators to use regular meetings and dialogue with conflicting parties when resolving individual differences at workplace.

Likewise, 28.2% of respondents strongly agreed that motivation of staff members could be a measure to conflict resolution, 61.8% of the respondents agreed while 6.4% were undecided. A total of 3.6% of the respondents held contrary opinion. In other words, they viewed stimulation or motivation as a weak approach towards solving conflict. However, an overwhelming majority (90%) viewed motivation as an effective approach to conflict resolution. The study by Johdi & Apitree (2019) on the causes of conflicts and effective methods to conflict management at Islamic secondary school in Yala, Thailand, revealed that among the strategies used in managing interpersonal conflict was face to face discussion to clarify issues through motivation, negotiating and compromising within school setting. Additionally, the responses from non-teaching staff regarding intervening measure to the conflict in public secondary schools are summarized in table 4.

Table 4: Responses from Non-Teaching Staff on Measures to Resolve Conflict in Public Secondary Schools in Arusha District (n=50)

| Statements | Frequency | Percentage (%) |
|------------------------------------|-----------|----------------|
| Collaborating | | |
| SA | 15 | 30 |
| A | 33 | 66 |
| U | 2 | 4 |
| Compromising | | |
| SA | 16 | 32 |
| A | 33 | 66 |
| U | 1 | 2 |
| Seminars and workshops | | |
| SA | 11 | 22 |
| A | 35 | 70 |
| U | 4 | 8 |
| Negotiation | | |
| SA | 25 | 50 |
| A | 21 | 42 |
| U | 1 | 2 |
| D | 3 | 6 |
| Guidance and counselling SA | | |
| A | 14 | 28 |
| U | 31 | 62 |
| SD | 2 | 4 |
| | 3 | 6 |

KEY: Strongly Agreed (SA), Agreed (A), Undecided (U), Disagreed (D), Strongly Disagreed (SD)

Source: Field data (2022)

The results in table 4 revealed that, 30% of the respondents strongly agreed, 66% agreed while 4% were undecided with collaboration as a measure to conflict resolution. The non-teaching staff felt that there is a need to work as a team in order to achieve the targeted institutional goals and objectives. They observed that working in cooperation through partnership would help them complement each other's weakness as both teaching and non-teaching staff strive to achieve their best.

In addition, 32% of respondents strongly agreed, 66% agreed while only 2% were undecided that compromise could be applied to solve conflict in public secondary schools in Arusha district. Moreover, 22% of the respondents strongly agreed, 70% agreed while 8% were undecided on seminars and workshops as a strategy to manage conflict among the teaching and non-teaching staff in Arusha District. In Tanzania a study by Ignace (2015) in Kinondoni municipal recommended that district education officer should organize seminars for heads of schools on the ways of managing conflict in schools.

Besides, 50% of the respondents strongly agreed on negotiation while 28% of respondents strongly agreed on guidance and counseling as the measures of resolving conflicts in public secondary schools. The findings are supported by Limbo (2018) who explained that conflict supervision as well as managing organization should be organized through, guidance and counseling.

Through interviews done by ward education officers it was noted that majority of the respondents show their concern on mediation, regular meetings, seminar and workshop, in-service training as well as guidance and counseling are common strategies that can be used in conflict resolution and management in school setting. From the foregoing, one of the interviewee said:

In my school, we handle interpersonal conflict among teaching staff and non-teaching staff using mediation approach whereby we point a 'mediator' from our staff who would deal and handle the interpersonal conflict among the staff members who have differences and misunderstandings. The mediator is always appointed from among staff members who are ready and acceptable by both parties to resolve their conflict secretly. He or she should be a secret keeper (Personal Interview, 28th-04-2022).

In the same vein one among the interviewee was quoted saying: In our school, we do use guidance and counseling as well as seminars and workshops to handle conflicts among teaching staff and non-teaching staff (Personal Interview, 29th-04-2022).

The findings are in agreement with a study by Shahmohammad (2015) on conflict management among secondary school teachers. The study suggested the

mediation and guidance and counseling as the methods for reducing conflict, not only at work place or home but also in school setting. Also, the study by Ignace (2015) at Kinondoni municipalin Tanzania recommended that district education officer should organize seminars to the heads of schools on the ways of managing conflict in schools. Moreover a study by Kaluma (2017) points out the appropriate strategies to address conflicts in school set up such as, good communication, timely decision, fairness, in-service training, seminar and workshop.

5. Conclusion and Recommendation

5.1 Conclusion

The causes of conflicts among teaching staff and non-teaching staff in public secondary schools in Arusha District include limited resources, poor communication, discrimination, unfair treatment, and overlapping responsibilities. Similarly, differences in opinions, intimacy relationship and poor working environments were mentioned as sources of conflicts in secondary schools. From qualitative findings, differences in opinions, poor academic performance, intimate relationship, harshness by support staff, criticism by other teachers, communication breakdown were mentioned as causes of conflicts in public secondary schools. In some cases, conflicts among staff members accumulate gradually and immediate response to potential signs of conflicts is necessary.

The suggested intervening measures to the conflicts among teaching and non-teaching staff in public secondary schools in Arusha District include regular meetings, negotiation, collaboration, accommodating one another, seminars and workshop, mediation, compromising, stimulation, in-service training, as well as guidance and counseling. Likewise, school heads should treat all staff members fairly and equally in order to build mutual respect and trust among all members who make-up the work force in school setting and the surrounding community. Furthermore, all staff members should respect one another and avoid indulging in matters that can cause conflict. Finally, the study concludes that before employing any management strategy, it is necessary to identify the root causes of conflict at hand so as to be effective and efficient when addressing them.

5.2 Recommendations

Based on the findings, the following recommendations were forwarded:

- i) Head of schools should monitor the efficiency and effectiveness of teaching staff and non-teaching staff in discharging their duties and any signs of conflict should be addressed as soon as possible.

- ii) Heads of schools should use different techniques such as negotiation, mediation, communication, discussion and dialogues as well as compromising in resolving conflicts in school setting. The study recommends that education administrator needs to build up leadership innovation and creativity in handling conflicts and should have a mechanism in place to deal with conflicts.

References

- Angela, R. (2015). *Assessment on Conflict Management and Resolution in Public Secondary Schools*. Nairobi Kenya: Nairobi University Press.
- Atieno, M. et al (2016). *Collaboration Conflict Management Strategies*. Kenya: International Journal of Trend in Research and Development.
- Bakala, N. (2020). *Conflict Management Practices in Secondary Schools in Linnu Woreda*. Addis Ababa: Addis Ababa University Press.
- Bolarinwa, A. (2015). *Principles and Methods of Validity and Reliability Testing of Questionnaires*. United States of America: Sage Publications Inc.
- Bonkovskaya, J. (2017). *Managing and Mitigating Conflict in Healthcare Teams*. Ghana: Yamens Press.
- Bourne, K. (2018). *Effects of School Conflicts on School Management*. Nairobi: University of Nairobi.
- Creswell, J.W. and Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (5thed)*. Thousand Oaks: SAGE.
- Crossfield, D. & Bourne, A. (2018). *Management of Interpersonal Conflict between Principals and Teachers in Selected Secondary*. Bermuda: *International Journal of Research in Business Studies and Management*, 5(1), 19-36.
- Ekplang, M. (2018). *Administrators' Conflict Management Strategies in Secondary Schools*. Nigeria: IARD.
- Glesne, N. (2015). *Conflict Management Strategies used by Head Teachers and Teachers of Primary Schools*. Dodoma: Unpublished Master's Thesis, Open University of Tanzania.

- Gyan, L. (2016) Doing social research. New Delhi: University of Sussex
- Hallak B. (2018) conflict resolution among Public and private Secondary Schools, Canada: Corwin Press.
- HakiElimu, (2014). Managing Conflict in Education Institutions in Tanzania: A Qualitative Study. Dar es salaam: HakiElimu.
- Ignace, A. (2015). *Assessment of Schools Strategies in Managing Conflicts in Secondary Schools*. Kinondoni: Unpublished Master's Thesis. The Open University of Tanzania.
- Isabu, M. (2017). *Causes and Management of School Related Conflict*. Nigeria: Ambrose Alli University Press.
- Johdi, B. and Apitree, A. (2019). *Conflict in Schools: Its Causes and Management Strategies*. Pakistan: Qurtuba University of Science and information Technology.
- Kaluma, V. (2017). *Conflict Management on Secondary Schools in Tanzania*. *Journal of Research in Education and Society* 11 (i) 20-3.
- Kaufman, S. (2016). *Context Matters: Negotiators' Interdependence in Public, Labour and Business Disputes*. New York: International Association of Conflict Management Conference.
- Limbo, C. (2018). *An Investigation of the Nature of Conflict and Conflict Management Strategies Involving Learners in Selected Public Secondary Schools of Lusaka District*. Lusaka: The University of Zambia.
- Matenga, E. (2015). *Persistence of Conflicts in Secondary Schools in Tanzania*. A Case Study of Mvomero District: Unpublished Master's Thesis, Mzumbe University.
- Messanga, A. (2021). *Effectives of Managerial Strategies in Handling Interpersonal Conflicts in Public Secondary Schools*. Mara Region, Tanzania: *Journal of Research in Education and Society* 11 (i) 20-3.
- Mwidege, V. (2021). Influence of Interpersonal Conflicts on Teaching and Learning in Public Secondary Schools. *ISOR Journal of Humanities and Social Sciences (ISOR-JHSS)* 21 (4), 32-41.
- Nguvumali, F. (2016). *Persistence of Conflicts in Tanzanian Public Primary Schools*. Mpanda: Unpublished Master's Thesis The University of Dodoma.
- Ntide, D. (2015). Conflict Management Strategies used by Head Teachers and Teachers of Primary Schools. Mbeya: Tanzania. *Journal of Education, Humanities and Sciences*, 4 (3) 23.
- Nyamajiwa, M. (2016). *Communication in Negotiation*. Harare: University of Zimbabwe.
- Nyasio, J. (2015). *Factors Influencing Conflict among the Teaching Staff in Public Secondary Schools*. Nairobi: University of Nairobi Press.
- Ozgan, H. (2016). *The Usage of Domination Strategies in Conflicts between Teachers and Students*. Nairobi: Educational Research and Review.
- Paschal, M. and Mkulu, D. (2020). *Teacher - Students' Relationship and Students' Academic Performance in Public Secondary Schools*. Mwanza: Tanzania *Journal of Research in Education and Society* 11 (i) 20-3.
- Shah, et al., (2018). *A Comparative Study to Evaluate the View – Points of Conflicts Resolution Among both Public and Private High School Principals*. Pakistan: KPK Publisher.
- Shahmohmmadi, N. (2015). Conflict Management among Secondary School Students. *Procardia Social and Behavioral Sciences*, 159, 630- 635.
- Thapa, T. (2015). Impact of Conflict on Teaching and Learning Process in Schools. *Academic Voices of Multidisciplinary Journal*, 5 (1), 73-78.
- Tshuma, R. (2016). Causes of Conflict among School Personnel in Gwanda District Secondary Schools. Zimbabwe: *ISOR Journal of Humanities and Social Sciences (ISOR-JHSS)* 21 (4), 32-41.
- Yambo, O. (2016). Determining Causes of Conflicts in Secondary Schools and their Influence on Student's Academic Achievement in Kisumu. Kenya: *Journal of Harmonized Research in Management*, 2(2), 138-142.
- Yasin, M. & Khalid, S. (2015). *Conflict Management Styles*. New York: McGraw- Hill Companies, Inc.

Ramani, D. and Zhimin, C. (2016). *Principals and Teachers use of Conflict Management Strategies on Secondary students*. Nigeria: Ambrose Alli University press.

Sompa, K. (2015). *Sources of Conflicts among Teachers in Public primary schools*: Nairobi: University of Nairobi.

Valente, G. and Lourenco, M. (2020). Causes of Interpersonal Conflicts in Public Secondary Schools. Nigeria: Natural Academy Press.

Vasileiou, K. (2018). *Characterising and Justifying Sample Size*. MBC: SAGE Publications



Influence of Leadership Induction Training on the Performance of Newly Appointed Heads of Public Secondary Schools in Arusha City Council

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Abstract: This study assessed the influence of leadership induction programme on the performance of newly appointed heads of public secondary schools in Arusha city council. The study identified leadership challenges faced by newly appointed heads of public secondary schools and assessed the influence of leadership induction programmes on performance of newly appointed heads of public secondary schools in Arusha City Council. It was grounded on contingency theory of socialization by Feldman. Contingency theory needs heads of schools to be familiar with environments for better performance of their duties. This study used mixed research approach. The study sampled 7 newly appointed heads of secondary schools, 70 teachers and one city secondary education officer, making a total number of 78 respondents. Purposive and stratified sampling techniques were employed to obtain the sample. Questionnaires and structured interview schedules were used for data collection. These instruments were validated using experts in the fields of education and research. Reliability was calculated using Cronbach alpha whereas the value of 0.87 was obtained. Data were analyzed using descriptive statistics and the results were presented in tables of frequencies and percentages while thematic analysis was used for qualitative data and direct quotations supported the presentation. The findings show that most of the appointed heads had not received any formal induction. Therefore, their performance was affected by a number of challenges, including lack of essential skills for effective management of the schools. The study recommended that every newly appointed head of school is inducted to enhance their management skills.

Keywords: Leadership, Induction, Training, Performance, School Heads and Arusha

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1. Introduction

One of the strategies to ensure effectiveness in the performance of different duties in an organization is through induction. According to Brown (2019), induction

training is a planned introduction to new teachers on the needs of the teaching profession. Induction process has been found to have significant long-term effects on the job

performance of new employees as it prepares them to become effective in the new working places (Gaikhorst et al, 2017). According to Mchilo, et al., (2021), in an education setting, induction involves the process of matching an educationist with both the content and context of the job. Armstrong (2016) sees induction as the process of providing new employees with basic information needed for them to work effectively in an organization. Therefore, induction is considered to be one of the important functions for an organization towards enhancing the performance of new employees.

The main objective of induction is to make an employee know the responsibilities, socialize with other workers, become familiar with the working environment so that together they can realize maximum output (Michelo et al, 2020). For the newly appointed heads of schools, induction serves them with three major things, these are; preparing them to become heads of schools, to make them change from ordinary teachers into heads of schools and equipping them with the managerial skills (Bush, 2018). According to Sobri et al., (2018), it is important for heads of schools to be competent both socially and professionally and therefore induction programmes for novice heads of schools are important to make them competent in performing their duties in the posted schools. Newly appointed heads of schools also need to be inducted so as to introduce them to their new responsibilities and make them to be part of the schools (Amour & Doniel, 2019). Different countries have the culture of inducting newly appointed heads of schools before assuming official responsibilities.

According to Wiczorek and Manard (2018), the management of schools in some areas is a challenging task due to limited resources and low level of education awareness among the local communities. Therefore, heads of schools need to be equipped with all the skills and knowledge for them to effectively execute their responsibilities. This can be done through induction programmes to the newly appointed heads of schools before assuming the public offices. A study conducted in Indonesia by Arifin et al., (2018) indicated that induction programmes, which integrate the culture of the place, strengthen heads of schools leadership abilities and make them to be good school leaders. However, studies conducted in African countries show concerns on the effectiveness of induction programmes whereby some programmes are perceived to be too theoretical of which heads of schools get little knowledge to be applied in the real school situations (Ndubuisi & Jacob, 2021).

A study conducted in Tanzania by Amos and Koda (2018) revealed that heads of schools have limited knowledge on their roles of clinical supervision. This suggests that heads of schools still need more knowledge and skills on their roles in the management of schools. One of the reasons limited knowledge on supervisory roles by heads of schools might be the process for their

selection (Weinstein et al, 2018). For instance, in Tanzania, heads of schools are appointed from the teaching staff. It is possible to find that some of the appointed heads of schools lack the practical part of school management. This is why the Government of Tanzania has made induction programmes to be mandatory. According to Sulemana (2018), it is important for induction programmes to be conducted for professional life of newly appointed officials.

Education secular number 5 of 2011 mandates induction programmes for all newly appointed public servants in Tanzania. It is important for heads of schools to be inducted since leadership development is essential for school effectiveness (Naido, 2019). The existence of teachers who have not participated in induction programmes suggest that induction is not taken seriously in some districts. Therefore, there was a need for a study to be conducted so as to assess the influence of leadership induction programmes on the managerial competence of newly appointed heads of schools in public secondary schools. In Arusha city council, there has been a shifting of heads of schools and new ones have been appointed to assume offices. However, there is limited literature on how induction programmes contribute to the performance of newly appointed heads of public secondary schools. Therefore, there was a need for current study to be conducted to fill the gap.

1.1 Research Questions

- i. What leadership challenges are faced by newly appointed heads of public secondary schools in Arusha City Council?
- ii. How does the leadership induction programmes influence the performance of newly appointed heads of public secondary schools in Arusha City Council?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was grounded on the Feldman's (1976) Contingency theory of socialization.

2.1 The Feldman's (1976) Contingency Theory of Socialization

Contingency theory of socialization developed by Feldman (1976) recognizes the importance of an individual to socialize in their new places of work. For the newly appointed heads of schools, it is important to be inducted so as to fit into their new managerial roles and the new schools in which they are posted. According to the theory, for an institution to effectively achieve its

objectives, human resource management functions must fit with the internal and external environments. Internal environment requires for collaboration between the heads of schools and other human resources so as to achieve the education objectives. External environment calls for heads of schools to use management practices that conform to the external environments, including national guidelines and regulations. In general, contingency theory calls for heads of schools to be familiar with the internal and external environments for them to perform their duties properly. For the heads of schools to understand the external and internal environments, induction training programmes are recommended.

According to Feldman (1976) induction training is essential for heads of schools to socialize with other members of the staff, managerial roles and the general school culture. The theory has three main stages which are anticipatory, encounter and acquisition stages. The first stage involves different activities that take place before the appointed head of school arrives at the new school. The theory calls for newly appointed heads of schools to be provided with relevant information about the school culture and the people expected to work with before assuming official responsibilities.

The second stage is the encounter one. This normally occurs when the newly appointed head of school arrives at the allocated school and gets to learn the school culture through experience. Finally, the newly appointed head of school acquires the culture of the place and understands the managerial and leadership roles and becomes familiar with the other human resources. The contingency theory therefore calls for induction training programmes to be conducted to teachers before arriving at the schools as well as when they have reported to the allocated schools.

The contingency theory also recognizes the consideration of different factors when planning for an implementing induction training programmes. This is because different schools may have different cultures and therefore need the heads of schools to be inducted differently. Thus, the theory suggests that there is no single strategy which can be used to induct the newly appointed heads of schools. The theory emphasizes on the recognition of different factors for effective management of schools. According to the theory, culture, globalization and size of the school for instance, might influence the application of teacher management strategies. Different culture may need different teacher management strategies. Therefore, the theory calls for heads of schools as the managers to be aware of different strategies that can be used to effectively manage their school. Hence, induction is necessary for the heads of schools to make them understand the differences existing among teachers and use appropriate management practices to enhance performance.

2.1.1 Application of the Theory

The theory was applied due to the fact that it allows the consideration of the existing environment in the selection and implementation of school management strategies as well as the choice of induction training programmes for the newly appointed heads of public secondary schools. In the current study the theory helped the researcher to find out whether different induction programmes offered to newly appointed heads of public secondary schools equipped them with the knowledge and skills for effective management of the schools with different cultures and contexts. Furthermore, the theory helped the researcher to find out the extent to which the induction training offered to newly appointed heads of schools considers the needs of new school one is posted to.

2.2 Leadership Challenges Faced by Newly Appointed Heads of Public Secondary Schools in Arusha City Council

Wieczorek & Manard (2018) conducted a study on Instructional Leadership Challenges and Practices of Novice Principals in Rural Schools, USA. The researcher sampled 6 principals from rural school settings in a Midwestern state in the United States who were interviewed. Content analysis was used to analyze the qualitative data by generating themes occurring from the collected data. The study found that the principals described how their positional stature and visibility in the rural community brought feelings of pressure to meet their community's expectations. They were expected to participate in all school and community events and shared how they strived to find professional balance and fit into the community culture. Second, the principals explained how their school communities experienced resource constraints that influenced their abilities to recruit teachers and maintain instructional programs. These fiscal matters were beyond their immediate positional control, so they focused on strategies to bolster school-community connections, develop school-community partnerships, recruit quality teachers, and maintain positive public relations with their communities. Third, in response to these resource constraints, districts worked to become more efficient and consolidate inter-district administrative roles and positions. The principals experienced significant time constraints and role uncertainty and sought to work within the structure of districts efforts to consolidate human and capital resources.

Another study was conducted by Arifin et al., (2018), on Islamic Crash Course as a Leadership Strategy of School Principals in Strengthening School Organizational Culture, Indonesia. The study used a qualitative approach via theoretical phenomenology orientation and a multi case design. The data collection was done through

observation, documentation, and in-depth interviews. Validity of the data was measured by data reduction, data presentation, and conclusion. The study found that three models of Islamic crash course performed: *tashih*, that is, *Al-Qur'an* reading competence, *taushiyah* (Islamic lecture) of leadership values, and apprenticeship for the application of a *santri's* (Islamic crash course student) character values. The benefits for the teachers are the preservation of their *Al-Qur'an* reading competence and the improved intensity of the leadership and application of Islamic values, which form the school organizational culture. An integration of values rooted from the three models into the institutional vision could strengthen the school organizational culture to improve school achievement.

In Africa, there was a study conducted by Ndubuisi & Jacob (2021) on Challenges Facing Administrators of Public Higher Institutions, Nigeria. Descriptive and thematic analyses were used to analyse quantitative and qualitative data respectively. The identified challenges included the following; inadequate funding, inadequate infrastructural facilities, inadequate personnel, corruption, strike actions, political influence, insecurity, lack of motivation, institutional autonomy. The study recommends that government should put in more effort towards ensuring that the identified factors hindering the effectiveness of Nigerian higher institutions' administrators are addressed and resolved accordingly for desired growth and development to be made possible in public higher institutions.

Amos & Koda (2018) conducted a study on Supervisory Role of Head of Schools in Enhancing Teacher's Professional Development in Public Secondary Schools, Tanzania. Descriptive survey design and phenomenology research design were used to collect data from eighteen (18) public secondary schools in Moshi District in which 272 respondents were involved. Questionnaire was used to collect data from teachers while interview guide and documentary analysis was used to collect data from heads of school, DSEO and ZCSQAO. Quantitative data collected was analyzed by using descriptive statistics. The study revealed that some heads of school needed to acquire further skills in supervision of teachers. It was also found that supervisory activities such as checking of teachers' records, classroom visits and team teaching were often delegated to head of department and deputy heads. The role of the heads of school in supervision of teachers was limited. School-based workshops or seminars were rarely organized by head of schools while majority of heads of schools relied solely on outside school professional development programme to enhance teachers' capacity. The study also established that the most common hindrances to heads of schools supervisory role including financial constraint, teachers' negative attitude towards supervision and limited opportunities to attend professional development among teachers.

2.3 Influence of Leadership Induction Programmes on the Performance of Newly Appointed Heads of Public Secondary Schools

A qualitative study by Tekir (2021) explored the principals' perceptions of their induction program in USA. The study used single case design to collect data from 10 respondents by using interview. Qualitative data was analyzed thematically. The study found out that new principals have gained more knowledge about key components of effective practice and felt better equipped to carry out their role as school leaders, to establish positive learning environment for all students, and to navigate through the range of challenges associated with being a new principal.

The study done by Beam et al., (2016), on challenges for novice school leaders: facing today's issues in school administration. The study reveals that present novice school leaders faced the following challenges; managing students' discipline, balance of duties and time management. Additionally, they face the difficulty in maintaining parent relation, working with staff and managing school finances. Furthermore, they lack support from superiors, and their effort to seek for assistance is bordered with fear that it may be interpreted as weakness and might jeopardize their new position. Similarly, credibility was another challenge, credibility with superior, parents, students and faculty, the study alleged that, because leaders were new or worked in the school as former teachers, others did not provide respect for them in their new role, therefore they lack credibility in the eyes of their colleagues. Even those who obtained leadership positions in schools other than where they were previously teachers still sensed that many teachers questioned their qualification, background and ability to lead.

Tahir et al. (2021) conducted a study on initial challenges and possible useful countering strategies: Perspectives from Malaysian novice principals. The study reveals the following challenges; first, dealing with a previous principal's legacy was a challenge, teachers were frequently comparing the new style of leadership with that of previous principal. Second, heavy workloads and travel a long distance to their school, third, lack of knowledge about leading their schools and lack of experience in solving their school problems. Fourth, lack of parental support, it is difficult to get parental participation or contacting a parent. In addition, they face problem in integrating theory into practice. Moreover, difficulty in adapting to the culture of new schools and isolation are challenges faced by the new principal. The study found that most of the beginner principals feel anxious when their deprived of the support, warm relationships and companionship with teachers, also novice principles were

treated as new member of the school left alone, and felt unable to rely on others for assistance.

In Africa, there was a study conducted by Ndubuisi & Jacob (2021) on Challenges Facing Administrators of Public Higher Institutions, Nigeria. Descriptive and thematic analyses were used to analyze quantitative and qualitative data respectively. The study found that the challenges facing higher institutions' administrators in Nigeria. The identified challenges include the following; inadequate funding, inadequate infrastructural facilities, inadequate personnel, corruption, strike actions, political influence, insecurity, lack of motivation, institutional autonomy. The study recommends that government should put in more effort towards ensuring that the identified factors hindering the effectiveness of Nigerian higher institutions' administrators are addressed and resolved accordingly for desired growth and development to be made possible in public higher institutions.

Kouhisar and Bush (2020) conducted a study on problems facing novice principals in Iran. The study revealed that novice principals experienced several psychological stresses including anxiety, tension, boredom and undue caution. The psychological stress is caused by job worries, role ambiguity, fear of failure, job requirement, inappropriate work relationships, financial problems, insufficient confidence and organizational process and changes. In addition, novice principals experience lack of readiness, lack of instructional leadership skills and inadequate self-management skills. Moreover, they are facing challenges such as social harm from students due students' low motivation to learn. Furthermore, contradiction between the policy and the reality, whereby the policy state that the government must provide free education to all citizen, however due to lack of funds school principals have to get money from parents for recurrent expenditure. This cause contradictions and complains among parents. Another problem was lack of resources, limited budgets, human resources related problems, administrative problems and political interference. They sometime do not have the right to select their deputies.

Another study by Martin (2016) was conducted in USA on Kansas public schools principals' induction practices and new elementary principals' perceptions of satisfaction and preparation. The study adopted quantitative research approach whereby data were collected from 327 respondents. The study revealed out that few Kansas elementary principals participated in a formal induction program. The study also revealed out that new elementary principals were satisfied with induction program package provided to them and a majority of new elementary principals did not feel well prepared for the leadership. The findings show that the induction programme had great influence on new elementary principals as they were not prepared for leadership.

According to (AIR) American Institute of Research (2021), induction program should provide seamless support to new principals, from preparation program to the school. Local education agency (LEA) should design and implement induction programs that expand on and complement what principals learned in their preparation programs. LEA should be aware of what new principals did and did not learn in their preparation programs. Providing new principals with mentors can improve principal effectiveness and retention. Mentor can help a principal to address on-the- job challenges. Moreover, the study reveals that there are three factors to be considered when implementing principal mentoring; first, mentor selection, a mentor should have history of effectiveness as a principal, demonstrating strong communication and listening skills and similar style of thinking. Secondly, role definition there must be a clear definition of mentor and principal roles in their relationship. Third, mentor training, mentors may need training on topics such as principal standard and instructional leadership.

Dotres (2020) carried out a study on effectiveness of new principal induction programs in large urban school districts. The study reveals that new principal induction program helped novice principals in their growth as leaders by addressing their needs from an emotional, knowledge and skills perspectives. Interaction with other novice principal peers provided participants with significant support system. The opportunities provided by professional development sessions helped participants to deal with many challenges they faced during their first year on the job as principals. Similarly, mentorship was particularly impactful and instrumental towards participants' success provided a non-threatening and trusting climate and shared their many years of experience and knowledge through their insight and recommendations.

Mchete and Shayo (2020) conducted study to investigate the role of induction training on performance of new employees at workplace: case study of the open university of Tanzania. The study adopted qualitative research approach and case study design to collect data from 19 respondents through interview and document analysis by which purposive sampling technique was used to select the sample. The study revealed out that induction training was of great value to the University as it served to inform new staff of the important aspects of their new working environment. The study recommended that top management should provide enough support and exert their full power on it and reasonable and realistic budget should be allocated. Moreover, there should be a continuous follow-up to get feedback from the trainees. There should be sufficient time allocation to orientation training to allow the program to cover all aspects. Though a qualitative method provided information on induction program however, it was small sample of (19) respondents and it focused on one university, limits to be generalized for other part of Tanzania.

Buberwa (2018) examined the effect of leadership knowledge on performance of the newly appointed primary schools head teachers in Kahama Town, Tanzania. Study adopted qualitative research approach using a descriptive survey design to collect data by using questionnaire. The study revealed out that head teachers had no leadership knowledge since no any special training was offered to them when they were appointed to their new posts. The results of the finding cannot be generalized due to previous study focused only on one district.

3. Methodology

This study used mixed research approach. According to Creswell and Creswell (2018), mixed methods is the type of the research that combines or integrates both qualitative and quantitative research in a single study. Mixed approach is appropriate for collecting qualitative and quantitative data for the purpose of having credible and triangulated conclusions about a social phenomenon (Denscombe, 2014). The sample for the current study consisted of seven newly appointed heads of public secondary schools (who have been in the position not more than three years), 70 public secondary school teachers and one city secondary education officer to make

a total number of 78 respondents. Since the current study was guided by the descriptive survey design, the sample size of 78 respondents was considered to be representative of the population. Reliability was ascertained in a pilot study through test re-test and calculated using Cronbach Alpha whereas the value of $r=0.87$ was obtained. Collected data were analyzed using descriptive statistics and the results were presented in mean rating and tables of frequencies and percentages while thematic analysis was used for qualitative data and direct quotations supported the presentation.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 The Findings on the Challenges Facing Newly Appointed Heads of Public Secondary Schools

On the research objective, to identify the challenges facing Newly Appointed Heads of Public Secondary Schools, table 1 summarizes the findings.

Table 1: The findings on the Challenges Facing Newly Appointed Heads of Secondary Schools

| Challenge | Mean score of teachers | Mean scores of heads |
|--|------------------------|----------------------|
| i. Lack of skills for supervising teachers | 3.61 | 1.71 |
| ii. Lack of Financial management skills | 3.17 | 2.00 |
| iii. Lack of conflicts solving skills | 3.42 | 1.43 |
| iv. Lack of skill on working with the police and other emergency services to ensure the safety of everyone on the school grounds | 3.27 | 1.71 |
| v. Lack of management of teacher discipline skills | 3.45 | 1.43 |
| vi. Lack of skills for developing and maintaining school policies and rules. | 3.2 | 1.43 |
| vii. Lack of entrepreneurship skills | 3.39 | 2.29 |
| viii. Lack of communication skills for communicating with parent and community | 3.11 | 1.29 |
| ix. Poor knowledge on distribution of resources | 3.71 | 1.43 |
| x. Lack of guidance and counseling skills | 3.49 | 1.57 |
| Total | 3.38 | 1.69 |

Mean Scores for Teachers' and Newly Appointed Heads of Public Secondary Schools on the Challenges
Source (Field data, 2022)

The newly appointed heads of schools who participated in the study were also asked to indicate the extent to which they experience the challenges due to lack of some skills needed for effective management of their respective schools. Table 1 presents the comparison

mean score for teachers and newly appointed heads of schools on the challenges facing the newly appointed heads of public secondary schools in the management of schools.

Results in table 1 show that the mean scores for all the ten statements responded by teachers are higher than the ones responded by heads of schools. The total mean score for teachers is 3.38 while the ones for newly appointed heads of secondary schools is 1.69. This difference implies that while the newly appointed heads of public secondary schools do perceive themselves as being less challenged, the teachers acknowledge the existence of a number of challenges. The study established that these challenges are due to lack of induction training at the time of appointment. It worth noting that the training at the universities and colleges does not prepare teachers adequately for leadership role hence induction training is necessary. Despite the difference in the mean scores, the researcher in the current study opted to consider the responses by teachers due to the fact that the teachers are the ones in regular contact with the heads of schools,

therefore, they were in a better position of indicating different challenges the newly appointed principals face.

4.2 The findings on the Influence of Leadership Induction Programmes on the Performance of Newly Appointed Heads of Public Secondary Schools

On the research objective to assess the influence of induction programmes on the performance of newly appointed heads of public secondary schools in Arusha city, the responses are shown in table 2. A scale of Very Large Extent=5, Large Extent=4, Moderate Extent=3, Small Extent=2 and Not at All=0 was adopted.

Table 2: The findings on the Influence of Leadership Induction Programme on Performance of Newly Appointed Heads of Public Secondary Schools

| Statement | Not at all | Small extent | Moderate extent | Large extent | Very large extent | Mean score |
|---|------------|--------------|-----------------|--------------|-------------------|------------|
| Induction programmes improve my leadership skills | 0.0 | 0.0 | 1.2 | 32.1 | 66.7 | 4.65 |
| Induction helps me get familiar on how to manage student discipline. | 0.0 | 0.0 | 1.2 | 34.5 | 64.3 | 4.63 |
| Induction helps newly appointed Heads of school to be familiar on how manage teachers' conduct. | 0.0 | 0.0 | 9.5 | 32.1 | 58.3 | 4.49 |
| Induction helps to understand how to work with emergency | 0.0 | 8.3 | 1.2 | 47.6 | 42.9 | 4.25 |
| Induction helps to understand how to solve conflict among teacher and community. | 8.3 | 1.2 | 0.0 | 57.1 | 33.3 | 4.06 |
| Induction programme helps me to adapt and perform well my duties as head | 0.0 | 0.0 | 9.5 | 59.5 | 31.0 | 4.21 |
| Induction expands my knowledge on how to manage of the teaching-Learning process | 0.0 | 8.3 | 1.2 | 66.7 | 23.8 | 4.06 |
| Induction programme help new heads of school to learn how to manage financial activities | 8.3 | 1.2 | 0.0 | 66.7 | 23.8 | 3.96 |
| Induction helps to understand how to work with parents and community around the school | 0.0 | 0.0 | 1.2 | 77.4 | 21.4 | 4.20 |

The responses of Newly Appointed Heads of Public Secondary Schools on the Influences

Source (field data, 2022)

Table 2 show that 66.7% of the newly appointed heads of schools indicated that leadership induction programmes improves their leadership skills to a very high extent. 32.1% of them indicated that leadership induction programmes improve their leadership skills to a large extent while 1.2% of the heads responded that such programmes improve their leadership skills to a moderate

extent. The mean score of the responses to this statement was 4.65, which indicates that most of the newly appointed heads of schools indicated that leadership induction programmes improve their leadership skills to a large extent. These responses imply that leadership induction programmes are perceived to be of great influence to the newly appointed heads of schools as it

improves their leadership skills. These findings are in agreement with Arifin et al (2018) study which indicated that induction programmes strengthen heads of schools' leadership abilities and then makes them to be good school leaders.

Data in table 2 also shows that the mean scores for newly heads of schools' responses on how leadership induction programmes make them to be familiar on how to manage students' discipline and teachers' professional conduct were 4.63 and 4.49 respectively. The values of the mean scores indicate that majority of the newly appointed heads of schools rated the two variables to be influenced by leadership induction programmes at very high extents. These findings imply that leadership induction programmes are considered to have a big influence on the performance of newly appointed heads of schools as it equips them with skills on how to manage students' discipline as well as to ensure professional conduct among the teachers. Similar observation was made by Sulemana (2018), who found out that leadership induction programmes for newly appointed heads of schools were essential as it enabled them to acquire skills for effective management human resources in their respective schools.

Results in table2 also show that 59.5% of the newly appointed heads of secondary schools, agreed that leadership induction programmes, at a very large extent, help them to adapt and perform well their headship duties. The mean score of their response in this item was 4.21, indicating that most of them opted for very high extent. These responses imply that leadership induction programmes are perceived by newly appointed heads of schools to have significant influence on their performance since such programmes help them to perform their headship duties effectively.

Therefore, both the newly appointed heads of schools as well as the teachers acknowledged the influence of leadership induction programmes on the performance of newly appointed heads of schools.

During interview, the city secondary education officer confirmed that;

It is true that induction training plays an important role on the efficiency of the heads of schools in governing and managing the schools. In the past, induction programmes were conducted and we had no problems concerning the performance of newly appointed heads. But currently a number of concerns are being raised regarding their performance due to lack of training (Personal interview, 7th May, 2022)

Responses from the city education officer agreed to what was indicated by the newly appointed heads of schools as

well as the teachers. Such agreement in the responses implies that different education stakeholders consider leadership induction programmes to be of great influence to the performance of newly appointed heads of schools. According to Kılınç and Gümüş (2021), induction programmes help the newly appointed head of schools to socialize into the schools and their managerial skills.

These findings are in agreement to Wieczorek and Manard (2018) who put forward that the challenging roles of school management requires the heads to be inducted so as to acquire skills and knowledge which will make them to manage the schools at easy.

The overall means score for newly appointed heads of schools was 4.28 which imply that most of them responded to most of the statements at a very high extent. Such responses imply that leadership induction courses are perceived to have a high influence on the performance of newly appointed heads of schools. These findings are in agreement to Susilowati (2021) who also found out that induction programmes are important for preparing newly appointed heads of schools as it makes them capable of performing their roles effectively. According to Martin (2016), some of the newly appointed heads of schools may not be prepared for the job and therefore, it is important for them to be inducted so as to equip them with all the required skills and knowledge for them to effectively perform their headship duties.

5. Conclusion and Recommendations

5.1 Conclusion

Based on the study findings, the following conclusions are drawn. Newly appointed heads of public secondary schools are faced by a number of challenges. These challenges are attributed by the lack of some essential skills needed for effective management of schools. Lack of communication, conflict resolution; financial management and discipline management skills makes the newly appointed heads of schools to find difficulties in managing their schools. Though the newly appointed heads of schools perceived themselves not to be challenged, the teachers in their respective schools do experience that their heads of schools do not perform well especially the ones who were not inducted before assuming the headship responsibilities.

Leadership induction programmes are not well conducted to the newly appointed heads of public secondary schools. There are no official leadership induction programmes organized by the department of education. Most of the newly appointed heads of schools depend on getting leadership experiences from the previous heads of schools. The lack of leadership induction programmes to the newly appointed heads of schools negatively affects the performance of these heads in the management of the schools.

Leadership induction courses have great influence on the performance of newly appointed heads of schools. Through induction, newly appointed heads of schools are equipped with different skills needed for effective running of the schools. Leadership, financial management and supervisory skills are all needed to the teachers and such skills can be learned through induction programmes before the newly appointed heads of schools assume the headship roles.

5.2 Recommendations

Based on the conclusions of the study, the following recommendations were made;

- i. The government of Tanzania through the ministry of education, science and technology should set up policies to make induction programmes to the newly appointed heads of schools to be compulsory. By making leadership induction programmes to be compulsory, all the newly appointed heads of schools will attend, hence acquire the skills needed for effective managing of their schools. Furthermore, the induction programmes themselves should include all the aspects of school management, administration and leadership.
- ii. The city department of education should conduct frequent seminars and workshops to the newly appointed heads of schools so as to make them gain more skills and knowledge needed for school management. This can be done by arranging seminars and involving experts in the field of educational management to facilitate such seminars.
- iii. The newly appointed heads of public secondary schools on their side should strive to seek professional development programmes so as to update themselves on different aspects of school management. This will enable them to acquire the required managerial skills.
- iv. Tanzania Heads of Secondary Schools Association (TAHOSSA) should play part to make sure that all newly appointed heads of secondary schools are being inducted before starting their new responsibility.

References

- Amos, O. and Koda, G. M. (2018). Contribution of school-based income-generating activities in quality education provision in secondary schools managed by the catholic diocese of Moshi, Tanzania. *British Journal of Education*. 6(4), 49-69.
- Amour, S., and Doniel, K. (2019). Elementary Principal Induction: Early Career Leadership Development and Socialization of Elementary School Principals. In *ProQuest LLC*. ProQuest LLC.
- Arifin, I., Juharyanto, J., Mustiningsih, M., and Taufiq, A. (2018). Islamic crash courses as a leadership strategy of school principals in strengthening school organizational culture. *Sage Open Journal*. 8(3), 1-10.
- Armstrong, M. (2016). *A hand book of human resources management and practice*. (6th ed) London: Kogan Page Publisher.
- Beam, A., Claxton, R. L., and Smith, S. J. (2016). Challenges for novice leaders: Facing today issues in school administration. *Educational Leadership and Administration*. 27, 142-162.
- Britten, N. (1995). Qualitative research: Qualitative interview in medical research. *BMJ*. 311, 251-253.
- Brown, J. (2019). Employee orientation: keeping new employee on board. *International Journal of Public Management Association for Human Resources*. 2(1), 1-4.
- Buberwa, J. (2018). *The Effect of Leadership Knowledge on Performance of the Newly Appointed Primary School HeadTeachers in Kahama Town, Tanzania* [Masters, The Open University of Tanzania]. <http://repository.out.ac.tz/1960/>
- Bush, T. (2018). Preparation and induction for school principals: Global perspectives. *Management in Education*, 32(2), 66–71. <https://doi.org/10.1177/0892020618761805>
- Creswell, J. W. & Clark, V. L. (2018). *Designing and conducting mixed methods research*. (2nded.). Sage Publications.
- Dotres, J. L. (2020). *Effective elements of new principal induction programs in large urban school districts*. (Doctoral dissertation). Retrieved from <https://thesis.cust.edu.pk>.
- Gaikhorst, L., Beishuizen, J., Roosenboom, B., and Volman, M. (2017). The sustainability of teacher professional development programme for the beginning urban teachers. *Cambridge Journal of Education*. 47(1), 1-19.
- Kılınc, A. Cand Gümüş, S. (2021). What do we know about novice school principals? A systematic review of existing international literature. *Educational Management Administration &*

- Leadership*, 49(1), 54–75.
<https://doi.org/10.1177/1741143219898483>
- Martin, E. A. (2016). *Kansas Public School Principal Induction Practices and New Elementary Principals' Perceptions of Satisfaction and Preparation* [PhD Thesis]. Doctoral Dissertation). Baker University, Kansas, USA.
- Mchete, T., and Shayo, F. A. (2020). The Role of Induction Training on Performance of New Employees at Workplace: Case Study of the Open University of Tanzania. *International Journal of Business Management and Economics, Review*, 3(01).
- Naidoo, P. (2019). Perceptions of teachers and school management teams of the leadership roles of public-school principals. *South African Journal of Education*, 39(2), Article 2. <https://doi.org/10.4314/saje.v39i2>
- Ndubuis, A. G., and Jacob, O, N. (2021). Challenges of instructional supervision in Nigeria educational system and the way forward. *Academia Globe: Under science Research*. 2(4), 56-67.
- Sobri, A., Bafadal, I., Nurabadi, A., and Juharyanto, J. (2018, January 1). *Induction Model with Self Reflection Based Mentoring Module for Beginning School Principals*. <https://doi.org/10.2991/icet-18.2018.49>
- Sulemana, A. (2018). *Examining the effect of induction training programme on newly recruited teachers in the Kpandai district*. (Master dissertation). Retrieved from <https://www.udsspace.uds.edu.gh>.
- Susilowati, T. (2021). Induction Program: An Effort to Improve Professionalism of Novice Principals. *Social, Humanities, and Educational Studies (SHEs): Conference Series*, 4(3), 73–80. <https://doi.org/10.20961/shes.v4i3.49972>
- Tahir, L. M., Samah, A. N., Hamzah, H. M., Abdullah, A. H., Ali, M. F., and Yusof, M. S. (2021). Initial challenges and possible useful countering strategies: Perspectives from Malaysian novice principles. *Sage Open Journal*.2021.1-16.
- Mchilo, F. J., Vumilia, P.and Okendo, E. O. (2020). Required competencies for professional development. *Journal of Education and Practice*.9 (33), 100-110.
- Weinstein, J., Azar, A., and Flessa (2018). An effective preparation? The scarce effect in primary school principals' practices of school leadership preparation and training in seven countries in Latin America. *Education Management Administration & Leadership*. 46(2), 226-257.
- Wieczoreck, D.and Manard, C. (2018). Instructional leadership challenges and practices of novice principle in rural schools. *Journal of Research and Rural Education*. 34(2), 1-21.



Availability of Physical Infrastructure and Its Influence on the Quality Education in Public Secondary School in Arusha District, Tanzania

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Abstract: The study assessed the availability of physical infrastructure and its influence on the quality education in public secondary school in Arusha District. This study was grounded in the systems theory by Ludwig von Bertalanffy. The study employed mixed research approach and descriptive research design. The study responded to two research objectives namely to: assess the availability of physical infrastructure in public secondary school and investigate the influence of physical infrastructure on quality education in public secondary schools. Data were collected using questionnaires and interview schedule. The targeted population of 11643 from 33 public secondary schools from which a sample size of 98 (60 students, 30 teachers, 4 school heads and 4 WEOs) respondents from 4 secondary schools, were selected by simple, stratified and purposive sampling techniques. Research experts ascertained the validity of the instruments while reliability was tested and found to correlate at Cronbach coefficient Alpha value of $r = 0.91$ at teachers' and students' questionnaires. Quantitative data were analyzed using descriptive statistics and the results were presented in tables of frequencies and percentages. Qualitative data were thematically coded and analyzed alongside research questions. The findings were presented in narrative forms. The study revealed many schools have no teachers' office, instead they use one of the students' classrooms while classrooms are not enough for students, in some schools teachers are using students' furniture interchangeably. The study recommends parents' involvement in construction of infrastructures, regular maintenance and well equipping strategies for enough infrastructures in distributing resources for infrastructure development.

Keywords: Infrastructure, Education, Quality, School, Arusha

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1. Introduction

Quality education has been regarded as a fundamental way to achieve development and growth among nations

worldwide. According to the World Bank Development Report, creating a nation with educated citizens facilitates both individual and national development (World Bank, 2018). However, the delivery of quality education

demands the availability of conducive teaching and learning environment where the physical infrastructures take part. According to Dumont, *et al.*, (2021), schools should have well equipped infrastructures, including bathrooms and classrooms which allow sanitation rather than contamination of diseases. Moreover, if school buildings are prone to be flooded by intensive rains, swept away by high winds, exposed to hazardous materials, or decaying for lack of maintenance, it hinders both teaching and learning, making it harder to produce the level of academic results that are possible in a safe and healthy building.

Despite the necessity of infrastructure, its effects have not paid much yield in terms of quality education. According to Atkin (2019), it is important for the schools to have well improved physical infrastructures since having such infrastructures within and outside the classrooms will make both teachers and students comfortable in the teaching and learning process. The presence of good infrastructures also motivates students to stay in schools as the school environment becomes welcoming and attractive. This raises a necessity and comparable sense to consider educational infrastructure as a significant component to learning and achievement of the students. Therefore, the physical infrastructures should be given due consideration when planning for improving the quality of education offered in the schools. This is because they create friendly learning environment, which enhances students' school attendance, ultimately improving academic achievement (Uline & Moran, 2018).

Despite education being an important impetus for personal and national development, the quality of education offered in public secondary schools in Tanzania has remained a point of discussion for decades due to low academic achievement of the form four students in the national examinations. According to URT (2013) the percentage of students failing the examination has been at a constant increase from the year 2008 to 2012. The decline in the performance of students in national examinations in the country has been linked to the learning environment that is not conducive to learning. Lack of classrooms, toilets, water, and electricity have been pointed out as being the contributing factors for students, especially in public secondary schools not to perform well in the national examinations.

For example, a study conducted by Ngusa (2021) in Tanzania revealed that English language teachers in the country were not in a good position to teach effectively due to the lack of instructional materials. Moreover, HakiElimu (2011) observed a significant difference in the performance of students from private and public secondary schools, whereas the students in private schools outperformed their counterparts in public schools. One of the factors for such differences was the presence of physical infrastructures in private schools which were adequate and in good conditions compared to the ones in

public schools. Similar observations were made by Mosha (2014) who concluded that the quality of education cannot be separated from the context and circumstances that are found in the school. Thus, educational infrastructures, including classrooms, laboratories for science practical and open fields for games are very essential for the delivery of quality education in the secondary schools. It is through these infrastructures where formal and non-formal education takes place at school. Educational infrastructure are general physical things such buildings, which enable learning and teaching process frequently formal and non-formal curriculum oriented activities involved in teaching and learning to take place.

In Arusha District the availability of physical Infrastructure is still a problem though the government has tried to solve the problem of insufficient classroom in the year 2021 through the TCRP 5441 Project, but still more effort is needed for the establishment of more infrastructures such as classrooms, Laboratories, changing rooms for girls students, dormitories and hostels (Cash, 2016). However, most of the schools in Arusha have acute shortages of instructional materials. Particularly, most schools seem to have scarcity of textbooks and reference books and physical facilities such as classrooms, desks and chairs. While acknowledging the government initiatives in providing quality education and increasing access to secondary school education, the academic achievement of the students in Community Secondary Schools are still poor. Therefore this study assessed the availability physical infrastructure and its influence on the quality education in public secondary school in Arusha district.

1.1 Research Questions

1. What are the physical infrastructures available in public secondary school in Arusha District?
2. What is the influence of physical infrastructure on quality education in public secondary school in Arusha District?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. This study was grounded in the systems theory introduced in 1933 by Ludwig von Bertalanffy.

2.1 The Systems Theory

The theory argues that an organization such as a school acts as a system with sub-systems whereby each sub-system performs a particular function (Lawrence, 2013). For the whole system to be successful, each part of it should perform its function effectively. The theory also holds that all systems have common elements which

include inputs, process, goals, products and feedback. In the current study, the researcher looked at the presence of the physical infrastructures which make part of the system inputs. The presence of physical facilities including classrooms, desks, tables, toilets, laboratories and changing rooms for female students was assumed to be important for the processes of teaching and learning to take place. Therefore, the study was conducted to determine whether such infrastructures were present and also to determine the extent to which their presence influences the provision of quality education in public secondary schools.

2.1.1 Application of the Theory

The theory is applicable in this study by dividing the whole system into its components. It is easy for a researcher to determine which component of the system is not well functioning. Therefore, in the current study the theory was of an advantage as it allowed the researcher only to concentrate on the availability of physical infrastructures in relation to the teaching and learning process. The theory enabled the researcher to determine whether the available infrastructures allowed the teaching and learning process to take place smoothly.

The major weakness of the theory is that it does not give solutions to the problems. The theory may only identify the component within the system which is not working appropriately but does not give suggestions on what should be taken to improve the performance of such component. Therefore, it requires the application of other theories in finding the solutions for the identified problems. Despite the weakness, the theory helped the researcher to identify whether the presence of physical infrastructures in the public schools influence the delivery of quality education and also based on the results, proper recommendations were made for the purpose of improving the situation.

2.2 Availability of Physical Infrastructure in Public Secondary Schools

Adeyanju (2018) conducted a study to investigate the perceptions of parents towards construction of physical resources in primary school the Nigeria with the targeted population of 450 respondents and cross-section design was applied to the study. The study found that parents and community generally have a significant role in promoting the availability of school resources through construction in case of financial assistance or manpower utilization. The findings by Adeyanju (2018) have shown that it is important for both teachers and students to be supplied with adequate physical infrastructures for effective teaching and learning to take place. However, the study did not indicate how available those facilities in the schools were.

Mabeyo (2016) on his study about the influence of school infrastructure on academic performance in public primary schools in Nzega District Tabora, cross-sectional design was used to get a total sample size of 115 respondents in which simple randomly for the students, purposive technique for teachers as well as educational officers. Mabeyo (2016) argues that there is a shortage of school infrastructure in most of schools such teachers' houses, classrooms, toilets and desks in primary schools this led to the poor academic performance among students in public primary schools. The problem of educational infrastructure in primary schools accelerates to secondary schools and become the alarming issues countrywide. The shortage and conditions of infrastructure in schools are causing miseries in learning and performance of the students.

Fuller (2020) based on his study done in Lesotho under the title Analysis of the Availability of School Facilities and Infrastructure as an Effort to Accelerate School Quality Improvement, whereby study used a qualitative approach with a multisite research design. The total number of respondents was 190 from the targeted population of 2390. The findings were identified as school library as an instructional resource which may significantly influence pupils' achievement after controlling for pupils' family background. He found that effect of library size and its activity have been positive in 15 out of 18 analyses. Also, in his study on the relationship between instructional facilities and academic performance discovered that library correlates with academic achievement and those schools with well-equipped library normally maintain high academic performance.

Thompson (2016) conducted a study based on how students fail science subjects in secondary school in Tanzania. Mixed research design was used to accomplish a sample size of 230 respondents. Interview and questionnaire as well as observation were used as data collection instruments, also simple randomly and judgmental sampling techniques were applied to the study. The findings note that electronically related teaching-learning materials are expensive to purchase, maintain and operate. The findings reveals that the situation is more serious in developing countries, such as Tanzania where a dilemma occurs as to whether to furnish the concerned schools with inputs or arrest some social or economic maladies such as unemployment, diseases or poor communication channels first.

2.3 Influence of Physical Infrastructure on Quality Education in Public Secondary School

Owoeye and Yara (2018) linked performance of students to the provision of adequate physical facilities while referring to a survey of 51 primary schools in Botswana with judgmental and purposive techniques as well as

questionnaire and interviews data collection methods applied during the study. The study found that students performed significantly better on academic tests when they had adequate classrooms, desks and chairs. Owoeye and Yara (2018) succinctly found that school buildings are very vital input to educational system; emphasizing that even though they do not teach but their use may facilitate or impede learning. However, the study found no evidence to show that an expensive school building would necessarily improve academic achievement.

Saeed and Wain (2019) conducted a study in Cameroon about the positive relationship between school administration and school infrastructure towards academic achievement among the students. The study used a targeted population of 4560 from four secondary schools and a sample size of 100 were selected to represent the entire group. Mixed research design was used during the process of data collection together with questionnaire and interview guide. The study found that all facilities must be provided in the schools for the students' better, concrete, and real experiences. Physical facilities help to enhance the learning of the students. Research shows that availability of the physical facilities, including classrooms, water, electricity, boundary wall, toilets, furniture, playgrounds, libraries, and dispensaries have a significant positive influence on the performance of the students and their achievement.

Bakari et al., (2020) carried out a study on effects of physical facilities on performance in Kenya Certificate of Secondary Examination in public schools in Bungoma. The study used 190 sample size with targeted population of 3480 from 7 selected schools, mixed design was also used, selection of respondents based on simple randomly and purposive technique, interviews and questionnaire applied during data collection. The study found that the academic performance of schools with adequate physical facilities has been improving over the years steadily while performance in schools that have inadequate physical facilities, in Kenya Certificate of Secondary Education (K.C.S.E) fluctuated with time despite new reforms and innovations that have been designed and introduced to make education relevant to socio-economic and political aspirations and expectations of the society at large.

3. Methodology

This study adopted descriptive survey design, which helped to describe the availability of physical infrastructures in secondary schools and determine how they influenced the delivery of quality education. The study targeted the heads of public secondary schools, ward education officers, teachers and secondary school students from all the 33 schools located in Arusha district. From the target population of 11643, a sample of 98 respondents was selected using stratified, simple random and purposive sampling techniques. This sample consisted of 4 heads of public secondary schools, 4 Ward Education Officers (WEOs), 30 teachers and 60 students.

Instruments used for data collection included questionnaires and interview schedules. The interview schedule was used to collect data from heads of schools and ward education officers through verbal conversations. Questionnaires were used to collect quantitative data from the students. This instrument had both closed and open ended items delivered from the research questions. Before the process of data collection, the instruments were pilot tested in two schools for the purpose of improving the validity and establishing reliability (Kumar, 2019). The instruments' indicated high level of reliability as the calculated coefficient of 0.91 was obtained from the students' questionnaire. The instruments were then used for data collection and the collected data were analyzed using descriptive statistics and thematic analysis.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Availability of Physical Infrastructure in Public Secondary Schools

The first objective of this study aimed at finding out the availability of physical infrastructures in public secondary schools in Arusha District. Data to answer this question were collected from students, and teachers. Students and teachers were provided with a rating scale in their questionnaires and requested to indicate the availability of different listed infrastructures in their respective schools. The heads of schools and the Ward Education Officer were interviewed. The responses from students and teachers are presented in table 1.

Table 1: Response from the Students and Teachers on the Availability of Physical Infrastructures in Public Secondary School

| Physical infrastructures | Students' responses in % | | | | Teachers' responses in % | | | |
|---|--------------------------|----|------|-----|--------------------------|------|------|------|
| | H | M | L | N | H | M | L | N |
| Classrooms | 46 | 36 | 13.3 | 3.3 | 26.7 | 60 | 13.3 | 0 |
| Laboratory | 26 | 36 | 35 | 2 | 13.3 | 53.3 | 33.3 | 0 |
| Changing rooms for girl students | 25 | 26 | 28 | 12 | 10 | 26.7 | 26.7 | 36.7 |
| Sports and game grounds | 11 | 25 | 46 | 16 | 6.7 | 23.3 | 30 | 40 |
| Water and Electricity supply | 31 | 26 | 38 | 3 | 10 | 50 | 40 | 0 |
| Availability of enough toilets | 35 | 33 | 23 | 8 | 10 | 33.3 | 56.7 | 0 |
| Tables and chairs | 40 | 12 | 7 | 5 | 16.7 | 66.7 | 10 | 6.7 |
| Staff quarters | 41 | 33 | 18 | 7 | 10 | 10 | 56.7 | 23.3 |
| Enough library materials | 20 | 16 | 62 | 2 | 6.7 | 26.7 | 56.7 | 10 |
| Availability of dormitories and hostels | 8 | 11 | 30 | 50 | 3.3 | 6.7 | 26.7 | 63.3 |

Source: Field Data (2022) Key: H = High; M = Moderate; L = Low; N = Not available

Data in table 1 show that 28 (46%) of the students indicated that classrooms are available to a high extent, 22 (36%) of them indicated the availability of classrooms is to a moderate extent, 8 (13.3%) of them indicated the availability of classrooms at a low extent and 2 (3.3%) of them indicated that classrooms are not available at all. Responses from teachers indicate that 26.7% reported that classrooms are available to a high extent, 60% of them indicated the availability of classrooms is to a moderate extent while 13.3% of them indicated the availability of classrooms at a low extent. The findings imply that most students and teachers who participated in the study indicated that classrooms are available in their schools. Thus secondary schools in Arusha districts have played a big role to ensure the availability of classrooms, despite the few challenges. The availability of classroom simplifies the learning process as most of the external factors may be reduced. This observation is in agreement to what was observed by Owoye and Yara (2011) who put forward that students do better in their academics in the presence of adequate classroom.

During the interviews, the head of school A said;

The availability of enough classrooms in school is in low extent compared to the rate of students' enrollment, this causes student's congestion hence, reduce the efficiency of teaching and learning skills and knowledge in secondary schools (Personal interview with Head of school 'A' on 13thMay, 2022).

Results in table 1 also show that 16 (26%) of the students indicated that laboratory are available to a high extent, 22 (36%) of them indicated the availability of laboratory to a

moderate extent, 21 (35%) of them indicated the availability of laboratory at a low extent and 1 (2%) of them indicated that laboratory are not available at all. The findings imply that most of students who participated in the study indicated that laboratory is available in their schools. Thus management of secondary schools in Arusha districts in collaboration with the government has played a big role to ensure the availability of laboratories. The availability of laboratory in each school enhances the learning process thereby improving the quality of education in public secondary school. According to Karaa (2019), laboratories assist students in establishing the relevance of the theory. It brings clarity in the mind of the students regarding in the basic concept of the subject. Practical lessons in the laboratory enable students to understand differences between theory and its application. The views obtained from the interview with Ward Education Office 'W' indicates that;

The availability of school laboratories assists students to learn practically rather than theoretically, it help to acquire learning contents easily. However, it is not available in high extent but to a moderate extent. (Personal interview with Ward Education Office 'W' 12th May, 2022)

Results in table 1 also show that 21 (35%) of the students indicated that toilets are available to a high extent, 20 (33.3%) of them indicated the availability of enough toilets to a moderate extent, 14 (23.3%) of them indicated the availability of toilets to a low extent while 5 (8.3%) of them indicated that toilets are not available at all. On the other hand, 10% of teachers indicated that toilets are available to a high extent, 33.3% indicated the availability

of enough toilets to a moderate extent and 56.7% indicated the availability of toilets to a low extent. The findings imply that most of students and teachers who participated in the study indicated that that Availability of enough toilets is available in their schools. Thus secondary schools in Arusha districts have played a big role to ensure the availability of toilets despite the few challenges. The availability of enough toilets improves school sanitation thereby curbing the chances of disease outbreak. The quality of education in public secondary is therefore enhanced with the availability of enough toilets. Generally, there is need to put up more toilets because yearly, the number of enrollment in public secondary schools have gradually increased.

The correlation information from head of school ‘‘B’’ when interview session was conducted held that;

Schools have a lot of students but the number of toilets available are low compared with the number of student, not only that but also, there are inadequate number of toilets for teachers in secondary schools. (Personal interview with head of school ‘‘B’’ on 13th May 202)

Results from table 1 also show that 5(8%) of the students indicated that availability of dormitories and hostels are available to a high extent, 7(11%) of them indicates the availability of dormitories and hostels to a moderate extent, 18(30%) of them indicated the availability of dormitories and hostels at a low extent and 30(50%) of them indicated that availability of dormitories and hostels is low. From the findings showed that there are inadequate dormitories and hostels in many secondary schools in Arusha District. George (2016) conducted a study in Algeria which found the rate of enrolment for students who come far from the school was 84% when a school was located in less than 1 kilometer away from home. However, students’ enrolment dropped drastically to 25%, when the school was located more than 5 kilometers away

from homes. Therefore, availability of dormitories and hostels would help students coming far away from school.

This shows that lack of hostels in public secondary schools is a serious problem and may negatively affect the learning of students. This was made more evident by the head of school ‘‘D’’ during an interview as indicated as follows;

Inadequacy of hostels and dormitories is another serious problem facing my school. I have so many students because of the free education policy but no dormitories available and the problem causes students truancy to increase day after day’’ (Personal interview with head of school ‘‘D’’ 13th May 2022).

Therefore, there was an agreement in the responses of students, teachers and the heads of schools on the inadequacy of hostel facilities in the public secondary schools in Arusha district and the lack of such facilities are considered to be one of the factors for low performance of students.

4.2 Influence of Physical Infrastructure on Quality Education in Public Secondary School

The second objective of this study aimed at finding out influence of physical infrastructures on quality education in public secondary schools in Arusha District. Data to answer this question were collected from students, and teachers. Students and teachers were provided with a rating scale in their questionnaires and requested to indicate how different listed infrastructures in their respective schools influence Quality Education in Public Secondary School. The heads of schools and the Ward Education Officer were interviewed. The responses from students and teachers are presented in table 2.

Table 2: Response from the Students and teachers on the Influence of Physical Infrastructure on Quality Education in Public Secondary School

| Statement on influence | Students’ responses in % | | | | | Teachers’ response in % | | | | |
|---|--------------------------|------|-----|-----|-----|-------------------------|------|------|-----|-----|
| | SA | A | U | D | SD | SA | A | U | D | SD |
| Increase performance | 68 | 31 | 0 | 0 | 0 | 63.3 | 30 | 6.7 | 0 | 0 |
| Reduce overcrowdings in the class | 50 | 46 | 3 | 0 | 0 | 53 | 40 | 6.7 | 0 | 0 |
| Reduce the rate of truancy among the students | 38 | 45 | 10 | 6.7 | 0 | 46 | 36.7 | 13.3 | 3.3 | 0 |
| Increase the rate of enrollment | 50 | 47 | 1.7 | 0 | 0 | 54 | 40 | 3.3 | 0 | 0 |
| Control the rate of spread of disease like endemic diseases | 60 | 33.3 | 1.7 | 3 | 1.7 | 53 | 33.3 | 6.7 | 3.3 | 1.7 |
| Provisional of good environment studies | 66 | 23 | 6.7 | 1.7 | 1.7 | 60 | 33.3 | 6.7 | 1.7 | 1.7 |
| Security and safety | 66 | 25 | 5 | 0 | 3 | 60 | 20 | 10 | 10 | 0 |
| Increase teachers morale | 46 | 41 | 8 | 1.7 | 1.7 | 63.3 | 26.7 | 2.7 | 1.3 | 0 |
| Effective learning and teaching | 51 | 28.3 | 6.7 | 5 | 8.3 | 66.7 | 30 | 3.3 | 0 | 0 |
| Strong relationship between students and teachers | 48 | 28.3 | 15 | 1.7 | 6.6 | 60 | 33.3 | 6.7 | 0 | 0 |

Source: Field Data (2022) Key: SA = strongly agree’ A = Agree; U = undecided; D = disagree; SD = strongly disagree

As shown in table 2, the responses were as follow: most respondents strongly agreed on the increased performance due to availability of Physical Infrastructure. In this regard, 68% of students strongly agreed while 63.3% of teacher confirmed this assertion. Likewise, 31% of students agreed with the statement while 30% of teachers also were in agreement. Physical infrastructures like learning and teaching aids facilitate students' academic performance in different ways such that students' acquired knowledge correspond to the available infrastructure in specific subject. In so far, it create conducive environment for the students and teachers during curriculum implementation as well and non-curriculum activities. The study done by Mwangi (2017) in Migori District, Kenya, suggested that the availability of tangible resources motivate students to learn and perform well academically due to the fact that students gain confidence and mastery mind interns of learning and teaching process. It is their turn.

Similar to the information from the interview done with the Ward Education Officer X, it was reported that;

There is a strong relationship between physical infrastructures like classes, toilets, dormitories, furniture and teaching and learning materials like books. Students tend to perform exemplary well when infrastructure is adequate. (Personal interview with Ward Education Officer "X" on 12th May 2022)

From table 2, the researcher also found that availability of infrastructure reduces overcrowding in the class. In this regard, 30(50%) of students indicated strongly agree, 28(46%) indicated agree with the statement while 2(3%) of the responds were undecided. For teachers, 53% strongly agreed with the statement and 40% agreed while 6.7% were undecided. This shows that the availability of enough physical infrastructures such as classes, tables and chair directly influence quality education. There are high demands of infrastructures like classes, chairs and table in secondary school to cover the gap on incensement of students' enrollment in public school. All this causes and is associated with free basic education policy. According to Handason (2019), in a study conducted in London about the demands of tangible infrastructure towards high learning achievement; several elements were necessary for quality education among them motivated students, well trained teachers using actual learning techniques, adequate facilities and materials, local language curriculum that builds on teachers and learners knowledge and experience, welcoming gender sensitive, health, safe environment that encourage learning and accurate assessment of learning outcomes.

On table 2, it was noted that infrastructure reduce the rate of truancy among the students, whereby 23(38%) indicated strongly agree, 27(45%) of the respondents agreed with the statement, 6(10%) were undecided while 4(6.7%) disagreed with the statement. One of the factors

that cause truancy in secondary school is the nature and environmental situation of the school; the physical facilities as well play vital roles on promotion and maintain of students' psychology. UNESCO (2020) reported that spacious classroom gives the teacher and student good room for interaction. Solid waste disposal system is important in enhancing safe and clean environment as well as truancy reduction in school. There is need for proper management of solid waste disposal in schools because this enhances positive attitude towards personal hygiene and environment.

During the interview, head of school D'' said;

Many students in my school are truancy, especially adolescent girls when it comes to the issues of their period miss attending school due to inadequate changing rooms, for males students become truancy when it comes to the issue of inadequate classes (Personal interview with Head of school D on 13th May 2022).

According to the results from table 2 on Provisional of good environment studies in which 40(66%) of the responders were strong agree, 14(23%) responses agree, 4(6.7%) were undecided, while 1(1.7%) of the respondents indicated disagree as well as 1(1.7%) responses strong disagree with the statement. Good and conducive environment as a major factor that accommodate students in learning and teaching. Conducive environment including the availability of enough learning and teaching materials, availability of extra curriculum activities like sports and games in secondary schools as well as enough electricity and water supply. According to Akande (2018), learning can occur through one's interaction with one's environment. Environment here refers to facilities that are available to facilitate students learning outcome. It includes books, audio visual, software and hardware of educational technology; so also, size of classroom, sitting position and arrangement, availability of tables, chairs, chalkboards, shelves on which instruments for practical are arranged

From the table 2 the researcher tend to know from the respondents on their level of agreement towards the statement which was security and safety, whereby 40(65%) were strong agree, 15(25%) of the rate responders were agree, 3(5%) were undecided while another 2(3%) were strong disagree with the statement. From the findings showed that many respondents agreed that physical infrastructures influence security and safety in secondary school. Use of modern tools and apparatus in laboratories for example reduce number of accidents which happen due to uses of outdated tools and apparatus. Not only that but also uses of modern classroom which facilitate the electricity simplify teaching and learning when materials like projectors become available.

During the interview with Ward Education Officer, the respondent put forth the following views;

Academic achievement among the students based on the availability of clear security and safety within and outside the school, it prepare students psychological well and interaction of learning and teaching contents become well done (Personal interview with Ward Education Officer on 13th May 2022).

Increase teachers morale, another statement provided by the researcher to the respondents whereby 28(46%) were strong agree, 25(41%) of the respondents were agree, 5(8%) were undecided, while 1(1.7%) was disagree and 1(1.7%) was strong disagree. The willingness of teachers towards teaching activities influencing by the rate of resources available since it reduce the uses of lot energy to present the subject content, but when there is high availability of physical learning and teaching facilities, boost teacher morale towards teaching and learning. Similar sentiment were given by Lyons, (2012) who said that learning is a complex activity that puts students' and teachers' motivation and physical condition to the test

Table 2 reviewed the statement mentioned by the researcher to the respondents by indicating their level of agreement on Strong relationship between students and teachers, where 29(48%) indicated strong degree 17(28.3%) indicated agree with the statement 9(15%) indicated undecided 1(1.7%) was disagree and the rest 4(6.5%) were strong disagree with the statement. The findings lie in line with agree segment in which mostly students indicate their level of agreement. Physical infrastructures become a bridge to join between teachers and students during learning and teaching activities in secondary school specifically in Arusha District.

During the interview with Head of school, the respondent reported that;

There is core positive altitude among the students towards the teacher who applies and uses well the available learning and teaching available in the schools. Since it allow students to interact with the subject matter like enough classrooms to conduct learner centered methods such as group discussion (Personal interview with Head of school of school 'A' on 13th may 2022)

Reduce overcrowdings in the class, teacher responded as 16 (53%) were strong agree, 12(40%) were agree 2(6.7%) of the teachers were undecided. Reduce the rate of truancy among the students, responded from the teachers were 14(46%) were strong agree, 11(36.7%) were agree with the statement, 4(13.3%) were undecided while 1(3.3%) of the respondents was disagree level of agreement. Increase the rate of enrollment, in which 17(53%) were strong agree, 12(40%) were agree and 1(3.3%) was undecided. Control the rate of spread of disease like endemic diseases, whereby teachers responded as follow 16(53%) were strong agree 10(33.3%) of the respondents were agree 2(6.7%) were

undecided, while 1(3.3%) was disagree and the last 1(1.7%) was strong disagree. Provisional of good environment studies, furthermore teachers attempt the statement in this way 18(60%) were strong agree 10(33.3%) were agree 2(6.7%) were undecided 1(1.7%) was disagree and 1(1.7%) was strong disagree. Security and safety 18(60%) were strong agree 6(20%) were agree 3(10%) were undecided 3(10%) were disagree. Increase teachers morale 19(63.3%) were strong agree 8(26.7%) were agree 2(2.7%) were undecided and 1(1.3%) was disagree. Effective learning and teaching 20(66.7%) were strong agree 9(30%) were agree 1(3.3) was undecided with the statement and lastly Strong relationship between students and teachers was Strong relationship between students and teachers whereby 18(60%) were strong agree 10(33.3%) were agree 2(6.7%) were undecided.

During the interviews, Ward Education Officer remarked that;

The infrastructures in secondary schools in Arusha District paved the way towards education achievement for students, when there is enough toilets, enough chair and tables, enough classrooms and enough dormitories, all these are catalyst for education achievement (Personal interview with Ward Education Officer on 12th May 2022).

5. Conclusion and Recommendations

5.1 Conclusion

The study has outlined the present status of the availability of educational infrastructure in secondary schools in Arusha district. Form the findings the implication is that there is need for improving educational infrastructure in terms of quantity and quality. Many infrastructures are not in good conditions as revealed by the study. Students and teachers involved in the process of monitoring and evaluation of infrastructure in schools have expressed their reservation on availability of adequate infrastructure and maintenance. The schools management has no well-defined financial budget planning for regular damage preventive and maintenance. Likewise, from the study it was observed that in some schools some furniture was seen scatted unmanaged in school premises.

The findings further highlighted that teachers and students in schools with poor infrastructure lack confidence and self-esteem compared to those schooling in well-equipped quality infrastructure. Due to unattractive and unsafe school environment, some students are not participating in some school activities while in other schools, learning session are conducted fully. This creates education class disparities in the context that graduates in the same level of education have acquired different knowledge due to different levels of availability of infrastructure.

5.2 Recommendations

1. Stakeholders in education urgently need to collaboratively invest and improve secondary schools infrastructure facilities in the country.
2. Policymakers have duty to make sure they enact laws that encourage improvement of school infrastructure. Also policymakers should advise, supervise and make a serious follow up to ensure government allocates appropriate fund for the improvement of the school infrastructure facilities.
3. The policymakers should make sure government is in touch and accountable to laws and quality education provisions that enable students acquire relevant knowledge, skills and attitude, which match with global challenges and the development of the country.

References

- Adeyanju, L. (2018). *Teachers Perception of the Effects and Use of Learning Aids in Teaching*. Nigeria Obafemi: University Press.
- Akande, K. O. (2018). *Impact of School Infrastructure on Provision of Quality Education in Public Secondary Schools of Nyakach District, Kenyatta*. University of Nairobi.
- Atkin, M.E. (2019), *Social science research. Conception Methodology and Analysis*. Uganda: Makerere University.
- Bakari J, Likoko S, Ndinyo F (2020). *Effect of physical facilities on performance in Kenya Certificate of Secondary Examination in Public schools in Bungoma South*. Nairobi: Inte. J. Science and Res. (IJSR).
- Cash, C. (2016). *Improving Students Achievement & School Facilities in a Time of Limited Funding*. The connection Project.
- Dumont, et al., (2021). *School facility condition and student academic achievement: UCLA'S Institute for Democracy, Education and Access (IDEA)*: Los Angeles, CA.
- Fuller, N. (2020) *Gilbert theory; Hierarchy of beginning Needs*: Ukraine; IPL Ltd.
- George, M. (2016). *The effectiveness of the school inspectorate in improving teacher quality: A case study of English language teaching in secondary schools in Tanzania*. Dar-es-salaam: University of Dar es salaam Master of Arts unpublished Dissertation.
- Hakielimu, (2011). *Are our Teachers Qualified and Motivated to Teach? A research report on teachers' qualifications, motivation and commitment to teach and their implications on quality education*. Dar es Salam: Hakielimu.
- Handason, M. (2019). *Comprehensive criteria to judge validity and reliability of quantitative research within the realism paradigm*. Quantitative Market Res. 3:118-126.
- Human Right Watch. (2017). *I Had a Dream to Finish School: Barriers to Secondary Education in Tanzania*. New York. United State of America. ISBN 97-1-6231-34419
- Karaa, I. (2019). *The impact of English Language as a medium of instruction on the training and performance of secretaries*. Unpublished Master's thesis. Dar es Salaam: University of Dar es Salaam
- Kumar, B. (2019) *Research Methodology: a step by step guide for beginners*: Los Angeles; SAGE
- Lawrence, B. (2013). *Save a Penny Lose a School: the real cost of deferred maintenance*: Washington DC.
- Lyons, S. (2012). *The adequacy of international materials and physical facilities and their effects on quality of teacher preparation in encouraging private primary teacher training college in Bungoma Country Kenya*. 2 (1):403-408.
- Mabeyo, J.E. (2016). *Improving Academic Performance in Primary Schools through School Committees: The Case of Nzega District in Tabora Region*. A Dissertation for award of MA.EAPPS at the Open University of Tanzania. Dar es Salaam. p.58
- Mosha, M. (2014). *Factors affecting students' performance in English Language in Zanzibar Rural and Urban Secondary Schools*. In J. Educ. and Practice. 5(35):64-76.
- Mwangi, H. (2017). *Factors affecting Adult Education Learners recruitment programme in Kakamega south district, Kenya*. Unpublished M.Ed. Thesis, Masinde Muliro University.
- Ngusa, B. (2021). *Relationship among School's Infrastructure Facilities, Learning Environment and Student's Outcome*. *International Journal for Research in Social science and Humanities Research*. Vol. 2 Issue

- Owoeye, S. and Yara, O. (2018). *School facilities and academic achievement of secondary school agricultural sciences in Ekiti state, Nigeria*. J. Asian Soc. Sci. 7(7):
- Saeed, M. and Wain, K. (2019) *Status of missing physical facilities in government schools of Punjab*. J. Res. and Reflec. In Educ. 5 (2):105-127.
- Thompson, S. (2016). *Simple randomly sampling*:
Netherland; Scribb.com Publishers
- Uline C. and Moran M. (2008). The Walls speak; the interplay of quality facilities, schools climate and student achievement, *Journal of Educational Administration*, 46(1), pp 55-73.
- UNESCO, (2020). *Quality of education and improvement of school achievement*. Retrieved from <http://www.unesco.org/education/educprog/bronchure>
- United Republic of Tanzania (2013). *Ministry of Education and Vocational Training Tanzania Institute of Education*. Dar es Salaam: Tanzania Institute of Education (TIE).
- World Bank, (2018). *How Tanzania plans to achieve 'Big Result Now'*. Dar es Salaam: Tanzania.



Effectiveness of Group Assignments in Assessing Knowledge Acquired among University Students in Arusha Region, Tanzania

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Abstract: The study assessed the effectiveness of group assignments on assessing knowledge acquired among university students in Arusha region. Specifically, the study investigated the effectiveness of university lecturers on monitoring group assignments and identifying methods used by university lecturers to ensure effective use of group assignments. Qualitative and quantitative approaches were employed. Eighty university students, 40 lecturers and 4 examination officers were sampled using stratified and purposive sampling techniques. Questionnaires were used to collect data from lecturers and students, while interview guides helped the collection of qualitative data from the examination officers. The instruments were validated using experts and the reliability was determined using split half method and the calculated reliability coefficient was 0.82. Data were analyzed using descriptive analysis whereas mean scores, frequencies and percentages were generated by use of SPSS. Qualitative data was analyzed thematically alongside research questions and the results were presented in words supported by direct quotations. The study found out that lecturers perceived themselves as competent on using group assignments but most of the students were not satisfied with how the whole process of group assignment was conducted. However, both students and lecturers acknowledged the importance of group assignments on assessing the acquisition of knowledge. Despite the shortfalls, the study concluded that group assignments are effectively used to assess learning acquisition among university students. The study recommended for more seminars and workshops for the lecturers so as to enhance their competence in using group assignments while assessing the acquisition of knowledge among students.

Keywords: Assessment, Assignment, Group, Effectiveness, Knowledge

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1. Introduction

One core role of an educator at all levels of education is to provide evidence on whether learning is taking place or not. The process by which information is to answer this question is called assessment. According to Gronlund and Linn (2009) assessment involves the collection of data to determine what a person knows and what he can do. Assessment is categorized into two broader aspects namely formative and summative

assessment. Formative assessment is conducted periodically to provide feedback on learning success or failures while summative assessment is conducted at the end of the course to provide evidence on whether the learning objectives have been achieved (Kitula and Ogoti, 2018; Sulaiman, et al., 2020). In higher learning institutions, the two categories of assessment are also used and sometimes formative assessment is referred to as continuous assessment (CA) or coursework and the summative assessment is referred to as the university exam (UE).

Formative assessment in universities takes a number of forms, including individual and group assignments, take home assignment, projects, presentations and practicum with the main aim of providing constructive feedback about the achievement of learning outcomes (Sulaiman, et al., 2020). This study however concentrated on the use of group assignments as one of the formative assessment methods. The use of group assignments has gained momentum in higher learning institutions within Tanzania and beyond, whereby both students and lecturers prefer such form of assessment to other forms (Daba et al., 2017). Literature shows that the use of group assignments has a number of advantages to both the learners and the lecturers. For instance, Dicker et al., (2020) observed that the use of group assignments helps students to develop personal and interpersonal skills as they work in groups. This enhances their ability to cooperate with others.

Group assignments also allow interaction between students of different abilities as it increases students' hands of tasks (Chang & Brickman, 2018). Additionally, group assignments have positive impacts on students' acquisition of knowledge and skills (Meng, 2017). The use of group assignments also reduces the assessment burden to lecturers instead of responding to the individual learner's need, the lecturer will have to respond to the groups. Moreover, the course activities are likely to be done within a short time when groups are used compared to when such activities were to be done by individual students (Daba et al., 2017). Due to the number of advantages, both lecturers and students in higher learning institutions feel more comfortable with group assignments compared to individual assignments.

Though group assignments are preferred by lecturers and students, it is important for lecturers to ensure that the method used yields valid results. According to Bravo et al., (2019), there should be maximum participation of individuals in the group activities for such method to give results which present the true ability of the members. If some students participate fully and others do not, the obtained scores may not be effective as there is a possibility for strong students to score lower grades due to the weak students (Yadgarovna & Husenovich, 2020). However, in the Tanzanian context, there is no research conducted to determine whether group assignments are effectively used in assessing knowledge acquired among undergraduate students. Thus there was a need for a study to be conducted to fill the existing gap.

Effective use of group assignments also calls for lecturers to be careful in making the groups. According to Kitula & Ogoti (2018), the groups should not be too large because it may be difficult for each student to participate effectively. Moreover, lectures should consider the characteristics of students in making the groups so that each learner benefits from the group members (Bravo et al, 2019). If lecturers do not make deliberate efforts to ensure that the groups are well constructed, there is a possibility of some groups to have members who are all strong and some groups may have members who are all weak. This situation may hinder the chances for weaker students to be helped during the courses. As long as group assignment is one form of

formative assessment, its major role should be to improve teaching and learning. Hence lecturers are urged to ensure that students' characteristics are considered when forming the groups. However, in universities within Tanzania there is limited literature on how groups are formed and hence the effectiveness of this method on assessing knowledge acquired is in question. This being the case, there was need for a study to be conducted to assess the effectiveness of group assignments on assessing knowledge acquired.

1.1 Research Questions

- i) To what extent are university lecturers equipped with skills on using group assignments to assess knowledge acquisition among students?
- ii) To what extent do lecturers ensure that group assignments are effectively implemented in assessing knowledge acquisition among students?

2. Literature Review

2.1 Theoretical Framework

According to Sax (1997) validity is the extent to which measurement results are useful in making decisions and providing explanations relevant to a given purpose. This means that for meaningful use of assessment results tools, there needs to be evidence that they are measuring what has been intended to be measured. Sax (1997) further states that a trait that fails to measure its own objectives serves little purpose no matter how reliable it may be. The concept of validity is grounded in the validity test theory that postulates that a students' score on an achievement test reflects his/her ability on the measured area.

Based on the theory it therefore can be expected for a graduate who scored high grades on teaching method examinations during his/her time of university studies to demonstrate high abilities on using different and relevant teaching methods. For an assessor to be sure if the test results are useful in explaining competencies; Gronlund and Waugh (2009) suggested for one to ask four questions:

1. What extent does the sample of measurement tasks represent the domain of tasks being measured?
2. How accurately does the performance on assessment predict future performance on some valued measure?
3. How well can student's performance on assessment be explained in terms of psychological traits?
4. How well can the use of assessment serve the intended purpose and avoid adverse purpose?

In answering the four questions, five kinds of validity do emerge; these are content validity, predictive validity, concurrent validity, construct validity and consequent validity. In this study, the researcher concentrated on two kinds of validity that are content and predictive validity as they are more relevant to the study.

Content validity refers to the adequacy with which the content of a test represents the content of curricular aims about which the inferences are to be made (Popham, 2008). It may not be possible for a lecturer to include in an assignment everything that has been taught in a particular course. Therefore, one needs to sample some aspects that can represent all the other aspects. Content validity then helps a lecturer to compare the assessment tasks to the specifications describing the task domains under consideration (Gronlund and Linn, 2000). Content validity also helps lecturers to find out how well the assessment tasks adequately represent all the tasks that need to be assessed. A good assignment therefore, needs to have an appropriate content and appropriate process to be applied to that content.

Predictive validity is concerned with how accurately test scores predict future performance (Aiken, 2000). According to Nitko and Brookhart (2007), individual's performance on a certain criterion can be predicted using the test performance. This means that through observing persons' performance, one can predict his/her success in the place of work. That is why the grade point average (GPA) is highly considered when a graduate applies for work. In the teaching profession also, especially in private schools, graduate's GPA is considered for one to be employed as a teacher. However, there is evidence from literature that some graduates with good grades fail to deliver what is expected of them (Low, Chong and Ellis, 2014). This may come with the use of group assignments, which are preferred by most of the students and lecturers. For instance if students are not participating in group assignments, there is a possibility for them to be awarded scores that do not reflect their true abilities and at the end the grades they achieve may not be a true reflection of their abilities. Therefore, the theory will help the researcher to find out the extent to which group assignments are effectively used by lecturers to measure students' acquisition of knowledge.

The limitation of validity test theory is that it is difficult to practice (Wolming & Wiksotrom, 2010). This is because the theory sees the validation procedure to consider the whole assessment process that ranges from the planning stage to the use of assessment results (Gafni, 2016). Despite the promising advantages of the theory, this limitation made it difficult for the researcher to adopt the theory as the guiding theory in assessing the efficacy of assessments used in universities since it demands too much time and requires a lot of efforts to be put into practice. Apart from the limitations, the theory will be of great help to the current study as it will help the researcher to find out the extent to which lecturers in universities ensure that validity is maintained in the group assignments.

2.2 Empirical Review

A systematic literature review by Khalid et al., (2021) on assessment literacy agenda in Malaysia revealed that there were clear disconnection between education, assessment literacy and teacher practice. The study suggested that there should be emphasis on the

importance of educational assessment literacy programme taking into account the concept, the manner in which values are formed and their effect on efficient practice. The study show that literacy assessment does not guarantee the needed skills for conducting assessment such as constructing group assignment because not all task can be provided as group assignment therefore, it require skills to conduct effective assessment of students including group assignment construction.

A quantitative study by Rezaei (2018) was conducted to explore effective group work strategies; faculty and students' perspectives in USA. The study employed cross sectional survey design to collect data from 308 respondents through questionnaire. The study found out that course instructors ensure effective group assignment by using different strategies such as carefully explaining to students how groups operate and how students will be graded, introducing group work early in the semester to set clear student expectations, establishing rules for misconduct, cheating, and plagiarism, establishing ground rules for participation and contributions, helping students develop the skills they need in doing group activities and by planning for each stage of group work. Also in USA, Rezaei (2017) found out that effectiveness of group work depends on how the effectiveness is measured, how the group is formed, and what type of task is assigned to learners. The studies show how effectiveness of group assignment can be ensured.

There are concerns about how to form and monitor the group assignments. According to Gronlund et al., (2009), groups of four-five members give a good opportunity for each member to participate while larger groups decrease such an opportunity. Too large groups may distort the quality of discussion as members may be arguing without listening to each other. Since members are many, it may not be easy to control the groups. Moreover, having many members per group activity may not guarantee chance for each member to present. Also, the division of activities among group members becomes problematic as the tasks may not be enough to all members and thus there is a possibility of some members to be given works that are purely not academic such as typing and printing.

A literature review done by Wilson et al., (2018) conducted on group work in USA revealed that instructors should form small groups and the formation of the group should consider characteristics of students that contribute to effective group. Moreover, the study revealed that instructors should avoid provision of uneven workload. Instructor should provide effective group assignment which challenge groups to solve highly complex problem that require collaboration of the group to solve. Furthermore, to make group assignment to be effective, instructors should provide opportunity for group member to know one another, set group norms, assign specific roles to students within groups and implement methods to monitor group assignment.

Brown (2019) conducted study to explore an authentic learning approach to group assignments: an analysis of student attitudes in USA. The study found out that project managers' approach, likely due to its increased authenticity, yields improved student attitudes toward group scheduling, group formation, and group grading processes. The study show that use of group leaders approach that give opportunity for group leader to recruit group members influence effective group assignment in acquisition of skill and knowledge among students. The groups were formed according to the characteristic of students that contribute to effectiveness of group assignment. However, the study was implemented in undergraduate agricultural finance courses.

In Tanzania, Kimaro and Kapinga (2020) conducted study to assess instructors' classroom assessment practice in selected higher learning institutions.. The study employed both qualitative and quantitative research approaches, whereby case study design was used to collect data from 112 respondents by using questionnaire and interview. The study found out that assessment practices considered being appropriate in improving learning and acquisition of knowledge among higher education learners. The study also revealed out that group assignment was provided by lecturers. Kimaro and Kapinga (2020) show that group assignment was important and appropriate in improving learning and acquisition of knowledge among higher education learners.

Another study in Tanzania was conducted by Kitula et al., (2018) who assessed the assessment literacy of university lecturers in conducting assessment among selected universities in Tanzania. The study employed mixed research approach whereby data were collected from 48 lecturers by using self-reporting questionnaire. The study revealed that lecturers' level of literacy was moderate in educational assessment. The study indicated that most of university instructors in Tanzania possessed skills for conducting assessment which has positive impact to learner.

3. Methodology

This study used a descriptive survey design which mainly aims at describing the characteristics of people, place or subject being investigated. The design therefore helped to describe the possession of assessment skills by lecturers and different strategies used to ensure effectiveness in the application of group assignments. The study was conducted in four higher learning institutions in Arusha Region -Tanzania selected by simple random sampling. The targeted population included university lectures, undergraduate students and examination officers. From this target population, a sample of 132 respondents (4 examination officers, 40 lecturers and 80 undergraduate students) was selected using purposive and stratified sampling techniques. The sampled students and lecturers responded to questionnaires which had both open and closed ended questions while the examination officers were interviewed. Prior to data collection, the questionnaires and interview guides were validated through the use of experts in the fields of research and assessment.

The collected data from questionnaires were analyzed using descriptive statistics by the help of SPSS whereby frequencies, percentages and means were generated and presented using tables. Qualitative data was analyzed using thematic analysis whereby the data from interviews were transcribed, coded and then the major themes were identified. The presentation of qualitative data was done in words supported by direct quotations.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 The Extent Universities Instructors in Arusha are Equipped With Group Assignment Construction Skills

The first research question found out the extent universities instructors in Arusha are equipped with group assignment construction skills. To answer this question, lecturers, students and examination officers were involved. The responses from the respondents are presented in table 1.

Table 1: Lectures' Responses on the Extent to which they Are Equipped with Group Assignment Construction Skills

| Statements | SD | | D | | U | | A | | SA | | Mean score |
|---|----|------|----|------|---|-----|----|------|----|------|-------------|
| | f | % | f | % | f | % | f | % | f | % | |
| i. I consider myself to be equipped in group assignment | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 45 | 22 | 55 | 4.55 |
| ii. I do provide feedback on time | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 60 | 16 | 40 | 4.4 |
| iii. I do provide group task which challenge groups and require collaboration of the group to solve | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 65 | 14 | 35 | 4.35 |
| iv. At this university, enough time is provided for group assignment to be done | 3 | 7.5 | 5 | 12.5 | 0 | 0 | 11 | 27.5 | 21 | 52.5 | 4.05 |
| v. Workload is fairly distributed to every group | 0 | 0 | 6 | 15 | 3 | 7.5 | 28 | 70 | 3 | 7.5 | 3.7 |
| vi. I do form groups with small size | 0 | 0 | 9 | 22.5 | 3 | 7.5 | 24 | 60 | 4 | 10 | 3.58 |
| vii. Marks allocation depends on effectiveness of individual participation | 0 | 0 | 14 | 35 | 3 | 7.5 | 15 | 37.5 | 8 | 20 | 3.43 |
| viii. I always monitor participation of every group member | 5 | 12.5 | 13 | 32.5 | 0 | 0 | 20 | 50 | 2 | 5 | 3.03 |
| ix. In forming groups, I do consider characteristics of students | 8 | 20 | 14 | 35 | 0 | 0 | 13 | 32.5 | 5 | 12.5 | 2.83 |
| x. I always provide time for group members to know one another | 8 | 20 | 13 | 32.5 | 0 | 0 | 16 | 40 | 3 | 7.5 | 2.83 |
| Grand mean score | | | | | | | | | | | 3.67 |

Source: field data (2022)

Key: SA= strongly agree, A= agree, U = no option, D= disagree, SD= strongly disagree

Results from table 1 show that 18 (45%) and 22(55%) of lectures who participated in this study agree and strongly agreed on the study statement “I consider myself to be equipped in group assignment” respectively. This implies that all lectures agreed that they were equipped in group assignment construction skills. It is very important for lecturers to have enough knowledge and skills in group assignment construction to make group assignment to be effectively used in assessing students as is the mostly preferred formative assessment method in university due to large number of students in a course. Lectures with group assignment construction skills may be in a good position to use group assignment effectively that helps students to develop personal and interpersonal skills as they work in groups. However, sometimes may fail to due time limit, number of students, shortage of learning and teaching resources and other related reasons. This finding is in line with Sulaiman et al., (2020) who found out that lecturers were absolutely aware of formative assessment practices.

The findings were also confirmed by Examination officer in one university in Arusha during interview said that;

We have lecturers with great experience and have enough knowledge and skills including group assignment constructions skills. Also to maintain quality of education we do provide training programs and workshop in

our university that makes most of lectures to be well equipped (Personal interview with Examination officer A on 25thApril, 2022)

Results from interview imply that most of the lectures have high experience and some of universities do prepare training program and workshop to equip their lectures with different skills including assignment constructions skills for the purpose of maintaining the quality of education provided in university. This is what may differentiate quality of education provided between one university and other for the reason that teaching experience and training programs for lecturers affect quality and performance of lecturers hence lead to quality education though there is other factor which influence quality of education provided. Therefore, a university with high experienced lecturers and providing training programs workshop cannot be compared with university with few experienced lecturers in terms of quality of education provided.

Results from table 1 show that 8(20%) of lecturers disagreed and 32(80%) of lecturers agreed on the statement “At this university, enough time is provided for group assignment to be done.”This implies that majority of lecturers (80%) who participated in this study do provide enough time for group assignment to be done and few lecturers (20%) disagreed on the same statement. This indicted that students are provided with enough time to accomplish group task provided have to find time that every group member will be ready to

participate. Therefore for effective group assignment, enough time should be provided to allow students apart from having hard college timetable should devote time for group task. Sometimes group task is given with very limited time that lead to only a few group members work for the group task, therefore lecturers with assignment construction skills do provide enough time to submit group work. Similar finding was found by Kitula et al., (2018) who found out that most of universities instructor in Tanzania possessed skills for conducting assessment which has positive impact to the learner.

Also the study indicated that some of lecturers (20%), do not provide enough time for students to perform group ask. Failure of lecturers to provide enough time for group task affects negatively the effectiveness of the group assignment in learning and acquisition of knowledge among students because students will do the group task just to meet the deadline and not to acquire knowledge which is contrary to Kimaro and Kapinga (2020) who argued that group assignment was important and appropriate method in improving learning and acquisition of knowledge among higher education learners. Effective group task improves learning and acquisition of knowledge among learners to comply with the limited time needed for group work.

Also this was confirmed by examination officer from one university in Arusha during interview who said that;

Sometimes we do receive complains from students for being given group work with unrealistic deadline, it very hard for students to gain knowledge from such assignments (Personal interview with Examination officer C on 27th April, 2022).

This implies that some lectures do provide group task with unrealistic deadline that force only few group member to work on behalf of the entire group. Only few students who participated would gain knowledge but most of group member are noted as participants but nothing much was gained from such group task. Group work with unrealistic deadline is not effective in improving students' knowledge.

Results in table 1 show that 18(45%) of lecturers disagreed and 22(55%) of lecturers agreed on statement "I always monitor participation of every group member" respectively. This implies that most lecturers (55%), agreed that they do monitor participation of every group

member and good number, (45%), of lecturers disagreed on the same statement. The findings indicate that most of lecturers do monitor participation of every group member. Monitoring participation of students in group assignment requires enough skill and experience as most of students tend not to participate in group work that make group task to be ineffective in improving and acquiring of knowledge among students. Lecturers have to apply their experience and skills to monitor students' participation in group work. However, the results also indicate that a good number of lecturers do not monitor participation of every group member because 45% of lecturers who participated in this study accepted that they do not monitor participation every study in group task that may be because of large number of students and time limit and sometimes may be lacking skills for monitoring students participation. This was supported by Gronlund et al., (2009), who found out that too large groups may distort the quality of discussion as members may be arguing without listening to each other. Since members are many, it may not be easy to control the groups. Moreover, having many members per group activity may not guarantee chance for each member to present. Also, the division of activities among group members becomes problematic as the tasks may not be enough to all members and thus there is a possibility of some members to be given works that are purely not academic such as typing and printing.

In order group assignment to be effective lecturers should make sure every group member participate in group task; this is only possible when lecturers have enough skills in monitoring students' participation in group task (Personal interview with Examination officer B on 25 April, 2022)

This implies that lecturers with enough skills in monitoring group assignments will easily monitor participation of group members. When groups are well monitored students do participate effectively that make them to gain more knowledge from group task because in acquiring knowledge from group task depend on the extent you have participated.

To confirm the findings from lecturers, students were asked the same question and were requested to indicate the extent to which they agree or disagree on with the provided statements and their responses were summarized in table 2.

Table 2: Students' responses on the Extent Lecturers Are Effectively Equipped with Group Assignment Construction Skills

| | SA | | A | | U | | D | | SD | | MEAN SCORE |
|--|----|------|----|------|---|-----|----|------|----|------|-------------|
| | f | % | f | % | f | % | f | % | f | % | |
| i. Groups are formed by considering students' abilities | 9 | 11.3 | 18 | 22.5 | 8 | 10 | 21 | 26.2 | 24 | 30 | 2.59 |
| ii. Time is provided for group member to know one another | 4 | 5 | 4 | 5 | 4 | 5 | 28 | 35 | 40 | 50 | 1.80 |
| iii. work load is always fairly to every group | 2 | 2.5 | 12 | 15 | 4 | 5 | 29 | 36.3 | 33 | 41.3 | 2.01 |
| iv. group task do challenge group and require collaboration of the group | 4 | 5 | 25 | 31.3 | 4 | 5 | 11 | 13.7 | 36 | 45 | 2.38 |
| v. Lectures always monitor participation of every group member | 4 | 5 | 8 | 10 | 0 | 0 | 28 | 35 | 40 | 50 | 1.85 |
| vi. Marks allocation is done fairly to every group member | 6 | 7.5 | 12 | 15 | 0 | 0 | 21 | 26.3 | 41 | 51.3 | 2.01 |
| vii. Enough time is provided for group assignment to be done | 5 | 6.3 | 13 | 16.3 | 4 | 5 | 21 | 26.2 | 37 | 46.2 | 2.10 |
| viii. Feedback are provided on time | 3 | 3.8 | 12 | 15 | 3 | 3.8 | 21 | 26.3 | 41 | 51.3 | 1.94 |
| TOTAL MEAN SCORE | | | | | | | | | | | 2.08 |

Source: field data (2022)

Key: SA= strongly agree, A= agree, U = no option, D= disagree, SD= strongly disagree

Results from table 2 show that 27(33.8%) and 45 (56.2%) of students agreed and disagreed on statement "groups are formed by considering students' abilities" respectively while 8(10%) of students undecided. This implies that majority of students, (56.2%), disagree that groups were formed by considering abilities of students. These indicated that groups were formed without considering abilities of students. Effective group assignments depend much on strength of the groups formed. When forming groups without considering students' abilities probably very few formed groups would be very strong and majority of them will be weak depending on their abilities that lead to group assignment to be not effectively in assessing and improving knowledge among university students. This also indicates that most of lecturers were not well equipped with group assignment constructions skills in Arusha universities. Probably they have low literacy on group assignment construction. The findings are contrary to Sulaiman et al., (2020) who found out that lecturers were absolutely aware of formative assessment practices.

Results from table 2 also show that 29(36.3%) and 47(58.7%), of students agreed and disagreed on statement "group task do challenge group and require collaboration of the group" respectively. While 4(5%) of students were undecided, this implies that majority of students (58.7%) disagree on group task do challenge group and require collaboration of the group. This indicate that most of group assignment provided does not bring challenge that require the collaboration of all group members probably may affect the effectiveness of

group assignment in assessing knowledge acquired among university students as supported by one examination office in one university in Arusha during interview said;

Group task should challenge the entire group and requires their solidarity to move out. It's meaningless to provided group assignment which does not provide any challenge that influence togetherness of all group members (Personal interview with Examination officer D on 27th April, 2022).

This implies that lecturers are required to provide group work with the target to assess knowledge acquired. Group work that challenges the entire group motivates students to search information that could help them to solve the problem. Also, all groups could organize their member to participate as no one could be able solve the problem alone. For effective group assignment it is important for group task to be challenging.

Generally, university instructors in Arusha were found not effectively equipped with group assignment construction skills. According Classical test theory developed by Lord and Novic (1968), each form of measurement consists of errors. It is very important for universities to equip their lecturers so as to avoid errors when using group assignment in performing assessment. Since lack of skills among lecturers in group assignment construction may negatively affect the effectiveness of group assignment.

4.2 Methods Used by University Lecturers Use to Ensure Effectiveness of Group Assignment on Assessing Knowledge Acquisition among Students

The second objective of this study aimed at finding out the extent to which lecturers ensured that group assignments were effectively implemented in assessing knowledge acquisition among students. Lecturers and students were asked to indicate whether different strategies were applied in their respective universities. Table 3 summarizes the responses from lecturers.

Table 3: Lecturers' Response on Methods Used To Ensure Effectiveness of Group Assignments

| | | NA | | S | | A | | MA | |
|-------|---|----|------|----|------|----|------|----|------|
| | | f | % | f | % | f | % | f | % |
| i. | Explaining to students how groups will operate and how students will be graded, | 0 | 0 | 0 | 0 | 19 | 47.5 | 21 | 52.5 |
| ii. | Introducing group work early in the semester to set clear student expectations | 2 | 5 | 0 | 0 | 30 | 75 | 8 | 20 |
| iii. | Establishing rules for misconduct, cheating, and plagiarism | 0 | 0 | 3 | 7.5 | 29 | 72.5 | 8 | 20 |
| iv. | Selecting group leaders | 14 | 35 | 10 | 25 | 7 | 17.5 | 9 | 22.5 |
| v. | Establishing ground rules for participation and contributions | 0 | 0 | 0 | 0 | 32 | 80 | 8 | 20 |
| vi. | Checking participation of members in group assignments | 3 | 7.5 | 8 | 20 | 21 | 52.5 | 8 | 20 |
| vii. | Provision of group assignment which require collaboration of the group to solve | 0 | 0 | 7 | 17.5 | 19 | 47.5 | 14 | 35 |
| viii. | The groups are formed according to the abilities of students | 11 | 27.5 | 4 | 10 | 17 | 42.5 | 8 | 20 |
| ix. | Formed group is small in size | 0 | 0 | 9 | 22.5 | 25 | 62.5 | 6 | 15 |
| x. | Provision of feedback on time | 2 | 5 | 3 | 7.5 | 26 | 65 | 9 | 22.5 |

Source (field data, 2022) f = frequency, % = percentage, NA = not applied, SA = somehow applied, A = applied, MA = much applied

Data in table 3 show that 52.5% of the lecturers indicated that the issue of explaining to students on how groups will operate and how students will be graded is much applied. The remaining percentage (47.5%) of them indicated to apply the same concept. These findings imply that all the lecturers in public and private universities in Arusha region do explain to their students on how to operate when provided with group assignments and how each group will be graded. According to Rezaei (2018) effective application of group assignments requires course instructors to explain to the students on what is expected to be done in groups and also to state how much scores will be awarded to the group activities. Having all the lecturers admitting to explain to the students is a good indication that group assignments in universities within Arusha region are well used.

Data in table 3 also show that 20% of the lecturers who participated in the study indicated to be much applying the concept of introducing group works earlier in the semester to set clear expectation to the students. Meanwhile 75% of the lecturers also indicated to apply the same concept. However, 5% of them indicated not to be introducing the group work earlier in the semester. These findings imply that most of the lecturers in public and private universities in Arusha region do provide group assignments early at the beginning of semester. Providing group assignments to the students at the earlier time makes the students to plan on how to perform the provided activities and hence improves the

efficiency of group assignments. This is further supported by Rezaei (2017) who indicated that effectiveness of group assignments depends on the time at which the activities are given. Thus, it is recommended for instructors to provide the assignments earlier so that the students can have enough time to reflect and perform the tasks.

However, data from the same table show that 5% of the lecturers do not provide the group assignment earlier. These findings suggest that though a large number of lecturers in public and private universities in Arusha region provide group at the starting of each semester, there are some of them who delay to provide such activities. Such a delay may negative affect the effectiveness of group assignments. This is because students may not have enough time to work and reflect on the provided tasks. Due to limited time, the students may not make use of library and internet resources in the speculation of relevant information and therefore hinder their understanding. This argument is further supported by Daba et al., (2017) who found out that adequate time should be given for students to work on the group assignments so as to have positive impact on the acquisition of skills and knowledge.

Data in table 3 also show that 62.5% of the lecturers indicated to be forming group assignments according to the abilities of students. 27.5% of them indicated to sometimes forming groups according to students' abilities while, 10% of them indicated not forming

groups based on students' ability. These findings imply that a large number of lecturers in public and private universities in Arusha region consider students' ability while forming groups for different assignments. According to Bravo et al., (2019), it is important for lecturers to be skilled in group formation by considering the characteristics of students. Considering the level of students will make the group to have mixed abilities and thus providing chances for the strong students to help the ones who are weak. Moreover, the findings are in agreement with Wilson et al., (2018) who recommended for instructors to form groups by considering the ability of students so as to improve participation of group members and hence to improve the effectiveness of group assignments.

Despite the large number of lecturers who indicated to be forming groups according to the characteristics of students, results in table 3 shows that 10% of the lecturers who participated in the study indicated not to be considering the characteristics of students when forming the groups. These findings imply that there are some lecturers in public and private universities in Arusha city who form groups without considering the ability of learners. This may be due to the lack of skills in group formation. Forming groups without considering the characteristics of students may hinder the effectiveness of group assignments. This is also supported by Bravo (2019) who indicated the importance of considering the characteristics of students

in forming groups. If lecturers do not make deliberate efforts to ensure that the groups are well constructed, there is a possibility of some groups to have strong members while others may have weak members. This situation may hinder the chances for weaker students to be helped during the courses.

Results in table 3 also show that 68.5% of the lecturers indicated to be providing timely feedback while 7.5% of them indicated to be doing such an activity sometimes and 5% of them indicated not to be providing timely feedback. These findings imply that a large number of lecturers in public and private universities do provide group assignments feedback on time. Providing group assignments on time is an indication for effective application of group assignments. However, data in the same table show the existence of some lecturers who do not provide timely feedback. These findings are in agreement with what Kitula and Ogoti (2018) found out that some lecturers in Tanzanian universities do not provide assessment feedback to students on time. Failure of lecturers to provide group assignment feedback on time makes the students not to know what they have achieved and therefore the formative role of group assignments may not be achieved to the fullest.

The same question was asked to the students so as to confirm what teachers indicated. Therefore, in their respective questionnaires students also responded to this question and their responses are summarized in table 4.

Table 4: Students' Response on Methods Used To Ensure Effectiveness of Group Assignments

| Statements | N | | S | | A | | MA | |
|--|----|------|----|------|----|------|----|------|
| | f | % | f | % | f | % | f | % |
| i. Lecturers do explaining to students how groups will operate and how students will be graded | 0 | 0.0 | 4 | 5.0 | 32 | 40.0 | 44 | 55.0 |
| ii. Group work are introduced early in the semester | 4 | 5.0 | 20 | 25.0 | 16 | 20.0 | 40 | 50.0 |
| iii. Rules for misconduct, cheating, and plagiarism are established | 4 | 5.0 | 16 | 20.0 | 28 | 35.0 | 32 | 40.0 |
| iv. Group leaders are selected | 0 | 0.0 | 4 | 5.0 | 16 | 20.0 | 60 | 75.0 |
| v. ground rules are established to monitor participation and contributions | 4 | 5.0 | 8 | 10.0 | 28 | 35.0 | 40 | 50.0 |
| vi. Lectures do check participation of members in group assignments | 4 | 5.0 | 8 | 10.0 | 20 | 25.0 | 48 | 60.0 |
| vii. Provision of group assignment which require collaboration of the group to solve | 0 | 0.0 | 8 | 10.0 | 32 | 40.0 | 40 | 50.0 |
| viii. The groups are formed according to the abilities of students | 44 | 55.0 | 4 | 5.0 | 12 | 15.0 | 20 | 25.0 |
| ix. Enough time is provided for group assignment | 8 | 10.0 | 16 | 20.0 | 16 | 20.0 | 40 | 50.0 |
| x. Formed groups are small in size | 16 | 20.0 | 16 | 20.0 | 24 | 30.0 | 24 | 30.0 |

Source (field data, 2022) f = frequency, % = percentage, NA = not applied, SA = somehow applied, A = applied, MA = much applied

Data in table 4 show that responses of students were in support of what was responded by the lecturers. However, there was a difference in the responses

concerning the formation of groups by considering the learning abilities of students. Most of the students (55%) who participated in the study indicated that lecturers do

not form groups by considering the level of students' ability. Therefore the groups that are formed may not be effective to facilitate group discussions as long as the chances for weaker students to be helped by the stronger ones are minimized. These findings are in agreement with what was observed by Kiasi et al., (2021). who put forward that some lecturers do not have skills in group formation and thus they do not consider the level of students' abilities in forming the groups.

Another huge difference between the responses of students and lecturers was observed in the aspect of group size. While all lecturers indicated to be forming small groups, some students (20%) on their side indicated that the formed groups are small. These findings imply that some lecturers make big groups even bigger than the recommended size. According to Wilson et al (2018), lecturers should form small groups which consider the characteristics of students for the group assignment to be effective. Moreover, Gross (1993) recommended that a group should have four to five members for effective implementation of group activities. Therefore, lecturers who make too large groups of students in group assignments do not make effective use of group assignments as long as the intended formative role of such assignments may not be achieved.

5. Conclusion and Recommendations

5.1 Conclusions

Despite the fact that lecturers are equipped with most of the skills needed for effective construction and implementation of group assignments, most of them do not follow all the recommended actions. This is because in the study it was found out from the students that lectures do not consider the level of learners when forming the groups. Moreover, students reported that some of the lectures do not provide timely feedback and some of them do not give adequate time for students to perform the group assignments.

University lecturers do not take much effort to ensure effectiveness of group assignments in assessing knowledge acquisition among students. Not all of them were found to be monitoring students' participation in group activities and only few lecturers reported to be using different methods such as random picking of students to present so as to ensure that every student participates in the group activity.

5.2 Recommendations

From the findings, the following recommendations are made:

1. Lecturers should be involved in group formation instead of leaving the students to form their own groups. The involvement of the lecturer will help to mix the abilities of students in the groups. Having groups with mixed abilities will facilitate the discussion and also

the possibility of weaker students to be helped by the stronger ones.

2. Lecturers should use a variety of methods to ensure that each person participates in the group assignments. These may include random picking of students to present, selection of group leaders and monitoring of the group activities. This will help in improving the validity of the scores awarded to the groups.

References

- Aiken, L. R. (2000). *Psychological testing and assessment* (10th ed). Boston: Allyn and Bacon.
- Bravo, R., Catalán, S., & Pina, J. M. (2019). *Analyzing Teamwork in Higher Education: An Empirical Study on the Antecedents and Consequences of Team Cohesiveness*. *Studies in Higher Education*, 44(7), 1153–1165.
- Brown, R., Zuo, N., Shockley, J., & Buck, S. (2019). An Authentic Learning Approach to Group Assignments: An Analysis of Student Attitudes. *Applied Economics Teaching Resources (AETR)*, 1(2226-2020-129), 1–13.
- Chang, Y., & Brickman, P. (2018). When group work doesn't work: Insights from students. *CBE: Life Sciences Education*, 17(3), ar52.
- Daba, T. M., Ejersa, S. J., & Aliyi, S. (2017). Student Perception on Group Work and Group Assignments in Classroom Teaching: The Case of Bule Hora University Second Year Biology Students, South Ethiopia--An Action Research. *Educational Research and Reviews*, 12(17), 860–866.
- Dicker et al., (2020). *Psychological testing and assessment* (10th ed). Boston: Allyn and Bacon.
- Gafni, R. (2016). Engagement Matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment. *Online Learning*, 22(1), 205–222.
- Gronlund, N. E., & Linn, R. L. (2009). *Measurement and assessment in teaching* (8th ed). Upper Saddle River, N.J: Merrill.
- Gronlund, N. E., & Waugh, C. K. (2009). *Assessment of student achievement* (9th ed). Upper Saddle River, N.J: Pearson.
- Khalid, N. H. M., Latif, A. A., & Yusof, I. J. (2021). *Assessment Literacy: A Systematic Literature Review & Research Agenda*. *Annals of the Romanian Society for Cell Biology*, 4668–4696.

- Saddle River, N.J: Pearson Merrill Prentice Hall.
- Kiasi, G. A., & Rezaie, S. (2021). The Effect of Peer Assessment and Collaborative Assessment on Iranian Intermediate EFL Learners' Writing Ability. *Journal of English Language Teaching and Applied Linguistics*, 3(13), 08–16.
- Kimaro, A. R., & Kapinga, B. B. (2020). *An Assessment of Instructors' classroom Assessment Practice in Selected Higher Learning Institutions, Tanzania. Tengeru Community Development Journal*, 7(1), 54–66.
- Kitula, P. R., & Koda, M. G. (2018). Perceptions of Students on the Fairness of Formative and Summative Assessments in Tanzanian Universities. *International Journal of Innovative Research and Development*, 7(8), Article 8. <https://doi.org/10.24940/ijird/2018/v7/i8/AUG18039>
- Kitula, P. R., & Ogoti, E. O. (2018). Effectiveness of implementing continuous assessments in Tanzanian Universities. *International Journal of Contemporary Applied Researches*, 5(7), 1–18.
- Kitula, P. R., Kireti, P., & Wambiya, P. (2018). *Perceived efficacy of university lecturers in conducting assessment among selected universities in Tanzania*. *International Journal of Education and Research*, 6(6), 121.
- Low, F. M., Chong, M. R., & Ellis, M. (2014). *Statistical theories of mental test scores*. Reading, MA: Addison-Wesley. (Low, Chong and Ellis, 2014).
- Meng, J. (2017). An Empirical Study on the Application of Cooperative Learning to Comprehensive English Classes in a Chinese Independent College. *English Language Teaching*, 10(2), 94–99.
- Nitko, A. J., & Brookhart, S. M. (2007). *Educational assessment of students* (5th ed). Upper Saddle River, N.J: Pearson Merrill Prentice Hall.
- Novic, C. (1968), The Walls speak; the interplay of quality facilities, schools climate and student achievement, *Journal of Educational Administration*, 46(1), pp 55-73.
- Popham, W. J. (2008). *Classroom assessment: what teachers need to know* (5th ed). Boston: Pearson/Allyn and Bacon
- Rezaei, A. (2017). Features of Successful Group Work in Online and Physical Courses. *Journal of Effective Teaching*, 17(3), 5–22.
- Rezaei, A. R. (2018). Effective Groupwork Strategies: Faculty and Students' Perspectives. *Journal of Education and Learning*, 7(5), 1–10.
- Sax, G., & Newton, J. W. (1997). *Principles of educational and psychological measurement and evaluation* (4. ed). Belmont, Calif.: Wadsworth.
- Sulaiman, T., Kotamjani, S. S., Rahim, S. S. A., & Hakim, M. N. (2020). Malaysian Public University Lecturers' Perceptions and Practices of Formative and Alternative Assessments. *International Journal of Learning, Teaching and Educational Research*, 19(5), 379–394.
- Yadgarovna, F. & Husenovich, N. (2020). *Classroom assessment: what teachers need to know* (5th ed). Boston: Pearson/Allyn and Bacon
- Wilson, K. J., Brickman, P., & Brame, C. J. (2018). Group Work. *CBE—Life Sciences Education*, 17(1), fe1. <https://doi.org/10.1187/cbe.17-12-0258>
- Wolming, S., & Wiksotrom, C. (2010). The Concept of Validity in Theory and Practice. *Assessment In Education: Principles, Policy & Practice*, 17(2), 117–132.



Contribution of Teachers' Professional Ethics towards Teaching Performance in Public Secondary Schools in Meru District, Tanzania

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Abstract: The study investigated the contribution of teachers' professional ethics towards teaching performance in public secondary schools in Meru District, Tanzania. Specifically, the study was guided by the following objectives: to assess the influence of teachers' professional ethics towards teaching performance among public secondary school teachers and to determine the strategies for enhancing professional ethics among teachers in public secondary schools in Meru district. Utilitarianism Theory guided the study. A mixed research approach under convergent design was employed. The target population for the study consisted of the district secondary education officers, district TSC secretary, school heads, teachers and form four students from secondary schools in Meru district. Stratified sampling technique was used to select 80 students and 80 teachers while 8 heads of schools, one DEO and one TSC secretary were purposively selected making a total number of 170 respondents. Questionnaire and interview schedule were used to collect data from the participants. Research experts ascertained the validity of the instruments while reliability was tested and found to correlate at Cronbach coefficient Alpha value of $r = 0.75$ at teachers' and students' questionnaires. Quantitative data were analyzed using descriptive statistics and the results were presented in figures, tables of frequencies and percentages. Qualitative data were thematically coded and analyzed alongside research questions. The findings were presented in narrative forms. The study found out that there was positive effect of teachers' professional ethics on students' academic performance. The study concluded that teachers' professional ethics is an important criterion for students' academic performance.

Keywords: Teachers, Professional, Ethics, Performance, School

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1. Introduction

A code of ethics is a written set of principles and rules intended to serve as a guideline for determining appropriate ethical behavior for those individuals under its authority. It defines behavior in terms of right and wrong and stipulates what are the acceptable and unacceptable

behaviors for a particular profession (Gotterbarn et al., 2018). The purpose of the code of ethics is to create and maintain a sense of professionalism, to offer guidance to those facing thorny ethical dilemmas, and to give public a standard to which it can hold a corporation or profession (Stievano and Tschudin, 2019). Therefore, the main reason for having codes of professional conduct in

professions is to ensure that the members of that profession are behaving in an appropriate manner.

Teaching being one of the professions also has its code of conduct. This code is there to enforce responsible behaviors to teachers. For instance, the professional code of conduct for teachers in South Africa calls for all teachers to act in a manner that their behavior does not deter the quality of the teaching profession (Nuland and Khandelwal, 2006). Similarly, the professional code of ethics and conduct for teachers in England requires all teachers to demonstrate personal and professional high standards when at the school or outside the school (Rychert and Diesfeld, 2019).

The level of ethics among professionals in different fields is being questioned around the world. For instance, in Russia Evstratova et al., (2020) observed that the level of professional ethics among the civil servants in the country was low. Such low level of professionalism resulted into underperformance of their duties and some civil servants were found to be using official positions for their own personal gain. Teachers being one of the professionals need to be highly committed to the teaching profession. This is because, it is through effective teaching that students can acquire the required knowledge and skills necessary to make them responsible members of the society.

Meanwhile, the code of conduct for teachers in Nigeria calls for teachers to be disciplined and appropriate corrective measures are taken when inappropriate behavior is demonstrated (Iroegbu and Uyenga (2019). Therefore, teachers in different countries through the world are held responsible by the codes of conduct and are expected to demonstrate acceptable behaviors and be good examples to the students and the society at large.

Teachers in Tanzania are also required to demonstrate acceptable behaviors and the code of conduct is attached

in their employment contracts. The Tanzanian code of conduct spells the responsibilities of teachers to the children, the state, the employer, the profession and the community at large (URT, 2007). To the child, the code of ethical conduct requires teachers to ensure whole development of the children physically, cognitively, spiritually and socially. Under this accord, teachers have a crucial role to play to ensure physical, cognitive, emotional, spiritual and social development of children under their care (Anangisye, 2019). Teachers therefore are required to exhibit good behavior so that the children can imitate such good behavior and become responsible citizens. Also teachers should attend classes and teach accordingly for the students to master the contents and develop cognitively. The level of professionalism among teachers is reported to be low, teachers are not committed to the teaching profession and thus effective teaching and learning do not take place as intended. This being the case, it is necessary to carry out a study to find out the contribution of teachers' professional ethics towards teaching performance in public secondary schools. Thus, the current study was conducted to fill the existing gap.

Since teachers are entrusted with the students, they have to create positive environment by ensuring that they teach effectively and they set good examples of behavior for the students to imitate and develop their own behaviors (Nuland and Khandelwal, 2006). To ensure that order is maintained by teachers in the schools, the teachers' professional code of conduct has been developed and it is implemented in both public and private schools. The code calls for teachers to be responsible to children under their care, the community in which they live, the teaching profession, the employer and the state as a whole (TSC, 2017). Despite having the code of conduct, cases of teachers' misconduct in schools, especially public ones in Tanzania, are still pronounced. For instance, from the year 2017 to 2019 a total number of 7123 teachers were expelled from the teaching profession for various reasons as indicated in table 1.

Table 1: Disciplinary Cases among Teachers from 2017/18 to 2020/21

| Type of disciplinary offences | 2017/18 | 2018/19 | 2020/21 | Total |
|--|---------|---------|---------|------------|
| Absenteeism | 1,801 | 2,005 | 1,641 | 5,447(76%) |
| Drunkenness | 16 | 08 | 09 | 33(0.5%) |
| Corruption | - | 06 | - | 06(0.1%) |
| Sexual relationship with students | 39 | 63 | 60 | 162(2.3%) |
| Insubordination | 12 | 46 | 34 | 92(1.3%) |
| Negligence | 48 | 09 | 17 | 74(1%) |
| Theft and destruction | 01 | 09 | 09 | 19(0.3%) |
| Failure to adhere with teachers' Conduct | 311 | 389 | 590 | 1,290(18%) |

Source: Teachers' Service Commission (2021)

Data in table 1 suggest that discipline among teachers in public schools is still a problem. Though the government

through the Teacher service commission (TSC) is taking necessary measures, still some teachers are not behaving

ethically. This negatively affects the teaching and learning process in schools. In Meru district, similar cases of indiscipline among teachers have been reported. Due to the presence of such cases, it is important for a study to be conducted to assess the contribution of teachers' professional ethics towards their teaching performance in public secondary schools in Meru district.

Research Questions

1. How does teachers' professional ethic influence teaching performance among teachers in public secondary school in Meru District?
2. What are the strategies for enhancing Professional Ethics among Teachers in public secondary schools in Meru district?

2. Literature Review

2.1 Theoretical Framework

The study was also guided by Utilitarianism Theory by John Stuart Mill in 1863. The concept of validity is grounded in the Utilitarianism theory that postulates that utility should be seen as an important standard of evaluation in ethical reasoning and decision-making. The theory of utilitarianism drives the force on the thinking about the greatest happiness and the greatest number rather than self-interest (Tluway, 2015).

According to utilitarianism theory, once the rules have been decided, it is not right to break them even when it might be bitter in an individual case. This instance reduces the problem of biasness in decision making. For example, teachers are forced to abide with rules and regulations of the teaching profession that might stop the cases of misconducts such as absenteeism and drunkenness. The consequence principle of the theory decides that, the determinant of morality is not the action itself, but its consequences. A teacher can therefore judge the consequences of misconducts in a particular instance rather than misbehaving during the working time by not attending the classes.

2.2 Application of the Theory to the Current Study

The theory of Utilitarianism is relevant to the study since it describes the application of rules and regulations that can be used by the TSC and heads of schools to guide teachers aiming at avoiding the occurrence of teachers' professional misconducts at the school. Heads of schools can use the Utilitarianism to guide and counsel teachers on the consequences of a particular action of professional misconduct that can affect the majority of the students in their examinations such as absenteeism, physical harassment and private tuitions. The Ministry of

Education science and technology can also apply the Utilitarianism theory when making the rules and regulations that will guide the teaching profession to which are supposed to be obeyed by the teaching staffs when dealing with daily teaching and learning activities.

2.3 The Influence of Teachers' Professional Ethics on Teaching Performance

A quantitative study by Evstratova (2020) was conducted to investigate problems of the creation and direction of improving the professional ethics of civil servants in the Russian federation. The study employed survey research design to collect data from 94 respondents through questionnaire and document analysis. The study revealed out that there was low level of professional ethics among civil servants. Also, the researcher identified the reason for low quality of ethics, the use of official position for personal gain, irresponsible attitude to their official duties, indifference and disrespectful attitude towards consumers of public services. The study shows that in Russia, most civil servants, including teachers had negative qualities.

In UK, the study by Bull et al., (2021) was conducted on discrimination in the education institutions. The study employed qualitative research approach whereby data were collected from students and teachers who were purposefully selected and interview schedule was tool used in data collection. The study revealed that sexual misconduct was prevalent in higher education. The study suggested that school management should find out the strategies to manage misconduct within the teaching profession. The study recommended the need to introduce the guidance to address staff sexual misconduct in UK higher education.

A qualitative study by Hogan, Ricci and Ryan (2019) was conducted to examine classroom teacher's verbal abuse in Canada. Data were collected through reviewing a sample of the decisions of the discipline committee of the Ontario College of Teachers from the Canadian Legal Information Institute online database, which provided a record of all the Ontario College of Teachers discipline committee decisions. The study found out that verbal abuse was present in Ontario classrooms, and measured responses and related methods of dealing with teacher misconduct were inadequate at best and slowly evolving. The study also found male Teachers were often offenders and the impact on all stakeholders was both life-changing and serious. Furthermore, the study concluded that any delay in effectively dealing with complaints and disciplinary matters was unacceptable as it stands and must be fixed to protect students from abuse.

In India, Muralidharan et al., (2017) conducted a study to investigate the fiscal cost of weak governance: Evidence from teacher absence in India. The study employed quantitative research approach under cross sectional

survey whereby data was collected from public schools. The study found out that nationwide representative sample of public schools in rural India found teacher absence rate of 23.6%. The study also found increasing school monitoring was strongly correlated with reductions in teacher absence rates.

Ayeni (2018) conducted study to investigate teachers' professional ethics and instructional performance as correlates to students' academic performance in secondary schools in Owo Local Government, Ondo State, Nigeria. The study adopted quantitative research approach whereby data were collected from 90 respondents through questionnaire in which, random sampling technique were used to select the sample from 9 public secondary school. The study revealed out that there was a significant relationship between teachers' professional ethics and instructional performance. The study also revealed that the level of teachers' professional ethics was high in punctuality, communication skills, human relations, effective time management, adequate knowledge of subject matter, and descent dressing habit. Moreover, the study revealed that the level of students' academic performance was above average.

Another study in Tanzania by Basimwaki (2020) investigated the influence of teachers' moonlighting on teaching in Tanzanian secondary schools: A case of selected secondary schools in Dar es Salaam City. The study adopted mixed research approaches. Data were collected from 168 respondents through questionnaires, interviews, and focused group discussion. The study found out that teachers had a number of moonlighting practices that were generating extra income. Moonlighting practices such as part-time teaching, petty business, retail shops, catering services, and selling snacks during and after school hours were found to be the common practices undertaken by teachers in public secondary schools. Furthermore, the study revealed out that teachers' moonlighting has positive and negative outcome. It was found that teachers' moonlighting was compromising time for classroom instructions.

In addition, a study in Tanzania by Mfaume and Bilinga (2017) was conducted on prevalence of teachers' professional malpractices in public secondary schools. The study adopted both qualitative and quantitative research approaches whereby data were collected from 75 respondents through questionnaires, interviews, focus group discussion, documentary analysis and observation. The study revealed that absenteeism, abusive and violent behaviors, sexual abuse, just to mention a few, were prevalent forms of teacher malpractices in schools. The study also revealed reasons that influenced such malpractices in schools included teachers' low salaries and remunerations, poor living and working conditions, influence of science and technology, lack of professional knowledge and poor management. The study shows that teacher's malpractice was great problem in rural and urban

schools in Tanzania, the prevalent of teachers' misconduct affect students' academic achievements negatively.

2.4 Strategies to Enhance Professional Ethics among Teachers

An exploratory study by Rychert and Diesfeld (2019) conducted to investigate the relationship between teachers' wellbeing and professional misconduct in New Zealand. Data were collected from 41 disciplinary cases through reviewing of disciplinary cases from the New Zealand Teachers Disciplinary Tribunal (NZTDT) between 2017 and 2018. The study found out that use of alcohol and other drugs and, break of professional boundaries and inappropriate use of force were indiscipline cases among teachers. The study also found out that diminished wellbeing may contribute to misconduct and be further affected by the disciplinary proceedings. The study suggested that preventive strategies could include health-based interventions as part of professional development.

In Turkey, Koç and Fidan (2020) conducted a study to examine teachers' views on the institutionalization of ethical and unethical behaviors in school settings. The study adopted qualitative research approach whereby data were collected from 20 working teachers by using semi structured interview. The study found out that there were no systematic efforts to institutionalize ethics in schools. The findings indicated that there was no disciplinary committee for dealing with teachers' professional misconduct.

The study by Rychert and Diesfeld (2019) shows that before any further action is taken against teachers when they commit misconduct, health-based intervention should be applied in order to help them to recover to their normal state. As human being, not always do they intend to commit misconduct but sometimes it happens because of psychological reason such as stress due to factors surrounding teachers such working condition, family, illness. Therefore health-based interventions could be a good strategy to help in protecting teachers.

Ndung'u (2017) conducted study to examine teacher indiscipline and the effectiveness of disciplinary measures employed by head teachers in public secondary schools in Githunguri, Kiambu County, Kenya. A quantitative research approach was used to collect data from 110 respondents through questionnaires, in which purposefully and simple random techniques were used to select the sample. The study found out that the common indiscipline cases among the teaching staff were missing classes, failure to come to school and also failure to seek permission from the school administration, absconding duties and refusal to obey seniors. The study also revealed out that all the head teachers used verbal warning as disciplinary action against teachers. Moreover, the study revealed other approaches used by the head teachers,

included written warning and forming of a disciplinary committee.

Mwesiga and Kireti (2018) conducted a study on teachers' commitment and compliance with codes of ethics and professional conduct in Kagera region, Tanzania. The study adopted mixed research approach under convergent parallel design whereby data were collected from 352 respondents through questionnaires, interview guide and document analysis guide. It was found out that techniques heads use include, asking teachers who misbehave to change, and if the problem persists then , reprimanding followed by warning letter and finally is just to report to the higher administration for further measures. The study also found out that withholding of salary increment techniques was not frequently used by heads to deal with misconduct.

3. Methodology

The study employed mixed research approach under convergent design Gay, et al., (2012).. The target population for the study consisted of the district secondary education officers, district TSC secretary, school heads, teachers and form four students from secondary schools in Meru district. Stratified sampling technique was used to select 80 students and 80 teachers while 8 heads of schools,

one DEO and one TSC secretary were directly involved in the study making a total number of 170 respondents. Questionnaire and interview schedule were used to collect data from the participants. Research experts ascertained the validity of the instruments while reliability was tested and found to correlate at Cronbach coefficient Alpha value of $r = 0.75$ at teachers' and students' questionnaires. Quantitative data were analyzed using descriptive statistics and the results were presented in tables of figures, frequencies and percentages. Qualitative data were thematically coded and analyzed alongside research questions. The findings were presented in narrative forms.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 The Influence of Teachers' Professional Ethics on Students' Academic Performance among Public Secondary Schools in Meru district

The study sought to investigate the influence of teachers' professional ethics on students' academic performance in public secondary schools in Meru district. Both Students and teachers were involved. The responses were summarized in table 2.

Table 2: Students' Responses on the Extent Teachers' Professional Ethics Influence Academic performance

| Statements | Very high extent | | High extent | | Moderate Extent | | Low extent | | Very low extent | |
|--|------------------|------|-------------|------|-----------------|------|------------|-----|-----------------|-----|
| | f | % | f | % | f | % | f | % | f | % |
| i. Teachers' attendance | 55 | 68.8 | 16 | 20.0 | 9 | 11.3 | 0 | 0.0 | 0 | 0.0 |
| ii. Good communication skill, trustworthiness, caring and confidential | 47 | 58.8 | 23 | 28.7 | 10 | 12.5 | 0 | 0.0 | 0 | 0.0 |
| iii. Fulfilling responsibility (teaching) | 63 | 78.8 | 12 | 15.0 | 5 | 6.3 | 0 | 0.0 | 0 | 0.0 |
| iv. Commitment and good time management | 51 | 63.7 | 15 | 18.8 | 11 | 13.8 | 3 | 3.8 | 0 | 0.0 |
| v. Good relationship with students | 53 | 66.3 | 16 | 20.0 | 11 | 13.8 | 0 | 0.0 | 0 | 0.0 |
| vi. Teacher having respect and good dressing habit | 44 | 55.0 | 27 | 33.8 | 3 | 3.8 | 3 | 3.8 | 3 | 3.8 |
| vii. Teacher use of appropriate measure to curb students' misconduct | 63 | 78.8 | 10 | 12.5 | 7 | 8.8 | 0 | 0.0 | 0 | 0.0 |
| viii. Teachers embracing guidance and counseling | 58 | 72.5 | 15 | 18.8 | 7 | 8.8 | 0 | 0.0 | 0 | 0.0 |
| ix. Teachers' proper use of language to influence students' good performance | 60 | 75.0 | 13 | 16.3 | 7 | 8.8 | 0 | 0.0 | 0 | 0.0 |
| x. Teacher profession ethics as an effective way of students' academic achievement | 48 | 60.0 | 17 | 21.3 | 9 | 11.3 | 6 | 7.5 | 0 | 0.0 |

Source; Field Data (2022)

The findings in table 2 show that teachers' attendance influence academic performance at the rate of 55(68.8%), 16(20.0%) and 9(11.3%) which is very high extent, high

extent and moderate extent respectively. This implies that majority of the students view teachers' school attendance as having a lot of influence on their academic

achievement. This implies that teachers' attendance in public secondary schools in Meru district to a large extent affects positively their academic performance. This may be due to the fact that a teacher may be in good position to fulfill his/ her responsibility, including covering the curriculum on time. As supported by Kusumaningrum et al., (2019) who found that high level of professional ethics affects positively teaching performance thus educational goals that have been set are achieved because teachers will be carrying out their duties and responsibilities that lead to an increase in students' achievement. Therefore, good teaching performance is one of the factors for the success of the teaching and learning process.

Furthermore, 47(58.8%), 23(28.7%) and 10(12.5%) of students indicated good communication skills, trustworthiness, caring and confidential among teachers at very high extent, high extent and moderate extent respectively influence teacher's performance and subsequently, students' performance too. This implies that most(58.8%) of students indicated that good communication skills, trustworthiness, caring and confidentiality among teachers have influence on students' academic performance. Good communication skills of teachers are basic need of academic success of students, and professional success of teachers. Teachers with poor communicational skills may cause failure of students to learn and promote their academics. As supported by Amadi and Amadi (2020) when teachers have intellectual skills, communication skills, integrity, respect, trustworthiness, caring, confidential, descent dressing habit, and guidance-oriented affects positively students' academic performance.

Also, 63 (78.8%), 12 (15.0%) and 5 (6.3%) of students indicated on teachers are fulfilling their responsibilities at very high extent, high extent and moderate extent respectively. This implies that majority (78.8%) of the

students showed that teachers fulfilling their responsibilities in public secondary schools in Meru district has a positive impact on students' academic performance because if teachers fulfill their duties, students may be in a position to perform very well as their teacher may have enough time to assist them in their areas of weakness. since they may have covered the curriculum very earlier. As supported by Rychert and Diesfeld (2019) (2019) who found that high level of professional ethics affects teaching performance, thus educational goals that have been set are achieved on time because teachers will be carrying out their duties and responsibilities that lead to an increase in student achievement. Therefore, good teaching performance is one of the factors for the success and success of the teaching and learning process.

In addition, 44 (55.0%), 27 (33.8%), 3 (3.8%), 3 (3.8%) and 3 (3.8%) of students indicated that teachers' respect and good dressing habit affect their performance at very high extent, high extent and moderate extent respectively. This implies that most (55.0%) of the students showed that teachers' respect and good dressing habit in public secondary school positively affects the academic achievement of students. When a teacher has respect and observes good dressing habit, it is easy to impart such habit to students as it makes them gain respect and act as good example to their students. As supported by Daniel and Sapu (2020) many teachers perceived to be fully compliant with professional ethics create positive environment for learning process thus leading to good performance among students. Having respect and good dressing habit is an indicator for a teacher to adhere teachers' professional ethics and conduct.

To confirm the findings the same question was also asked to the teachers to find out the extent to which teachers' professional ethics influenced academic achievement of students in public secondary schools in Meru district. Their responses are summarized in table 3

Table 3: Teachers Response on the Extent to which Teachers' Professional Ethics Influences Academic performance of Students

| Statements | Very low | | Low | | Moderate | | High | | Very high | |
|--|----------|------|-----|------|----------|------|------|------|-----------|------|
| | f | % | f | % | f | % | f | % | f | % |
| i. Teachers' attendance | 0 | 0.0 | 0 | 0.0 | 16 | 20.0 | 38 | 47.5 | 26 | 32.5 |
| ii. Good communication skill, trustworthiness, caring and confidential | 0 | 0.0 | 0 | 0.0 | 16 | 20.0 | 38 | 47.5 | 26 | 32.5 |
| iii. Fulfilling responsibility (teaching) | 0 | 0.0 | 0 | 0.0 | 16 | 20.0 | 38 | 47.5 | 26 | 32.5 |
| iv. Commitment and good time management | 0 | 0.0 | 0 | 0.0 | 32 | 40.0 | 22 | 27.5 | 26 | 32.5 |
| v. Good relationship with students | 0 | 0.0 | 0 | 0.0 | 12 | 15.0 | 42 | 52.5 | 26 | 32.5 |
| vi. Teacher having respect and good dressing habit | 0 | 0.0 | 0 | 0.0 | 22 | 27.5 | 21 | 26.3 | 37 | 46.3 |
| vii. Teacher use of appropriate measure to curb students' misconduct | 16 | 20.0 | 16 | 20.0 | 0 | 0.0 | 22 | 27.5 | 26 | 32.5 |
| viii. Teacher embracing guidance and counseling | 0 | 0.0 | 0 | 0.0 | 16 | 20.0 | 27 | 33.8 | 37 | 46.3 |
| ix. Teachers' proper use of language to influence students' good performance | 0 | 0.0 | 0 | 0.0 | 12 | 15.0 | 42 | 52.5 | 26 | 32.5 |
| x. Teacher profession ethics as an effective way of students' academic achievement | 0 | 0.0 | 0 | 0.0 | 16 | 20.0 | 16 | 20.0 | 48 | 60.0 |

Source; Field Data (2022)

From table 3 and using the scale of very high extent, high extent and moderate extent, respondents indicated teachers' attendance at the rate of 26 (32.5%), 38 (47.5%) and 16 (20.0%) respectively. While none of the teachers in public secondary school in Meru district indicated lower or lower extent of the teacher's attendance. This implies that majority of the teachers (47.5%) indicated that teachers' attendance at school in Meru district influences students' academic performance due to the fact that students' may find help from their teachers wherever they find difficulties. Moreover, teachers may have enough time to deal with students' academic problems thus, teachers' attendance affects positively the academic achievement of students. As supported by Mwesiga and Kireti (2018) who found that high level of professional ethics affected positively teaching performance thus, educational goals that have been set are achieved because teachers will be carrying out their duties and responsibilities that lead to an increase in student achievement. Therefore, good teaching performance is one of the factors for the success of the teaching and learning process.

Besides, the respondents indicated that teacher's good communication skill, trustworthiness, caring and confidentiality to students influenced students' academic achievement at the rate of very high extent (32.5%), high extent (47.5%) and moderate extent (20.0%). This implies that majority of the respondents indicated that in public secondary school in Meru district, good communication skill, trustworthiness, caring and confidential among

teachers have influence on students' academic performance. Good communication skills of teachers are basic need of academic's success of students, and professional success of life. Teachers with poor communicational skills may cause failure of students to learn and promote their academics. As supported by Amadi and Amadi (2020) teachers having intellectual skills, communication skills, integrity, respect, trustworthiness, caring, confidential and good dressing habit positively influence students in their academic performance.

In addition, the researcher established that teachers with ability to fulfill their responsibilities influenced students' academic performance to a high extent. This implies that majority (80%) of the teachers show that fulfilling their responsibilities in public secondary schools in Meru district affects students' academic achievement positively. As supported by Kusumaningrum et al., (2019) who found that high level of professional ethics affects positively teaching performance thus educational goals that have been set are achieved because teachers will be carrying out their duties and responsibilities that lead to an increase in student achievement.

Moreover, having respect and good dressing habit among teachers was mentioned as a factor that influences their performance as seen in students' academic achievement. This implies that majority (72.6%) of the teachers believes that respect and good dressing habit among themselves in public secondary school has a positive effect on students'

academic achievement. When a teacher has respect and good dressing habit, it allows one to gain the respect needed and to setting positive example to their students. In support of this finding, Daniel and Sapo (2020) found that teachers perceived to be fully compliant with professional ethics are also seen as role models in the society.

To confirm the findings from students and teachers during the interviews, one head of school said that;

In this school some teachers disobey profession ethics as I have experienced absenteeism, truancy and bad dressing code among teachers (Personal Interview, 28/04/2022).

This implies that some public secondary school teachers tend to disobey professional ethic, which affects negatively level of teachers' profession conduct thus in one way or another also have negatively students' academic progress. More efforts should be made to help teachers to follow profession ethics.

Also, during interview on level of the teachers' profession ethics TSC district secretary remarked that;

Level of teachers' profession ethics in Meru district is wanting because still there is a lot of report on teachers' misconduct and if not managed on time may have negative effect on students' academic performance (Personal Interview, 2/05/2022)

This implies that the level of teachers' profession ethics in Meru is affects efficiency and effectiveness in learning process as the result of poor job performance among teachers as level of profession conduct has great impact on performance of both students and teachers. As supported by Evstratova et al. (2020) who noted that there was low level of professional ethics among civil servants. Also, the researcher identified the reason for low quality of ethics included the use of official position for personal gain, irresponsible attitude to their official duties, indifference and disrespectful attitude towards consumers of public services.

4.5 Strategies for Enhancing Professional Ethics among Teachers

The objective aimed at finding out different strategies that could be adapted to enhance professional ethics among teachers in public secondary school. Before, indicating the strategies, teachers were first asked to identify some common types of professional misconduct exhibited by teachers in public secondary school and possible measures to improve the misconduct. This was an open -ended question whereby a number of professional misconducts were indicated. Their responses were summarized in table 4.

Table 4: Teachers' Responses on the Forms of Profession Misconduct in Public Secondary Schools in Meru District

| S/N | Forms of profession misconduct | f | % |
|-----|--|----|-------|
| 1 | Use of abusive language | 58 | 72.5 |
| 2 | Improper dressing style | 52 | 65 |
| 3 | Failure of fulfilling responsibilities | 43 | 53.75 |
| 4 | Sexual abuse | 30 | 37.5 |
| 5 | Alcoholism | 23 | 28.75 |
| 6 | Absenteeism | 12 | 15 |

Source (field data, 2022)

Data in table 4 show that the use of abusive language was indicated by 58 (72.5%) of secondary school teachers. The data shows that, abusive language was identified as the most common form of professional misconduct among public secondary school teachers in Meru district. These findings imply that a good number of teachers in secondary schools do use abusive language in most of their interactions with students. This may be due to the fact that teachers think that they have authority over the students and then they can speak any word to them regardless of how the word will be interpreted. Similar findings were reported in Canada by Hogan et al., (2019) who found higher rates of verbal abuse among teachers in the country. The findings of this study also concur with report given by TSC (2019) which indicated a huge number of teachers being fired from the teaching

profession due to different professional misconducts, including verbal abuse.

Improper dressing styles and failure to fulfill responsibilities were identified as common forms of professional misconduct by 52 (65%) and 43 (53.75%) of the teachers respectively. These findings are in contrast to what was observed in Nigeria by Amadi and Amadi (2020) who reported that teachers demonstrated good dressing styles as recommended by the code of ethics for the teaching profession. The contradiction in the findings of the two studies suggests that it is possible for teachers to dress properly if laws and regulations are set, implemented and followed by everyone responsible. The existence of cases of improper dressing among secondary school teachers in Meru district also suggest that in

Tanzanian context the laws that require teachers to abide by the codes of professional ethics are not well reinforced.

Other forms of professional misconduct among teachers in public secondary school as pointed out by teachers included sexual abuse, absenteeism and alcoholism. These findings suggest that there are a number of cases pertaining to professional misconduct among teachers in public secondary school in Meru district. Similar findings were also reported in New Zealand by Rychert and Diesfeld (2019) who also found out alcoholism to be a common case among teachers. Similarly, Ayeni (2018) found out a number of teachers to be engaged in malicious behaviors including alcoholism, drug abuse and absenteeism. These findings show that although teachers

and students generally rated the level of ethical conduct of teachers to be acceptable, there are still a number of teachers who do not follow the professional code of conduct for teachers.

Due to the existence of such cases, it was then important for the researcher to know from the study participating on different strategies to be adapted for the purpose of enhancing professional ethics among teachers. Teachers responded to an open-ended question in their questionnaire to indicate different strategies to be adapted for enhancement of professional ethics among secondary school teachers. Their responses were summarized and are presented in figure 1.

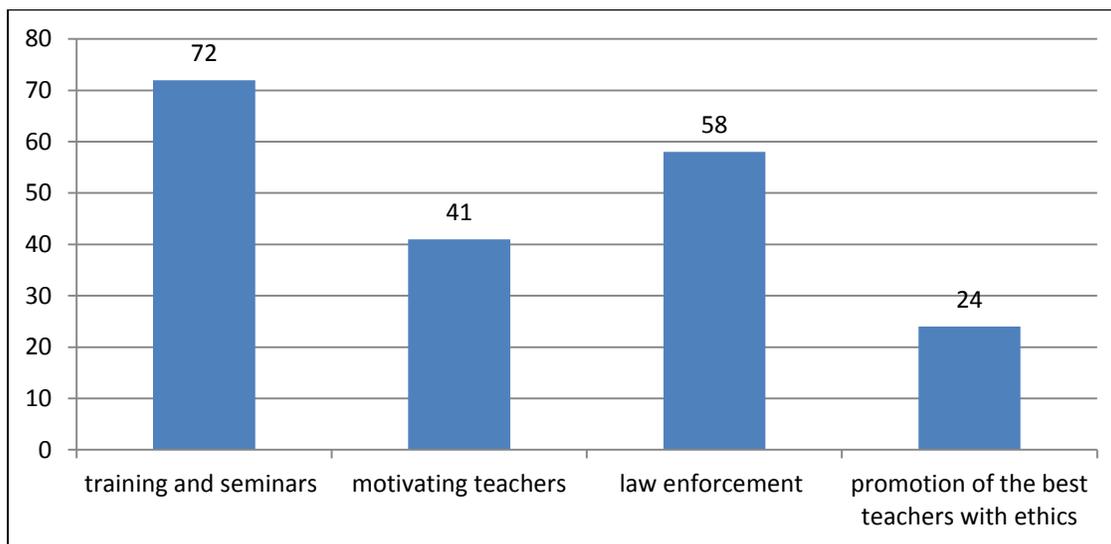


Figure 1: Teachers' Responses on the Strategies for Improving Professional Ethics
Source (field data, 2022).

Data in figure 1 show that 72 (90%) of the teachers who participated in the study suggested the use of training and seminars on teachers' professional ethics as a strategy to enhance professional ethics among public secondary schools. These findings suggest that there is a need for more seminars and workshops to orient teachers on the importance of maintaining professional ethics. Data in the same figure also indicate that 41 (51.25%) of the teachers indicated the application of attendance register as one of the strategies for enhancing teachers' professional ethics. This implies that teachers in public schools believe that the application of attendance register by the heads of schools can be an effective method towards improving teachers' school and class attendance. These findings are in agreement with Masiaga (2017) who recommended the use of attendance register as one of the strategies to enhance teachers' school and class attendance.

Enforcement of laws and regulations was indicated by 58(72.5%) of the teachers as being one of the strategies for enhancing professional ethics among teachers in public secondary schools. These findings suggest that the

presence of teachers with professional misconduct in public secondary schools may be due to poor enforcement of laws and regulations. These findings are supported by Betweli (2020) who found out that not all professional misconduct among teachers are reported to higher authorities as required by the law but failure of heads of schools to report the cases of professional misconduct among their teachers makes these teachers to continue misbehaving. Therefore, there is a need for heads of schools and other higher authorities to ensure enforcement of laws pertaining to teachers' professional ethics so as to enhance professional conduct among teachers. Promotion of the teachers with high levels of ethics was also pointed out by 24(30%) of teachers who participated in the study. These teachers saw the need of recognizing the ones with higher levels of professional conduct so as to motivate other teacher also to behave in the same manner.

5. Conclusion and Recommendations

5.1 Conclusion

There is a positive effect of teachers' level of professional ethics on students' academic performance. Teachers with high level of professional ethics are committed to their job, they always come to school on time and teach effectively. Through doing so, they complete the syllabus on time, leading to improved students' academic performance. Also, through maintaining acceptable relationships with students, teachers with high level of profession ethics provide support to the needy students and hence help them to do better in their academic performance.

Teachers' professional ethics is an important criterion for students' academic performance. Therefore, it is the responsibility of everyone involved in the teaching profession to ensure high levels of professional ethics among teachers. This can be done through conducting seminars and workshops to teachers regarding the importance of maintaining professional ethics. Also, the higher authorities should take immediate measures to different cases pertaining to teachers' professional misconduct being reported by the heads of schools.

5.2 Recommendations

From the study, the following recommendations were suggested:

1. Colleges and universities offering teacher education should emphasize on teachers' professional ethics by offering different courses pertaining to teachers' ethics and monitoring the behaviour of teacher trainees to ensure that ethical principles of the teaching profession are practiced during the time of training.
2. Teachers should maintain high level of professional ethics because it has a significant effect on students' academic performance. Teachers should be committed, punctual and exhibit good behaviour.

References

- Amadi, E. C. and Amadi, R. N. (2020). *Perceived Influence of Teachers' Professional Conduct on Students' Academic Performance in Senior Public Secondary Schools in Port Harcourt Metropolis*. London: SAGE Publications, Inc.
- Anangisy, W. A. (2019). Tanzanian Teachers' Knowledge of Moral Character Inherent in the Teaching Profession. *Journal of Research and Reflection in Education CICE Series*, 6, 197–10.
- Ayeni, A. J. (2018). Teachers' professional ethics and instructional performance as correlates of students' academic performance in secondary schools in Owo Local Government, Ondo State, Nigeria. *Advances in Social Sciences Research Journal*, 5(8).
- Basimwaki, H. A. (2020). Influence of teachers' moonlighting on teaching in Tanzanian secondary schools: A case of selected secondary schools in Dar es Salaam city [PhD Thesis]. The University of Dodoma.
- Betweli, O. K. (2020). Curbing Teacher Misconduct in Public Primary Schools in Sumbawanga Municipal and Rural Districts, Tanzania: Headteachers' strategies and Challenges. *European Journal of Research and Reflection in Educational Sciences Vol*, 8(4).
- Bull, A., Calvert-Lee, G., and Page, T. (2021). Discrimination in the complaints process: Introducing the sector guidance to address staff sexual misconduct in UK higher education. *Perspectives: Policy and Practice in Higher Education*, 25(2), 72–77.
- Daniel, W., and Sapo, S. (2020). Teachers' perception of professional ethics and its impact on their professionalism. *American Journal of Educational Research*, 8(6), 400–410.
- Evstratova, T. A., Medvedeva, N. V., Dupliy, E. V., and Palehova, P. V. (2020). Problems of the creation and direction of improving the professional ethics of civil servants in the Russian Federation. *Revista Género Inter disciplinary in education*, 1(01), Article 01. <https://doi.org/10.51249/gei.v1i01.75>
- Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational research: Competencies for analysis and applications* (Tenth ed.). Boston, MA: Pearson.
- Gotterbarn, D. W., Brinkman, B., Flick, C., Kirkpatrick, M. S., Miller, K., Vazansky, K., & Wolf, M. J. (2018). ACM code of ethics and professional conduct. *American Journal of Educational Research*, 7(8), 548–560.
- Hogan, T., Ricci, C., and Ryan, T. G. (2019). Respecting students: Abusive classroom teacher verbal behaviour. *Journal of Pedagogical Research*, 3(3), 151–165. <https://doi.org/10.33902/jpr.v3i3.139>
- Iroegbu, E. E., and Uyanga, R. E. (2019). Teaching staff professional ethics and quality of educational

- output in Federal universities, South-South zone of Nigeria. *American Journal of Educational Research*, 7(8), 548–560.
- Koç, F. and Fidan, B. P. (2020). Institutional challenges in managing misconduct in local government: Case study of Amajuba District Municipality. PhD Thesis.
- Kusumaningrum, D. E., Sumarsono, R. B., and Gunawan, I. (2019). Professional ethics and teacher teaching performance: Measurement of teacher empowerment with a soft system methodology approach. *International Journal of Innovation, Creativity and Change*, 5(4), 611–624.
- Masiaga, D. (2017). The Quality of Education in Tanzania: Issues and Experiences. *Journal of Social Sciences* 38(2) 185-195.
- Mfaume, H, and Bilinga, M. (2017). Prevalence of teachers' professional malpractices in Tanzanian public secondary schools: What ought to be done? *Journal of Education and Training Studies*, 5(2), 43-52.
- Muralidharan, K., Das, J., Holla, A., and Mohpal, A. (2017). The fiscal cost of weak governance: Evidence from teacher absence in India. *Journal of Public Economics*, 145, 116–135.
- Mwesiga, A., and Kireti, P. (2018). Teachers' commitment and compliance with codes of ethics and professional conduct in Kagera region, Tanzania. *International Journal of Contemporary Applied Researches*, 5(5), 55–77.
- Ndung'u, G.W. (2017). *Teacher Indiscipline and the Effectiveness of Disciplinary Measures Employed by Head teachers in Public Secondary Schools in Githunguri, Kiambu County, Kenya*. Kenyatta University Press.
- Nuland, S., and Khandelwal, B. P. (2006). Ethics in Education: The Role of Teacher Codes. Canada and South Asia. ERIC.
- Rychert, M., & Diesfeld, K. (2019). Teachers' Health, Wellbeing and Professional Misconduct. An Exploratory Analysis of Cases from New Zealand's Teachers Disciplinary Tribunal 2017-2018. *Journal of Law and Medicine*, 26(4), 922–942.
- Stievano, A., & Tschudin, V. (2019). The ICN code of ethics for nurses: A time for revision. *International Nursing Review*, 66(2), 154–156.
- Teachers' Service Commission (TSC) (2017). Guideline for teachers' disciplinary procedures and appeals. Dar es Salaam: Government Press.
- Tluway, Z. (2015). The contribution of heads of school in curbing teachers' misconduct in Tanzanian public secondary schools [PhD Thesis]. The University of Dodoma.
- United Republic of Tanzania (2007). *Education and Training Policy*. Ministry of Education and Vocational Training. Dar es Salaam: Government Press.



Sexual Harassment among Female Students and Its Effects on Their Education: A Case of Universities in Arusha Region

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Abstract: This study examined sexual harassment among university female students regardless of various strategies applied against it. The objectives were to determine factors influencing sexual harassment among female students in universities and to examine strategies adopted to mitigate sexual harassment in universities. Gender and Power theory grounded this study. Mixed methods approach and descriptive survey design were used to gather data. Four universities were randomly selected. The targeted population was 510 respondents with 102 sample size which included 78 female students, 16 academic staffs selected randomly while 4 student leaders and 4 deans of students were purposively selected. Quantitative data were collected using questionnaires while qualitative data through interview guides. Research experts & supervisor validated the instruments. Reliability was determined in pilot study and Cronbach alpha coefficient was found to correlate at $r = 0.75$. Quantitative data were analyzed using descriptive statistics in the SPSS version 20 and results were presented in tables of frequencies and percentages. Qualitative data were analyzed thematically. The study revealed poor awareness on sexual harassment, student's indiscipline, dress code, internet use, unsafe hostels, university culture, public transport and part time jobs as factors influencing sexual harassment among female students. The findings indicated measures against sexual harassment such as enactment of anti-sexual harassment policy, the use of website reporting platform and research center, educative programs, dress code, gender desk and code of ethics. The study recommends for introduction of gender based education from primary schools to university, which will necessitate war against sexual harassment in education setting.

Keywords: Sexual, Harassment, Students, Female, Universities

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1. Introduction

Sexual harassment (SH) has been a matter of concern among national and international organizations since the 1970s. For instance, the United Nations in 2008 declared that violence against women in all countries, cultures and communities to be neither acceptable nor tolerable (Garcia-Moreno et al., 2013). According to Cantor et al., (2015), sexual harassment is any conduct of sexual nature that offends the person to whom the action is done. Such

actions may include touching, teasing, sexually suggestive comments, request for sex, insults and bullying (Bondestam et al., 2020; Landin et al., 2020). Moreover, unwelcome sex advances, request for sex favors and other verbal or physical contact of sexual nature constitute sexual harassment (Klein & Martin, 2019). In addition Wamoyi et al., (2021) considered unwilling touching of someone else's breasts and buttocks, hugging and teasing as sexual harassment.

SH is often experienced in the workplaces or in educational settings and women are more likely to experience it than men (Wamoyi et al., 2021). In working places; research done in Vietnam by Chu et al., (2021) revealed in 2013 and 2014, 48% of female journalists had experienced some form of SH at work, also a review in the United States of America (USA) indicated that more than 80% of female doctors at one medical college reported to have experienced SH. Similar findings from Sri Lanka pointed that despite an increase in male nurses and nursing studies, female nurses are more prone to be sexually harassed than male nurses (Somani et al., 2015; Spector et al., 2014). Another different study by Landin et al., (2020) in Tanzania observed that among 133 female participants, 10.5% of them had experienced SH at workplace, compared to male participants which was 7.8%. This indicated that between 19 of those reported being sexually harassed, 14 were women. With this regards, the findings pin pointing that the problem is serious even at work in various countries regardless of their economic status.

Likewise in Tanzania, the University of Dar es Salaam launched the UDSM Anti-sexual Harassment policy in 2006 and reviewed it in 2018, (UDSM, 2018: Kavishe, 2021) indicated that until 2018, the policy facilitated to victims of SH to report the incidents to the university administration and file cases against the perpetrators. The policy also led to solution to some reported cases while others were kept pending, UDSM (2018), the same university provided knowledge and education to students, emphasized on awareness regarding to human rights as a method of dealing with SH on campus (Kavishe, 2021).

Regardless of the adopted measures, the problems still exist in various Tanzanian Universities at high rates and with new forms. Unfortunately, sexual harassment is unlikely to be eliminated in the near future unless critical measures are taken to address the problem. Therefore this study was conducted to find out the reasons for existence of SH among female students in universities, regardless the allocated strategies.

1.1 Research Questions

- i. What are the influencing factors for sexual harassment among female students in universities in Arusha Region?
- ii. What are the strategies adopted to mitigate sexual harassment in universities in Arusha Region?

2. Literature Review

2.1 Theoretical Framework

This study was framed by Gender and Power Theory pioneered by Connell (1987). The mentioned theory lay its focus on social and structural issues surrounding women in terms of distribution of power and gender-specific norms within interaction of heterosexual relationships

(Connell, 1987). Connell's theory consists of three interdependent structures such as sexual division of power, sexual division of labor, and the structure of the Psychoanalysis. The three social structures are originated from historical and socio-political forces of a society where by they put much emphasis on segregation of power and roles between genders in accord with social norms of a particular society (Wamoyi et al., 2021).

The theory explained itself with a wide range on how society can be a lead influence to inequalities and gender based violence with the consideration of those entities that act as a guide of a particular society. It provided more useful information that once a society decide to focus and make use of them it will be so easy to avoid those gender related problems and challenges. In regard with this new study the theory enabled investigation on how power is used by men which influence their sexual; behaviors, for example the way some male academic staffs and administrator used their position on demanding for sexual relationships with female students. Not only to them but also to male students who also used their power treating female students in bad ways. The theory enabled the researcher to find out those society's social norms that have an influence to gender inequalities in almost all spheres of life, resulting to gender violence inform of sexual harassment. In addition, the theory was useful to find out to what extent the presence of these social mechanisms result to female students to experience harassment from males in different forms including sexually.

2.2 Empirical Literature

2.2.1 Factors for Sexual Harassment among Female Students in Universities

SH incidents are prevailing day after day due to various external and internal factors that necessitate its occurrence. A study conducted by Kempinska & Rudenko (2021) on SH in the Academic Space as a Social and Pedagogical Problem identified that in America the institutional culture in universities contributes much to sexual harassment practices. The study was very useful in identifying in details those kind of organization culture which influence SH practices, including downplaying SH. The findings from this study revealed that in most organizations SH was not treated as a serious problem. There is a culture of silence towards the incidents. In addition, sexual harassment was also treated quite indulgently as a demonstration of male strength in the institutions.

A field survey was done in Vietnam by Chu et al., (2021) on Female Students' Awareness in SH Prevention. The study was conducted to find out how female students were aware of SH practices, factors for its occurrence and measures attributed to its preventions. On data collection

the researchers used questionnaires for female students and interview guides for lecturers. The instruments successfully helped the researchers to obtain the required data concerning factors for sexual harassment as well as awareness regarding SH prevention, unsafe hostels, and little knowledge about the new living environment in the city, part time job and public transport.

A study by Obiozor & Osuala (2018) on Control Strategies for SH of Female Learners in Tertiary Institution in Nigeria revealed that in middle east, factors like search for education and certification, greed, economic hardship, positivism in science and lack of respect for oneself are the root cause for this ill problem. The findings added that learner's desire for urban lifestyle made them to practice things such as displaying themselves openly, dress indecently and immodestly with skimpy dresses that show tummies and breast.

A different research by Beninger (2013) on combating sexual violence in schools in sub-Saharan Africa: legal strategies under regional and international human rights law discovered that in Ghana and Zimbabwe SH is flourishing due to poverty; therefore students struggle to pay university fees and other living expenses. The study was of importance on identifying various legal procedures to follow on dealing with SH in education institutions.

Research conducted by Oni et al., (2019) in South Africa over SH and victimization of students: A case study of a higher education institution in South Africa was kin on identifying factors for SH. These are university's social structure, alcohol and substance abuse, absence and ineffective implementation of policy on SH and failure of victims to report the incidence. With this study data was collected from students of both genders living in university campuses and taking courses from certificate to post graduate level of education.

In Tanzania, a qualitative study done by Wamoyi et al., (2021) on Male and Female Conceptualizations of SH indicated social norms and gender power as the influence of SH among adolescents in secondary schools. The study assisted on knowing to what extent this group was aware of SH practices and their encounter to it. The study found that in universities SH among female students was sometimes influenced by absence of projects which educate males on how to value and respect women, faking life, peer influence, adolescent behavior and threats from the harassers.

2.2.3 Adopted Measures against Sexual Harassment among Female Students in Universities

Various measures have been applied globally in combating sexual harassment in higher learning institutions. A study conducted in France by Carrington et al., (2021) on SH in the Academic Space as a Social and Pedagogical Problem reported the presence of national

policy on gender-based violence in academia. The study reported that together on July 2019 over 95% of public universities in France created special advisory services within their institutions. The efforts didn't end there, the government enacted law against SH in universities which indicated a penalty of 1 year imprisonment and a fine equivalent to 15,000 Euros to a person who practices harassment. Same researchers also reported that Ireland and Israel launched a national policy on gender-based violence in educational institutions, including universities. The findings added that the government of Poland set up a penal code that would guide the victims. Also Sweden, Iceland, and Israel organized activities such as conferences, seminars, workshops and meetings in fighting sexual violence in the academic environment.

Another study was conducted by Hamada et al., (2020) on Fighting SH on Campus in Africa. This was an action research which examined the differences and similarities between three Egyptian universities (BeniSuef, Alexandria, and Fayoum) in fighting SH within their respective campuses. The study indicated measures taken by those universities towards managing SH in universities. For instance, in December 2016, BeniSuef established Ant sexual harassment unit and adopted an anti-sexual harassment and violence policy with the task of receiving SH and violence complaints, transfer complaints to the anti-harassment committee (the committee secretly investigates the complaints and recommends any punitive measures).The unit also assisted victims of harassment and protected the complainant; together they implemented training and raising awareness programs. Similarly, in Alexandria University the professors were engaged in training, campaigns and workshops organized by different non-governmental organizations (NGOs) towards addressing SH. The university also launched anti-sexual harassment unit in September 2017. In addition, Fayoum University established sexual harassment unit with the support from university administration and its president unit provided trainings to students, psychological and legal support to victims of sexual harassment.

3. Methodology

Mixed methods approach and descriptive survey design were used to gather data (Creswell, 2014). Four universities were involved in this study whereby the study used simple random sampling technique to select the universities. The targeted population for this study was 510 respondents with 102 sample size which included 78 female students, 4 student leaders, 16 academic staff and 4 deans of students. Female students & academic staff were selected using simple random sampling (enabled every individual to have an equal chance to participate in the study) while student leaders and deans of student were purposively selected. Quantitative data were collected using questionnaires while qualitative data was collected through interview guides. Research supervisor & experts

from the department validated the instruments (Okendo, et al., 2020). Reliability was determined in pilot study and Cronbach alpha coefficient was found to correlate at $r = 0.75$. Quantitative data were analyzed using descriptive statistics in the SPSS version 20 and results were presented in tables of frequencies, percentages and histogram. Qualitative data were analyzed thematically alongside research questions.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Factors Influencing Sexual Harassment among Female Students in Universities

The study aimed at finding out factors influencing SH among female students in public and private universities in Arusha region. Data were collected from female students, student's government leaders, dean of students and academic staff. In their questionnaire, female students and student government leaders were provided with ten factors for sexual harassment and requested to indicate the rate of contribution for each factor. Their responses were presented in table 1.

Table 1: Responses to Factors Influencing Sexual Harassment among Female Students in Universities

| Responses | Major | | Minor | | No effect | |
|---|-------|------|-------|------|-----------|------|
| | f | % | F | % | f | % |
| 1. Poor awareness on sexual harassment | 6 | 7.8 | 7 | 9.2 | 5 | 6.5 |
| 2. Student's indiscipline | 15 | 19.7 | 2 | 2.6 | 6 | 7.8 |
| 3. Normalization of sexual harassment in dress code | 4 | 5.2 | 18 | 23.6 | 3 | 3.9 |
| 4. Little knowledge on new city life | 10 | 13.1 | 4 | 5.2 | 6 | 7.8 |
| 5. Internet use | 19 | 25 | 2 | 2.6 | 4 | 5.2 |
| 6. Social Norms | 5 | 6.5 | 9 | 11.8 | 7 | 9.2 |
| 7. Unsafe hostels | 12 | 15.7 | 5 | 6.5 | 1 | 1.3 |
| 8. University culture | 3 | 3.9 | 8 | 10.5 | 23 | 30.2 |
| 9. Public transport | 1 | 1.3 | 11 | 14.4 | 1 | 1.3 |
| 10 Part time job | 1 | 1.3 | 10 | 13.1 | 20 | 26.3 |

Source: (Field data, 2022) KEY: "f" Frequency " %" Percentage

Tables 1 revealed that Internet use majorly contributes towards SH at the rate of 19 (25%). Spending a lot of time on internet among female university students influences sexual harassment towards them. The agreement of the majority support that spending much time on internet lead to sexual harassment practices towards the users in universities. This study agrees with Arafa et al., (2017), who identified internet use as a major cause of online SH in Egyptian universities. The agreement between the two studies signifies that internet use is a contributing factor to SH in universities.

Another finding from table 1 show responses about student indiscipline, where by 15(19.7%) indicated that it is a major contributing factor towards SH. The researcher established that student's indiscipline has direct association with occurrence SH among female students in universities. This includes dressing codes, the way they talk and the way they walk mostly influence and stimulate men's desire for sexual intercourse. The study correlate

with Obiozor & Osuala (2018) who identified students' lack of respect in Nigerian universities as contributing towards SH of female students. The two findings correlation implies that students' indiscipline has much influence on SH directed to girls in the universities.

Furthermore, table 1 pointed out unsafe hostels as another cause of SH. In other words, unsafe hostels cause sexual harassment among female students in university. The hostels are not insulated from outsiders hence people can access them at will. Insecurity and low level of technologies in different hostels as well as scraping of hostels association has resulted in SH like raping, among the female students in universities. The findings are in agreement with Chu et al., (2021), who indicate unsafe hostel, to some extent, contribute to sexual harassment practices in Vietnamese universities. The two findings being in agreement indicated that unsafe hostels are the root cause for SH practices targeting female students in the universities.

Also, from table 1, little knowledge about new city life was identified as a contributing factor towards SH. The result from the study shows that respondents appreciated city life particularly to female students coming from the village as an improvement to social status in their life. Apparently, this new environment was mentioned as a factor contributing to SH among female students in universities. Most of female students come from rural areas knowing less about urban environment, so the failure to adapt to the new environment affect them, and cause some to face sexual harassment practices. The findings are in agreement with Obiozor & Osuala(2018) who indicate learner's desire for urban lifestyle contributed to sexual harassment practices in Nigerian universities. The agreement between the two studies implies that little knowledge on new city life facilitates female students to face sexual harassment behaviors.

Table 1 show that poor awareness on sexual harassment is a factor for SH. The findings imply that many female students are not aware of what steps to follow so as to avoid the repeatedly incidence of sexual harassment. The study relates with Chu et al., (2021) who indicated the same factor in universities in Hanoi-Vietnam. The two studies agree that Poor students' awareness on sexual harassment practices and steps to follow on victims' side is a facilitator to the existing problem.

Data in table 1 also show that the respondents identified social norms/customs like unequal treatment between sexes at home which gives power to men through which they exercise it by practicing gender based violence like sexual harassment against women. This study is compatible with Gender and Power theory of Connell (1987), on how power is used by men to influence their sexual behaviors, for example some males who used their power treating females in bad ways. Power given to male gender as a social norm makes them to be more powerful than women, thus influencing their behaviors and actions. The agreement between the theory and the findings in the current study is a clear testimony that social norms sometimes influence SH among female students in the universities.

In addition, with regards to the theme factors influencing sexual harassment among female students in universities, during the interview with academic staff and dean of students one respondent revealed that;

There are different factors contributing to SH. The factors are categorized in terms of financial problems, social norms, luxurious life, laziness, culture, and power, lack of gender education, relationships, conflicts, mob psychology and lack of sensitization programme (Personal interview with dean of students from university 'A', April 20, 2022.

The study discovered that female students who came from families with low level of income were more likely to encounter SH during their study time due to financial

challenges, a situation that led to sexual harassers to take advantage of student needs. One of the academic staff explained that:

...there is a period when the boom ends completely and the girl still requires personal needs. So in a situation like this, a girl may finds herself getting into an environment that exposes her to sexual abuse just to meet her needs... she will tolerate everything from male counterparts to get her needs you know people are coming from families with different economic status (Personal interview with an academic staff from university 'B' on April 21, 2022).

Furthermore, some of respondents mentioned that social norms contribute to sexual harassment among female students in universities. One academic staff remarked that:

In most cases, Africans are guided by some traditional norms in our societies that in one way or the other put women in disadvantageous group that required them to be submissive to men's needs, orders, and request!" (Personal interview with academic staff from university 'C' on April 22, 2022).

Another results from some respondents revealed that sexual harassment among university female students was influenced by the need to live a luxury life by some female students. The students themselves are determined to live such kind of life they cannot afford, which leads them to experience harassments from those men who provide for their expenses.

Apart from that, a respondent pointed out that;

Some female students are generally lazy and they rely on male students to help them in assignments, presentations and to pass examinations. You may find one does not participate fully in group assignment or even sometimes the same person does not do test, so her fellow male students help her and demand sexual favors for them to include her in the work already done(Personal interview with dean of students from university 'C', April 22, 2022).

Additionally, results from this study show other respondents indicated university culture as a cause of sexual harassment practices in universities. The society and university culture make harassment practices to increase, for instance culture of holding the perpetrator instead of exposing them to the public, firing or stop continuation of their studies. The culture of not making perpetrators responsible for their action in both the society and university should be discouraged. Also university culture of not taking sexual harassment practices seriously influences its continuous occurrence.

Moreover, power was identified to be a source of sexual harassment practices. Power vested on academic staff and administrator influenced their sexual behaviors in universities. The findings are in agreements with Gender and Power theory by Connell (1987) which support segregation of power and roles between genders in accordance with social norms of a particular society whereby according to the theory men are equipped with more power over women in all spheres of life. Therefore, it is that power vested on them by the society which enables them to influence women sexually.

Furthermore, lack of educative projects which target to educate men on how to value and respect women was identified as a factors influencing SH. The absence of these projects makes it easy for males to conduct inappropriate behaviors including harassing females because they do not see their worth and have not been taught how to behave respectful towards them. In this regard, one among the deans summarized that:

The absence of projects that educate males on how to value and respect women tends to be the reasons why men keep harassing women in different ways (Personal interview with the academic staff from university 'C', April 22, 2022).

The findings are in agreement with Bodestam & Lundqvist (2020) who revealed that education and trainings are necessary for fighting sexual harassment in European universities.

4.2 Strategies Adopted in Mitigating Sexual Harassment in Universities

The other objective aimed at examining various strategies adopted to mitigate sexual harassment in universities. In their questionnaire, female students and student government leaders were provided with ten forms of strategies and requested to indicate those which were applicable in their institutions. Their responses are presented in table 2.

Table 2: Responses on Strategies Adopted to Mitigate Sexual Harassment in Universities

| s/no | Responses | More applicable | | Less applicable | | Not applicable | |
|------|----------------------------------|-----------------|------|-----------------|------|----------------|------|
| | | F | % | f | % | f | % |
| 1. | Reporting the incident | 2 | 2.6 | 8 | 10.5 | 1 | 1.3 |
| 2. | Ant-sexual harassment policy | 17 | 22.3 | 1 | 1.3 | 0 | 0 |
| 3. | Seminars | 5 | 6.5 | 14 | 18.4 | 5 | 6.5 |
| 4. | Workshops | 7 | 9.2 | 16 | 21.0 | 4 | 5.2 |
| 5. | Conferences | 11 | 14.4 | 5 | 6.5 | 6 | 7.8 |
| 6. | Legal support | 12 | 15.7 | 4 | 5.2 | 7 | 9.2 |
| 7. | Training | 4 | 5.2 | 12 | 15.7 | 8 | 10.5 |
| 8. | Raising awareness programs | 14 | 18.4 | 11 | 14.4 | 2 | 2.6 |
| 9. | Campaigns | 3 | 3.9 | 2 | 2.6 | 11 | 14.4 |
| 10. | Imprisonment or penalty payments | 1 | 1.3 | 3 | 3.9 | 32 | 42.1 |

Source: (Field data, 2022) KEY: "f" Frequency " %" Percentage

Table 2 show the indication level of agreement among the respondents on strategies adopted to mitigate SH among female students in the universities.

From table 2, it can be noted that enactment of Ant-sexual harassment Policy was ranked first 17(22.3%), followed by raising awareness programs at 18.4%, Legal support at 15.7% and conferences at 14.4%. Findings indicate that there is need for policies to be formulated to curb sexual harassment among female students in universities. The study findings are in agreement with Bondenstam & Lundqvist (2020) who indicated that policy is a measure in dealing with sexual harassment practices in European universities.

From the findings, the government and other education stakeholders should take into consideration the

establishment of different awareness programs like clubs in universities to facilitate the provision of awareness and self-determination among female students. The findings relate to Hamada et al., (2020) who identified the implementation of trainings and awareness program in Egyptian universities as a good means in overcoming SH in universities. The finding is supported by Kempinska & Rudenko (2021) who indicated the agreement among universities to apply legal procedures in overcoming sexual harassment in universities in France.

Also, the findings revealed that orientation programmes were applied in some universities. The method was applied at the beginning of each academic year to both new comers and the continuing students which seemed to be one among the useful strategy adopted by those

institutions in combating SH. One of the deans declared that:

...there is a tendency of conducting orientation programme which includes both new comers and continuing students...the students are told different things....for example university life and issues of harassment (Personal interview with the dean of students from university 'C', April 22, 2022).

The findings are in agreement with Gender and Power Theory pioneered by Connell (1990) which emphasizes on the society's social norms that have an influence in gender inequalities in almost all spheres of life, resulting to gender violence in a form of sexual harassment. The agreement between the two studies indicates that orientation programmes are essential for eradicating sexual harassment in universities.

While visiting another university, the researcher also observed dressing code as captured in figure 1. This is displayed by the entry point of the university as a strategy to mitigate SH. Another dean from one of the institutions commented that:

There is a dress code which guide students of both genders on how they are supposed to dress around the campus, including in classes...but there are those female students once they pass at the entrance they are in proper dresses but deliberately they carry with them other indecent dresses in their bags which they later put on after passing the gate (Personal interview with the dean of students from university 'C', April 22, 2022).

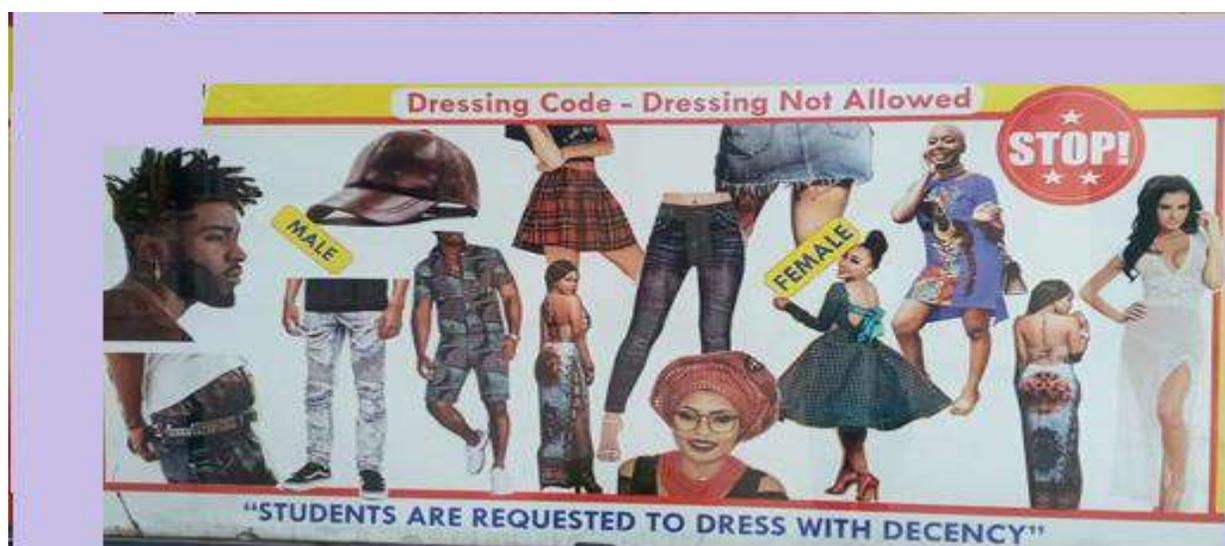


Figure 1: A guide to Dressing Code

Source: (Field data, 2022)

According to the data obtained in this research many respondents from universities accepted that dress code was a well thought strategy to stop sexual harassment behaviors in their campuses. The finding is supported by Obiozor & Osuala (2018) who revealed presence of dress code policy in Makerere University, which banned mini dresses and indecent attire by female learners since they had been blamed for everything such as AIDs, rape and sexual harassment. The compatibility of the two studies imply that dress code is an effective strategy against sexual harassment in universities.

On other hand, suggestion box is another means applicable in mitigating sexual harassment among university female students. The suggestion box made available in the researched institution enabled students to put their suggestions, complains, advices and opinions about institutions' activities, how they are taught, treated as well

as social and sexual affairs. The academic staff elaborated that:

There is a suggestion box that students use to give their opinions, proposal, advice, complaints..., everything related to education and everything else (Personal interview with the academic staff from university 'D', April 29, 2022).

Guidance and counselling is another strategy used by the universities in dealing with sexual harassment through which both students and staffs sometimes attend sessions at the time they are in need of the service including sexual issues. A satisfactory number of the interviewees indicated that this strategy has been used by their institutions in fighting harassment practices among female students. The findings are concurring with Obiozor & Osuala (2018) who recommended counseling centres in

universities in Nigeria to be equipped with well-trained counsellor who deals with sexual harassment victims too. In addition, the findings from this study reveal that gender desk was an effective means of combating sexual harassment practices in and outside university campuses. One of the academic staff agreed that:

... Yes there is this gender desk working through the gender desk club where female students discuss and present their issues...for example the abuse they are subjected to (Personal interview with an academic staff from university 'A', April 27, 2022)

This study is in agreement with Bondestam & Lundqvist (2020) who indicated the application of case management tool like gender desk in fighting harassment behaviors in European universities. The study argued that gender desk is a productive strategy of handling sexual harassment in universities.

Results from the current study indicated that students were supplied with confidential reporting system regarding all forms of harassments, including sexual ones in their universities as a strategy used to combat sexual harassment among female students in university as well. An academic staff confirmed that;

Here at our institution ...the university website has confidential platforms which allow students to report any form of gender violence and harassment targeted at female students (Personal interview with the academic staff from university 'D', April 29, 2022).

Therefore, reporting is another means of fighting sexual harassments since it reveals the harassers with their behavior. The findings again concur with Kavishe (2021) who revealed that sexual harassment cases were filed and reported which necessitated some to be solved while others were kept pending at the university of Dar es salaam. The concurrence of these studies indicates that reporting is an efficient means that leads to elimination of sexual harassment behaviors in the universities.

The study is also in agreement with Makhafola et al., (2021) who pointed the presence of code of ethics to staffs in Nigerian universities. The agreement between the two imply that code of conduct and ethic is a good controlling means which attempt to end all the harassment practices in an organization towards female students in higher learning institutions.

Apart from that, the use of research center was also the effective technique used by some of the institutions to fight against sexual harassment in their compound. One of the academic staff commented that:

In this university there is what is known as National women's research and documentation center which is hosted here responsible for researching on women and gender issues (Personal interview with the

academic staff from university 'C', April 22, 2022).

The technique was applied in a way that various dialogues are conducted by female students through which they raise gender issues that are taken into consideration and researched by the national women's research and documentation center. Thereafter, feedback is given in terms of recommendations and solutions towards the issues pointed out. The findings are in accord with the feminist theory which was pioneered with the works of Mary Wollstonecraft (1759–1797), the feminist are against all forms of discriminations, misuse of power and favoritism due to gender difference. Likewise the main target of the mentioned research center was to deal with gender based issues affecting female students in both spheres of life at university campus. Therefore, the agreement between the two reveals that the technique was appropriate and effective.

5. Conclusion and Recommendation

5.1 Conclusions

The respondents indicated financial problems, relationships conflicts, public transport, poor awareness among female students, student's indiscipline, social norms, unsafe hostels, internet use and little knowledge about the new living environment in the city. Others are truancy, laziness in accomplishing assignment as well as status and need for recognition as the major factors for sexual harassments among female students.

Majority of respondents who participated in the study from the four institutions revealed that their institutions applied strategies like university platform, provision of education, guidance and counseling, suggestion box, dress code, enacting strict laws, raising awareness programs, ant-sexual harassment policy, legal support, conference and orientation programs in fighting sexual harassments among female students. The same respondents added that it is hard to eliminate sexual harassments among university female students because some factors for its occurrence originate from the victims themselves. For instance, they do not cooperate fully on addressing the issue, greed, looking for status and fame, their dressing style and how present themselves in the public as well as personal interest.

5.2 Recommendations

1. Parents, guardians and community must ensure proper parental care and upbringing of female students to be good examples that may in one-way or another prevent their children from adopting harassment behaviors originating from themselves simply because once children witness the practices at home the incidents affects child's mentality and morals to adulthood.

- Finally, the individual person to accomplish fully personal duties, the academic staffs and administrators should academically raise both students equally and make them responsible in their action regarding the stipulated laws and regulations. Students on their side should perform their academic responsibilities accurately, behave morally and cooperate fully once sexual harassment accusations are made.

References

- Arafa. A. E et al., (2018). Cyber Sexual Harassment: A Cross-Sectional Survey Over Female University Students in Upper Egypt., *International Journal of Community Medicine and Public Health*, 5(1).
- Beninger, R. (2013). *Assessing the Reliability and Validity of Expert Interview*. <http://doi.org/10.1177/146511650504835>
- Bondestam, F., and Lundqvist, M. (2020). Sexual harassment in higher education—a systematic review. *European Journal of Higher Education*, 10(4), 397-419.
- Cantor, D., Fisher, B., Chibnall, S., Townsend, R., Lee, H., Bruce, C., & Thomas, G. (2015). *Report on the AAU campus climate survey on sexual assault and sexual misconduct*. Rockville, MD: Westat.
- Carrington et al., (2021). Opinion: Use science to stop sexual harassment in higher education. *Proceedings of the National Academy of Sciences*, 117(37), 22614–22618. <https://doi.org/10.1073/pnas.2016164117>.
- Chu, Y., Vu, N. and Thanh, H. (2021). Female Students' Awareness in Sexual Harassment Prevention: *International Journal of Multidisciplinary Research and Analysis Issn (print): 2643-9840, ISSN (online): 2643-9875 Volume 04 Issue 07 July 2021 DOI: 10.47191/ijmra/v4-i7-08, Impact Factor: 6.072 Page No. - 918-923*
- Connell. (1987). *Gender and Power*. Stanford University Press.
- Connell. (1990). The state, Gender, and Sexual Politics: Theory and appraisal. *Theory and Society*, 19(5), 507–544.
- Creswell, J.W. (2014). *Research Design: Qualitative and Mixed Methods Approaches*. (2ed). California Sage Publication Inc.246pp.
- Garcia Moreno, C. et al., (2013). *Global And Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*. World Health Organization.
- Hamada, A. et al., (2020). *Fighting Sexual Harassment on Campus: How Local Contexts of Different Universities Affect the Dynamics and Outcome of these Efforts*, UK
- Kavishe, M.A (2021). *Exploring the Experience of Cyber stalking among Female Students in Tanzanian : A Case Study of the University of Dar es salaam*.
- Kempińska, U and Rudenko, M (2021). Sexual Harassment in the Academic Space as a Social and Pedagogical Problem: *Scientific practice, Modern and classical research methods, Volume 2. DOI 10.36074/logos-26.02.2021.v2.29*
- Klein, L.B & Martin, S. (2019). Sexual Harassment of College and University Students: A Systematic Review. *Article reuse guidelines: sage pub. Com/journals-permissions DOI: 10.1177/1524838019881731; journals.sagepub.com/home/tva*
- Landin, et al., (2020). *Sexual Harassment in Clinical Practice-A Cross- Sectional Study among Nurses and Nursing Students in Sub-Saharan Africa*
- Makhafola et al., (2021). Corruption as abuse of power: sexual violence in educational institutions. In Sweeney, G, Despota, K. and Lindner, S. (Eds). Transparency International, global corruption report: *Education*. Abingdon, Oxen: Routledge. (Makhafola, et al., 2021).
- Obiozor, Ogechi R. and Osuala, Linda N. (2018). Control Strategies for Sexual Harassment of Female Learners in Tertiary Institutions in Nigeria: *International journal of educational benchmark (ijeb), eissn: 2489-0170pISSN:2489-4162 University of Uyo. Vol. 11(1) 2018*
- Okendo, E.O; Atoni, R. and Kitula, P.R (2020). *Fundamentals of Educational Research*. Nairobi:Rinny.
- Oni, H.T; Tshitangano, T.G and Akinsola H.A. *Sexual harassment and victimization of students: a case study of a higher education institution in South*

Africa. Afri Health Sci. 2019; 19(1). 1478-1485.
[https:// dx.doi. org/10.4314/ ahs. v19i1.21](https://dx.doi.org/10.4314/ahs.v19i1.21)

Spector et al., (2019). Perception and Tolerance of Sexual Harassment: An Examination of Feminist Identity, Sexism, and Gender Roles in a Sample of Chinese Working Women. *Psychology of Women Quarterly*, 33(2), 215–233.
<https://doi.org/10.1177/0361684320903683>

Somani, R., Karmaliani, R., McFarlane, J., Asad, N., and Hirani, S. (2015). Sexual harassment towards nurses in Pakistan: Are we safe? *International Journal of Nursing Education*, 7(2), 286- 289.

UDSM. (2018). *University of Dar es Salaam Anti-Sexual Harassment Policy*.

Wamoyi, J et al., (2021). Male and Female Conceptualizations of Sexual Harassment in Tanzania: *The Role of Consent, Male Power and Social Norms Article reuse guidelines: sage pub. Com / Journals-permissions*



Assessment on the Effects of Library Resources to Public Secondary School Students in Acquisition of Knowledge: A Case of Arusha District

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Abstract: *This study assessed the effects of the usage of library resources on the acquisition of knowledge among students in public secondary schools in Arusha district. The study examined condition of library resources in public secondary schools and investigated measures to be taken to improve the condition and effective uses of library resources by secondary school students. Convergent parallel design was adopted. From a target population of 5282, the sample for the study was 98 respondents which included 50 students, 40 teachers, 4 librarians and 4 heads of schools in Arusha district. Stratified random sampling technique was used to select the respondents while school heads were purposively selected. Questionnaires, observation guides and interview schedules were used as data collection instruments. Research experts validated the instruments and the reliability test ($TQ=0.86$ & $SQ=0.79$) was conducted using Cronbach alpha. The collected data were analyzed using descriptive statistics to generate mean scores, percentages and frequencies. Thematic analysis was used to analyze the qualitative data and the presentation was done in words being supported by direct quotations. The study found out that the condition of library resources in public secondary schools was bad as most of the school libraries did not have up to date books. The study recommended for the government and other education stakeholders to support the schools by ensuring that the school libraries have adequate and up to date books. The study also recommended for students to be encouraged to use library resources for them to expand their knowledge and skills.*

Keywords: *Library, Students, Resources, Knowledge, School*

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1. Introduction

Availability of information is an essential component for successful learning and acquisition of knowledge across all education levels (Kumah, 2015). Thus, students in higher and lower levels need to use information for them to achieve various academic goals. This calls for students to spend a considerable amount of their schooling time on

reading. This is because reading is an important activity towards increasing person's knowledge and changing one's attitudes (Putri & Usman, 2021). According to Chinwendu, et al., (2018), there is a strong relationship between reading and acquisition of knowledge. Individuals who read always are expected to have better understanding of different aspects and hence they may demonstrate the possession of knowledge on several issues. Therefore, knowledge is acquired from reading

different kinds of sources including textbooks, journals as well as internet resources in the libraries (Ufuophu and Ayobami, 2012).

For several years, libraries have been used as the main source of information by students and other readers (Horrihan, 2016). According to Simba (2016), libraries are most important in the education system as they encourage students to search for knowledge and therefore, they understand whatever they learn in classrooms. Moreover, Sari (2021) observed that libraries increase both physical and digital space for the community to learn. This argument is further supported by Basirat et al., (2018) who argue that exposing the teaching staff as well as the students to library facilities enhances teaching and learning process leading into improved students' academic performance. Therefore, libraries are seen as among the important factors for success of students and the schools. Therefore, secondary schools across the world are recommended to have accessible library facilities for students and the academic staff to learn (Fawcett, 2013). Sharma (2019) indicated that libraries are special collections of information which can help the learners to acquire the required knowledge and skills. In Pakistan, Rehman et al., (2020) revealed that majority of the colleges had library buildings with limited physical facilities. In Egypt, the condition of libraries was not impressive as reported by (Chakraborty, 2020). Studies conducted in Iran have showed that the university libraries do not have adequate library resources and thus the acquisition of knowledge among university students is affected (Yeganehfar&Zaree, 2020). Moreover, Mubofu and Malekani (2019) revealed that students who frequently use library resources do achieve higher grades than the ones who do not have a studying habit. These studies show that there are problems with the library facilities in the countries. However, there is little information on the use of library facilities among secondary school students in Tanzania particularly in Arusha district council. Therefore, there was a need for the current study to be conducted to fill the gap.

1.1 Research Questions

1. What is the condition of library resources in public secondary schools in Arusha district?
2. What measures can be taken to improve the condition and effective use of library resources in public secondary schools in Arusha district?

2. Literature Review

2.1 Theoretical Framework

Constructivism is basically a theory based on observation and scientific study about how people learn. The founders of this theory were John Dewey in 1933 to 1998, Bruner

in 1990 and Piaget in 1972. It explains that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. When we encounter something new, we must reconcile it with our previous ideas and experience, maybe changing what we believe, or maybe discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions to explore and assess what we know. Constructivism's basic postulation is that people are active learners and must construct knowledge for themselves. To that effect, the traditional mode of lecturing to groups of learners is considered inappropriate and the teachers use materials with which learners can become actively involved through manipulation or social interaction (Schunk, 2000). Learning in this theory is about discovery. In this theory, learning focuses on problem-solving and construction of meaning.

Constructivism enables the learners to be active participants in their learning process, which ultimately creates potential for deeper understanding. This is since learners who are active learners construct meaning by integrating prior knowledge with new information (Donham 2008). Therefore, this study examined much on the conducive environment and factors that a student needs in order to extract the better knowledge when they are using the library resources in accessing the information about their subject matter.

2.2 Empirical Literature

Shoaib et al., (2020) conducted a study on library resources and research environment in higher education institutions in Pakistan. A total of 1358 students participated from public and private universities to fill the questionnaire. The questionnaire was pre-tested from 30 respondents. Structural Equation Modelling (SEM) technique was employed to measure the effects of the proposed model. The study findings showed that the students are provided with all the necessary facilities to search the information and sort-out the updated knowledge on the topics of their interest. Moreover, the students are getting benefits from all the online and print sources to meet the demands of the research in the present era. It is also revealed that research-intensive students are satisfied with available library resources. The study recommended that students should be facilitated by providing updated digital and print resources to keep up to date students with the latest knowledge produced in their relevant fields.

Chakraborty (2020) conducted study on survey of district libraries in lower Assam, Egypt. The study consisted of three districts which are selected from public library system in Assam and the interview method was used to collect relevant data from the library professionals. The study found that the condition of the district libraries of Assam is not very impressive. Though these three public

libraries are rich regarding their collection and staff, the number of daily users of the district libraries is not as per the expectation. Similarly, the study found that most users visit the library for reading newspapers. The finding also shows that due to lack of funds as well as government initiative, the libraries do not fulfill the requirements of the library users. Also, the study finding noted that libraries are lagging in terms of using modern technologies like computer and internet, which becomes a basic need of today's generation. The study recommends that the library services should be extended to different parts of the country. Also, Government should provide sufficient funds for the uses of ICT applications in the library to attract the users towards the library. Lastly, the study recommends updated information should be provided by the library staff to its users.

Samlawi et al., (2021) conducted a study on evaluation of digital libraries to improve agile library services in USA. The study used qualitative approach. Data collection was done by use of interview schedule. Purposive sampling technique was used to select respondents while triangulation was used to analyse data. The study shows that the optimization of digital libraries for the development of agile library services is measured by ease of use in terms of systems that are easy to learn, easy to master, clear and easy to reach, flexible, and easy to use. Furthermore, flexible factors are the only aspect that needs to be improved.

Park & Yoo (2019) conducted a study on the management of an academic library using customer relationship management, Korea. The study used demographic information, library resources, homepage services, and facilities/environment of the library were categorized in the questionnaire and analysed. The study revealed that library resources used was the highest, and its facilities/environment was the lowest in the user satisfaction study. It also revealed that there were many necessities for the quick acquisition and dissemination of the requested material to the library users, and for the inter-library loan (ILL) services among campuses for the subscription books in the library resources used study. Also, there are a lot of necessities for the plans of more frequent library event, more detailed event guidance, and more reinforcement of public relations.

3. Methodology

In this study, the researcher employed convergent parallel research design. According to Creswell (2012), convergent parallel design involves a simultaneous collection of both qualitative and quantitative data. The advantage of convergent parallel design is that it combines the advantages of qualitative and quantitative methods leading into more coherent findings. The design helped the researcher to triangulate the quantitative and qualitative data obtained for the purpose of justifying the reliability and validity of the study findings. The sample was

selected from the target population of 5282 individuals (students, teachers, librarians and school heads). The sample size was calculated using Yamane formula (Cohen et al., 2007).

Yamane suggests the formula as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = stands for sample size

N = stands for total population size,

e = stands for the level of precision.

Total population under the study was 5282. Using Yamane's Formula, a sample was determined.

$$n = \frac{N}{1 + N(e)^2}$$

N = 5282, n=? e = 0.1 since P= 10%

Substituting values in the formula

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{5282}{1 + 5282(0.1)^2}$$

$$n = \frac{5282}{1 + 5283(0.01)}$$

$$n = \frac{5282}{1 + 52.82}$$

$$n = \frac{5282}{53.82}$$

$$\therefore n = 98$$

Therefore, the desired sample size was 98 respondents (students, teachers, librarians and school heads).

Thus, the sample for the study was 98 respondents which included 50 students, 40 teachers, 4 librarians and 4 heads of schools who were selected using probability and non-probability sampling techniques. Stratified random sampling technique was used to select 40 teachers who participated in study. The researcher categorized the teachers into two groups according to their gender. Then the researcher randomly selected 4 male teachers and 4 female teachers making a total number of 8 teachers from each school. Therefore, 40 teachers (20 male and 20 female) were selected from the 5 sampled schools. School heads were purposively selected.

Questionnaires, observation guides and interview schedules were used as data collection instruments. The instruments were validated using research experts and the reliability test was conducted using Cronbach alpha. The coefficient for teachers' questionnaire was 0.86 and the one for student's questionnaire was 0.79. The collected data were analyzed using descriptive statistics to generate mean scores, percentages and frequencies. Thematic analysis was used to analyze the qualitative data and the presentation was done in words being supported by direct quotations.

4. Results and Discussion

The findings were discussed according to the research objectives.

4.1 Library Resources Available in Public Secondary Schools

The first research question aimed at finding out the condition of library resources in public secondary school. To answer this question, students and teachers were provided with questionnaire. School heads and librarians also respondents to this question through interview. Results of students were summarized in table 1.

Table 1: Students' responses on the condition of school libraries in public secondary school in Arusha district (n=50)

| Statements | SD | | D | | U | | A | | SA | | Mean score | |
|---|----|----|----|----|----|----|----|----|----|----|-------------|------|
| | f | % | f | % | f | % | f | % | f | % | | |
| i. School has library | 3 | 6 | 5 | 10 | 13 | 26 | 14 | 28 | 1 | 5 | 30 | 3.66 |
| ii. Books available in school library are enough for students self-studying | 12 | 24 | 13 | 26 | 2 | 4 | 18 | 36 | 5 | 10 | | 2.82 |
| iii. school library has updated books | 10 | 20 | 21 | 42 | 0 | 0 | 19 | 38 | 0 | 0 | | 2.56 |
| iv. School timetable clearly indicate time for library studies | 16 | 32 | 21 | 42 | 3 | 6 | 9 | 18 | 1 | 2 | | 2.16 |
| v. The school library has computers connected to the internet | 13 | 26 | 30 | 60 | 5 | 10 | 2 | 4 | 0 | 0 | | 1.92 |
| vi. Books are accessible in the school library | 5 | 10 | 6 | 12 | 3 | 6 | 28 | 56 | 8 | 16 | | 3.56 |
| vii. Library resources are most useful to you | 5 | 10 | 0 | 0 | 2 | 4 | 26 | 52 | 1 | 7 | 34 | 4.00 |
| viii. School library has conducive environment for students to study | 7 | 14 | 33 | 66 | 3 | 6 | 7 | 14 | 0 | 0 | | 2.20 |
| Grand mean score | | | | | | | | | | | 2.86 | |

Source: field data (2022)

Key: SA= strongly agree, A= agree, U = undecided, D= disagree, SD= strongly disagree

Table 1 shows that, 8 students out of 50 who responded to questionnaire either strongly disagreed (6%) or disagreed (10%), which is equivalent to 16% of the respondents who disagreed to the statement that there are libraries in their school while 29 students, which is equivalent to 58%, agreed that there was library in their school. On the other hand, 26% of students were undecided to the availability of library in their school. Similarly, 50% of students disagreed that books available in school the library are enough for students' self-studying while 46% of respondents agreed that there were enough books in school library for students' self-studying, on top of that, 4% of students were not aware that is, they were undecided on whether enough books were available in school library for students' self-studying.

Table 1 also indicated that, 62% of students disagreed with the statement that, school library has updated books and 38% of students agreed to the statement while none (0.0%) of students were undecided. On the other hand, 31 students out of 50, which is equivalent to 62%, strongly disagreed that school timetable clearly indicate time for library studies while 10 students (10%) strongly agreed with the statement while 3 students (6%) were undecided.

Meanwhile, 86% of students strongly disagreed that, school library has computers connected to the internet while 10% of students were undecided as 4% of overall students strongly agreed with the statement that school library have computers connected to the internet.

Similarly, table 1 indicate that, 11 students (22%) strongly disagreed with the statement that books are accessible in the school library while 36 students equal to 72% agreed that books are accessible in the school library as 6% of all students were undecided. Moreover, from table 1 10% of students strongly disagreed that library resources are most useful in their learning while 86% of students agreed and the rest 2 students out of 50 equals to 4% were undecided. As the researcher continued to analyze data from table 1, the data indicated that, 40 students out of 50 (80%) disagreed that school library have conducive environment for students to study whereby 3 students out of 50 equivalents to 6% were undecided. on the other side, 7 students which is equal to 14% agreed to the statement that, school library have conducive environment for students to study

Therefore, based on the analyzed data from table 1 school libraries in secondary schools, particularly the sampled

schools were in the bad condition. The study found that some libraries were not in the conducive environment that could support the students in their studies, learning and acquisition of knowledge. Libraries also found to have the challenge of lack of enough updated books for students' self-study thus the need for renovation is inevitable.

The findings in table 1 are in line with the study done by Redman et al., (2020) who also found that majority of colleges had no separate building for the library, the physical facilities in the libraries were not satisfactory, there was shortage of information resources in the libraries, majority of libraries did not receive regular library funds and there was shortage of paraprofessional staff in the libraries. This implies that libraries were not well equipped to support students' leaning and acquisition of knowledge.

Also, the findings were confirmed during interview with one the head of schools in public secondary school who said;

At this school we have very good library building but most of books are out of date which means that they do not support our students in acquisition of knowledge according to the current syllabus. This is very important area

that is left behind by government and education stakeholder (Personal interview with head of school "P" April 28, 2022).

Also, on answering the same question during interview, one librarian said:

As a professional in library keeping, I have raised the issue that most books in the library are out of date, but no action has been taken. For students to expand their knowledge, they need to read books, unfortunately, only a few books are relevant to the current syllabus. (Personal interview with librarian from school "X" April 27th, 2022).

This implies that most of secondary schools have buildings in the name of library however most books are out of date hence do not support students learning and acquisition of knowledge. This indicates that most of the libraries in secondary school are in poor condition thus, provision of library materials is inevitable.

On the same research question, teachers were also asked to answer the same question provided in the questionnaire and their results were summarized in table 2.

Table 2: Teachers' Responses on the Condition of School Libraries in Public Secondary School in Arusha District (n=40)

| | SD | | D | | U | | A | | SA | | Mean score |
|---|----|------|----|------|----|------|----|------|----|------|------------|
| | f | % | f | % | f | % | f | % | f | % | |
| i. School has library | 5 | 12.5 | 11 | 27.5 | 15 | 37.5 | 6 | 15.0 | 3 | 7.5 | 2.78 |
| ii. Books available in school's library are enough for students self-studying | 16 | 40.0 | 8 | 20.0 | 0 | 0.0 | 16 | 40.0 | 0 | 0.0 | 2.40 |
| iii. school library has updated books | 12 | 30.0 | 15 | 37.5 | 0 | 0.0 | 13 | 32.5 | 0 | 0.0 | 2.35 |
| iv. School timetable clearly indicate time for library studies | 7 | 17.5 | 11 | 27.5 | 5 | 12.5 | 17 | 42.5 | 0 | 0.0 | 2.80 |
| v. The school library has computers connected to the internet | 19 | 47.5 | 14 | 35.0 | 2 | 5.0 | 5 | 12.5 | 0 | 0.0 | 1.83 |
| vi. Books are accessible in the school library | 10 | 25.0 | 3 | 7.5 | 0 | 0.0 | 16 | 40.0 | 11 | 27.5 | 3.38 |
| vii. Library resources are most useful to you | 10 | 25.0 | 0 | 0.0 | 5 | 12.5 | 16 | 40.0 | 9 | 22.5 | 3.35 |
| viii. School library has conducive environment for students to study | 16 | 40.0 | 8 | 20.0 | 0 | 0.0 | 11 | 27.5 | 5 | 12.5 | 2.53 |
| Grand mean score | | | | | | | | | | | 2.68 |

Source: Field Data (2022)

Key: SA= strongly agree, A= agree, U = undecided, D= disagree, SD= strongly disagree

Table 2 shows teachers' response on the condition of library in secondary school and their grand mean score was 2.68 (M=2.68) since the grand mean score of all statements was below 3. This implies that teachers also confirmed that condition of libraries in secondary schools in Arusha district is poor; whereby, 16 teachers out of 40 who responded to the questionnaire which is equivalent to 40% disagreed with the statement that there was no library in school while 9 teachers which is equivalent to 22.5%

agreed that there were libraries in their schools. On the other hand, 15 teachers (26%), were undecided. Similarly, 24 teachers of 40 (60%) disagreed that there is availability of enough books in library for students' self-studying while 16 teachers equal to 40% agreed that there were enough books in school library for students' self-studying. On the other hand, table 2 also indicated that, 27 teachers equally to 67.5% disagreed with the statement that, school library has updated books while 13 teachers equal to 32.5%

% agreed. Moreover, 18 teachers out of 40 which is equivalent of 45% disagreed that school timetable clear indicate time for library studies as 17 teachers equal to (42.5%) strongly agreed while 5 teachers (12.5%) were undecided to the statement.

Meanwhile, 82.5% of teachers disagreed to the statement that, school libraries have computers connected to the internet while 5% were undecided as 12.5% of teachers agreed with the statement that school library have computers connected to the internet. Table 2 on the other hand indicated that, 13 teachers (32.5%) disagreed with the statement that books are accessible in the school library while 27 teachers equal to 67.5% agreed.

Moreover, table 2 displays that 10 teachers equal to 25% held contrary opinion that library resources are most useful to students' learning while 25 teachers equal to 67.5% agreed that library resources are most useful to students' learning and the rest (5) teachers out of 40 equals to 12% were undecided. Similarly, table 2 depict that, 24 teachers out of 40 (60%) disagreed that, school library have conducive environment for students to study while 16 teachers out of 40 equals to 40% agreed that school

library have conducive environment for students to study. Therefore, based on the analyzed data from table 2, school libraries in the studied secondary schools were in the degenerated condition in the sense that, some libraries were not in the conducive environment that could support the students' learning and acquisition of knowledge. Libraries also found to have the challenge of enough updated books for students' self-study thus the need for improvements are inevitable.

The findings in table 2 are in line with the study done by Chakraborty (2020) on survey of district libraries in lower Assam, Egypt. The study found that the condition of the district libraries of Assam is not very impressive and most of users visited the library for reading newspapers. It is expected that a library should have every kind of books as to allow library users to acquire knowledge according to their needs. This study also indicated that libraries were in poor condition.

To address the second research question, students were asked to indicate the resources available in the secondary school libraries and their answer were summarized in table 3.

Table 3: Students' Responses on Library Resources which are mostly available in the School Library

| Resources available | | f | % |
|--|---------------------------------------|---|------|
| Which of the following library resources are most available in the school library? | Reference books | 6 | 12.0 |
| | Printed journal and articles | 2 | 4.0 |
| | Books | 3 | 72.0 |
| | | 6 | 0 |
| | Electronic books | 0 | 0.0 |
| | Government publication and newspapers | 6 | 12.0 |

Source: Field Data (2022)

Table 3 shows that 12% of students mentioned reference books as one among the library resources available in their school library, 4% of students mentioned printed journal and articles while 72% of students mentioned books as the most library resource available in their school library and the rest (12%) of students mentioned Government publication and newspapers. This implies that in the school library visited by the researcher, there was many books available in school libraries compared to other

resources like reference books, printed journal and articles, electronic books as well as Government publication and newspapers.

To confirm what was said on availability of resources in school libraries, teachers were asked to indicate the resources available in the secondary school libraries and their answer were summarized in table 4.

Table 4: Teachers' Responses on Library Resources which are mostly available in the School Library

| Library resources | | f | % |
|--|---------------------------------------|----|------|
| Which of the following library resources are most available in the school library? | Reference books | 8 | 20.0 |
| | printed journal and articles | 0 | 0.0 |
| | Books | 28 | 70.0 |
| | Electronic books | 0 | 0.0 |
| | Government publication and newspapers | 4 | 10.0 |

Source: Field Data (2022)

The table 4 indicates teachers' response on the availability of some of the resources in the visited school libraries. The table shows that, 8 teachers (20%) mentioned availability of reference books while 28 teachers (70%) mentioned availability of books and the rest of teachers (4) equal to 10% who pointed out the availability of Government publication and newspapers. Therefore, teachers' response as compared to students' response on the availability of some library resources in school depicted that, most secondary school libraries have books more than other library resources such as Reference books, printed journal and articles, electronic books as well as Government publications and newspapers.

The finding indicates that most of secondary school have more books than other library resources which is a clear indication that there is great shortage of library resources in schools' libraries, which limit library users on

acquisition of knowledge as it is expected that a library should have necessary resources that support learning process as supported by Rehman et al., (2020) who also found that resources in most libraries in developing countries are not satisfactory.

4.2 Measures necessary to improve the Condition and Effective use of Library Resources in Public Secondary Schools

The second research question aimed at finding out the necessary measures to be taken to improve the condition and effective use of library resources in public secondary schools. To answer this question, students and teachers were provided with questionnaire. School heads and librarians also respondents to this question through interview. Results of students were summarized Table 5.

Table 5: Student' Responses on the Way forward to improve condition of public-school libraries

| Statements | SD | | D | | U | | A | | SA | |
|---|----|------|---|------|----|------|----|------|----|------|
| | f | % | f | % | f | % | F | % | f | % |
| i. There should be programs for educating students on the use of library | 3 | 6.0 | 0 | 0.0 | 14 | 28.0 | 21 | 42.0 | 12 | 24.0 |
| ii. Provision of enough updated books, journals and other reference materials for students in the library | 0 | 0.0 | 9 | 18.0 | 6 | 12.0 | 22 | 44.0 | 13 | 26.0 |
| iii. Librarian should collaborate with the teachers to supervise students in library use | 0 | 0.0 | 3 | 6.0 | 8 | 16.0 | 20 | 40.0 | 19 | 38.0 |
| iv. Teachers should provide guidance to students who read in secondary school library | 0 | 0.0 | 5 | 10.0 | 3 | 6.0 | 28 | 56.0 | 14 | 28.0 |
| v. School should have clear timetable for library studies | 6 | 12.0 | 3 | 6.0 | 12 | 24.0 | 16 | 32.0 | 13 | 26.0 |
| vi. Easy in borrowing books from the library | 0 | 0.0 | 3 | 6.0 | 14 | 28.0 | 19 | 38.0 | 14 | 28.0 |
| vii. Library should have the necessary materials to facilitate academic work in the school | 0 | 0.0 | 6 | 12.0 | 9 | 18.0 | 27 | 54.0 | 8 | 16.0 |
| viii. School library should support teaching and learning | 0 | 0.0 | 0 | 0.0 | 6 | 12.0 | 30 | 60.0 | 14 | 28.0 |
| ix. Teachers should frequently emphasize the use of library by students | 0 | 0.0 | 0 | 0.0 | 14 | 28.0 | 31 | 62.0 | 5 | 10.0 |

Source: (Field Data, (2022))

Key: SA= strongly agree, A= agree, U = undecided, D= disagree, SD= strongly disagree

Data in Table 5 show that, 6% of students disagreed that there should be programs for educating students on the use of library while 28% of students who responded to the questionnaire were undecided yet 33 students, which is equal to 66%, strongly agreed that there should be programs for educating students on the use of library. Meanwhile, 9 students (18%) disagreed that there was provision of enough updated books, journals and other reference materials for students in the library while 35

students (70%) agreed, and the rest 6 students (12) were undecided. Nevertheless, 78% of students agreed that librarian should collaborate with the teachers to supervise students in library use while 16% of them were undecided as 3 students (6%) disagreed with the statement.

Furthermore, table 5 shows that, 10% of students disagreed that teachers should provide guidance to students who read in secondary school library while 6% were undecided and

84% of students agreed with the statement. On the other hand, majority of students (29) equivalent to 58% strongly agreed that school should have clear timetable for library studies while 12 students equal to 24% were undecided as 9 of them (18%) disagreed with the statement. Similarly, 6 students which is equal to 12% of students disagreed that, library should have the necessary materials to facilitate academic work in the school while 35 (70%) agreed and the rest (18%) were undecided. Additionally,

44 students out of 50 which is equivalent to 88% agreed that school library should support teaching and learning while 6 (12%) of students were undecided as none of the students disagreed with the statement. These findings, however, are in line with the study by Ban leman (2018) and Ida (2016) explained the use of library and came up with their findings that showed the numerous challenges facing students in utilizing the library and role of library in improving the academic performance.

Table 6: Teachers' responses on the Way forward to improve condition of public-school libraries

| Statement | SD | | D | | U | | A | | SA | |
|---|----|------|----|------|----|------|----|------|----|------|
| | f | % | f | % | f | % | f | % | f | % |
| i. There should be programs for educating students on the use of library | 0 | 0.0 | 0 | 0.0 | 17 | 42.5 | 3 | 7.5 | 20 | 50.0 |
| ii. Provision of enough updated books, journals and other reference materials for students in the library | 0 | 0.0 | 6 | 15.0 | 3 | 7.5 | 21 | 52.5 | 10 | 25.0 |
| iii. Librarian should collaborate with the teachers to supervise students in library use | 0 | 0.0 | 3 | 7.5 | 14 | 35.0 | 8 | 20.0 | 15 | 37.5 |
| iv. Teachers should provide guidance to students who read in secondary school library | 0 | 0.0 | 11 | 27.5 | 3 | 7.5 | 21 | 52.5 | 5 | 12.5 |
| v. School should have clear timetable for library studies | 8 | 20.0 | 0 | 0.0 | 3 | 7.5 | 19 | 47.5 | 10 | 25.0 |
| vi. Easy in borrowing books from the library | 0 | 0.0 | 3 | 7.5 | 13 | 32.5 | 19 | 47.5 | 5 | 12.5 |
| vii. Library should have the necessary materials to facilitate academic work in the school | 0 | 0.0 | 5 | 12.5 | 3 | 7.5 | 27 | 67.5 | 5 | 12.5 |
| viii. School library should support teaching and learning | 0 | 0.0 | 0 | 0.0 | 3 | 7.5 | 27 | 67.5 | 10 | 25.0 |
| ix. Teachers should frequent emphasize student on library use | 0 | 0.0 | 0 | 0.0 | 13 | 32.5 | 22 | 55.0 | 5 | 12.5 |

Source: Field Data (2022)

Key: SA= strongly agree, A= agree, U = undecided, D= disagree, SD= strongly disagree

Table 6 shows that, 42.5% of teachers who responded to the questionnaire were undecided to the statement that there should be programs for educating students on the use of library. On the other hand, 23 teachers, which is equally to 57.5%, strongly agreement with the statement that, there should be programs for educating students on the use of library. Meanwhile, 6 teachers (15%) disagreed that there is provision of enough updated books, journals and other reference materials for students in the library while 31 teachers (77%) agreed, and the rest 3 teachers (8) were undecided.

Nevertheless, 57% of teachers also agreed to the statement that librarian should collaborate with the teachers to supervise students in library use while 35% of them were undecided as 8% of teachers disagreed to the statement. Table 6 further show that, 28% of teachers disagreed that, teachers should provide guidance to students who conduct personal studies in secondary school library while 8%

were undecided and 70% of teachers agreed with the statement. On the other hand, majority of teachers (29) which is equal to 72.5% strongly agreed that school should have clear timetable for library studies while 3 teachers equal to 7% were undecided as 8 of them equal to (20%) disagreed. Similarly, 5 teachers which is equal to 12% of students disagreed that, library should have the necessary materials to facilitate academic work in the school while 32 (81%) agreed.

Therefore, based on the findings, in order to improve public school library, there should be programs for educating students on the use of library, supply of enough updated books, journals and other reference materials for students in the library. Similarly, librarian should collaborate with the teachers to supervise students conducting personal studies in the library. Teachers should provide guidance to students who read in secondary school library, school should have clear timetable for library studies, easy in borrowing books from the library, library

should have the necessary materials to facilitate academic work in the school and teachers should frequently emphasize to student the need to use library in order to curb the fore mentioned challenges to ensure students' effective learning and gaining their intended knowledge. These findings are supported by Augustine (2022) who revealed that school libraries should be improved, both buildings and facilities.

Also, during interview with head of school in one public secondary school, one school head suggested that:

Government should supply enough funds for buying books and library facilities, parents and education stakeholders should also help in the provision of updated books at the school library (Personal interview with the librarian of school "Z" April 29, 2022).

Another head of school during interview recommended that:

Government should employ professional librarian, there should be frequent training program and seminars to students in secondary school on the use of library resources this may help to build reading habit among them. Many students do not have reading culture even though resources are available (Personal interview with head of school "P" April 28, 2022).

Also, librarian during interview suggested that;

Our library is out of date, government should improve both building and facilities and the library should be modernized by installing computers with internet. (Personal interview with librarian of school "X" April 27 2022).

These finding from interview imply that government should also consider improving public secondary school libraries buildings and facilities. Besides, there should be special program for educating students on library use and government should employ librarian in public secondary schools in Arusha district. Also, there is need to ensure availability of updated books and other library resources. Libraries should be digitalized and modernized to widen the availability of current books. These finding concur with Samlawi et al., (2021) who pointed out that in order to have active library services, libraries should be digitally improved and modernized.

5. Conclusion and Recommendations

5.1 Conclusion

The condition of libraries in public secondary schools in Arusha district is not good. Most of the books in these libraries are out of date and do not correspond to the requirements of the current syllabi. Moreover, the libraries do not have digital facilities such as computers and

internet connections to facilitate the searching of materials. Additionally, the school libraries are not managed and controlled by professional librarians and therefore the efficiency of the offered services is reduced. There still a lot of things to be done so as to improve the condition of libraries in public secondary schools. The government and other education stakeholders all need to work together to improve the condition.

5.2 Recommendations

1. The government of Tanzania should ensure that school libraries are provided with the necessary requirements including books and other materials. This can be done by increasing the budget for the education sector and having close monitoring to ensure that the funds allocated to improve library facilities are used as intended. Also, the government should see the need of employing professional libraries in the public schools.
2. The schools should have well indicated time for students to go for library studies. During the library studying time, the school management should set monitoring procedures to ensure that this time is used as expected. Teachers also should encourage students to use libraries by providing them tasks which require thorough reading.
3. Students should build a habit of attending school libraries for private studying. This will increase their knowledge and make them to be confident when performing internal and external examinations. Students also should use the time allocated for library studies effectively.

References

- Augustine, B. (2022). Availability of Library Facilities, Knowledge Sharing as Determinants of Job Performance of Library Staff in Southwest Nigeria. *Library Philosophy and Practice*, 2018.
- Ban Ieman, B. R. (2018). *The Influence of Library Resources Utilization on Students' Academic Performance: A Case Study of Public Secondary Schools in Dodoma Municipality* [Masters, The Open University of Tanzania]. [Http://Repository.Out.Ac.Tz/2222/](http://Repository.Out.Ac.Tz/2222/)
- Chakraborty, K. (2020). Survey of District Libraries in Lower Assam. *Palarch's Journal of Archaeology of Egypt / Egyptology*, 17(6), 13154–13164.
- Cohen et al., (2007). *Research Methods and Statistics*.

London: Hodders and Stronghton.

- Chinwendu, et al., (2018). Information and communication technology (ICT) challenges in teaching chemistry. A case study of Zimbabwean Polytechnics. *International journal of advanced research and innovative ideas in education*, 5 (1), 2395- 4396.
- Creswell, J. W. (2012). *Education research: planning, conducting and evaluating quantitative and qualitative research*. New Jersey: Pearson, prentice hall.
- Donham, S. (2008). *The Quality of Secondary Schools in different Development Context*. Paris: UNESCO.
- Fawcett, E. (2013). Awareness and Digitization Of School Library Resources in AkwaIbom State, Nigeria. *Journal of Library and Information Sciences*, 6(1). <https://doi.org/10.15640/Jlis.V6n1a6>
- Horrigan, A. (2016). Mapping out the ICT integration terrain in the school context: Identifying the challenges in an innovative project. *Irish Educational Studies*, 32(3), 309-333.
- Ida, D. (2016). *Economic Survey Report*. Nairobi: Government Printer.
- Kumah, R. (2015). The Impacts of ICT on the Students' Performance: A Review of Access to Information. *Research on Humanities and Social Sciences*, 2224-
- Mubofu, T. and Malekani, D. (2019). The struggle for social constructivism in post socialist Central and Eastern Europe. *International Journal of Constitutional Law*, 18(2), 434-440. <https://doi.org/10.1093/icon/moaa048>
- Park, I.-J., and Yoo, K.-J.(2019). A Study on the Management Improvement of an Academic Library Using Customer Relationship Management. *Journal of the Korean Society for Information Management*, 36(2), 31-56. <https://doi.org/10.3743/Kosim.2019.36.2.031>
- Putri, F. and Usman, M. (2021). Challenges Faced by Students in Public Libraries in Bulawayo Urban Regular Schools. *Mediterranean Journal of Social Sciences*, 5(9): 445.
- Rehman et al., (2020). The Improvement of School Library Based on Accreditation in SmkLugina Rancaekek. *Central Asia and the Caucasus*, 23(1), Article 1. <https://www.Ca-C.Org/Submissions/Index.Php/Cac/Article/View/248>
- Samlawi, A. A., Saryono, D., and Anisa, F. (2021). Evaluation of Digital Libraries to Improve Agile Library Services. *Library Philosophy and Practice (E-Journal)*. <https://digitalcommons.Unl.Edu/Libphilprac/6216>.
- Sari, C. (2021). Assessment of Resources in Selected Secondary School Library Media Centres in Ondo, State Proquest. *International Journal of Computer Applications*, (0975 – 8887) Volume 134 – No.16, January 2016.
- Schunk, S. (2000). *Interface as an Integrative Framework for Understanding Learning and Knowledge Acquisition in Public Library Contexts*. <https://repository.isls.org/handle/1/7448>
- Simba, B. (2016). *Evaluation of College Libraries in Khyber Pakhtunkhw*. Pakistan: Condition
- Sharma, A. (2019). Investigation Of the Factors Affecting Performance Improvement of Public Libraries Based On Customer Relationship Management (Crm). *Library Philosophy and Practice*, 2019, 2388.
- Shoaib, D., Abdullah, F., & Ali, N. (2020). *Library Resources and Research Environment in Higher Education Institutions: Students' Satisfaction*.
- Ufuophu, E., and Ayobami, O. (2012). Usage of information and communication technologies and job motivation among newspaper workers in Nigeria. *Journal of communication and media research*, 4(1), 89-92.
- Yeganehfar, G. and Zaree, (2020). Towards an Actor-oriented Approach to Social Exclusion: a Critical Review of Contemporary Exclusion Research in a Swedish Libraries *European Journal of Social Work*, 21(2), 167-180.



Assessment of the Shortage of Science and Mathematics Teachers and Its Effects on Secondary Education in Karatu District

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Abstract: *This study assessed the shortage of science and mathematics teachers and its effects on secondary education in Karatu District. The objectives of this study were to: determine the effects of shortage of science and mathematics teachers on syllabus coverage in secondary schools and identify the effects of shortage of science and mathematics teachers on students' learning behaviour in secondary schools. This study employed descriptive survey design. Total of 158 respondents participated in the study, which included 102 students, 48 teachers selected using clustered and random sampling, while 6 Head of Schools and 2 Educational Officers were purposively selected. Questionnaires were used to collect quantitative data while interview guide was used to collect qualitative data. Research experts validated the instruments and the reliability test ($TQ=0.91$ & $SQ=0.89$) was conducted using Cronbach alpha. Quantitative data was analyzed using descriptive statistics and qualitative data was analyzed thematically. The findings revealed that shortage of science and mathematics teachers in secondary schools affects the early syllabus coverage and some topics are not covered at all. Similarly, shortage of science and mathematics teachers affects students' learning behaviour in secondary schools as students lose the passion to learn science and mathematics and decide to take arts subjects due to the negative attitude developed towards science and mathematics subjects. The study recommends that in order to mitigate the shortage of science and mathematics teachers, new systems to recruit, support, and retain teachers need to be developed and those recruited teachers should be motivated.*

Key Words: *Science, Mathematics, Teachers, Education, School*

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1. Introduction

A teacher is the most important school related factor influencing student's achievement (Aydin & Aslan, 2016). Teachers are often highly-valued members of the community who occupy a wide range of leadership roles, particularly in rural areas, where other professionals are seldom found. Losing their knowledge and skills is a

danger to national and regional stability since lack of education is inextricably linked to poverty, and consequently to ill-health and unplanned population growth (UNESCO, 2018). Schramm-Possinger (2011) state that high skilled teachers are one of the single most important factors in facilitating effective teaching and learning for student's successes, this being the fact, there is a need for teachers to be trained for having adequate and

skilled teachers for educational upbringing. Also, it is important for schools to have enough skilled teachers.

Few education issues have received more attention in the past few decades than the challenge of staffing the nation's classrooms with qualified mathematics and science teachers. Recent high-profile reports from organizations such as the John Glenn Commission in United States of America (USA) (National Commission on Mathematics and Science Teaching for the 21st Century, 2000), the National Research Council (2002), and the National Academy of Sciences (2007) have directly tied mathematics and science teacher staffing problems to a host of educational and societal problems to the inability to meet student achievement goals. In Britain, Teachers attrition is reported as a national crisis, especially in mathematics and science fields (BBC News Online, 2001; BBC News, 2001). Santiago (2001) reported that the situation is worsening in Sweden, Germany and New Zealand. Sutchter, Darling-Hammond & Carver (2019) report on teacher shortages, resultant from teacher attrition in Ontario and Australia. Also in the USA, the problems of teacher shortages as a result of turnover are widely reported in many states and the shortage of science and mathematics teachers being a growing (Ingersoll, 2002). This implies that the problem of science and mathematics teacher is a global problem such a way that secondary education may not well achieved especially in science and mathematics subjects.

In Tanzania the shortage of science and mathematics teachers is a critical problem, which has persisted for many years. The number of mathematics teachers available is very small compared to requirements of these teachers. The average shortage of mathematics teachers for 5 years from 2009-2013 was 52% and within 48% which are available, 8% of them had gone for further studies in different Universities and 3% of them turnover the teaching profession after completing their studies (MoEVT, 2014). For example, according to National Examination Council of Tanzania (NECTA) report, in 2015, out of 383,851 candidates who sat for the Basic Mathematics paper, only 64,332 (16.76%) candidates passed, while in 2014, out of 240,160 candidates who sat for the examination, only 47,001 (19.58%) candidates passed. Masele & Tweve (2018) also indicate that only 17.8% of seating candidates in 2009, and only 16.1% in 2010 passed the mathematics examination as compared to all other subjects, where passes were always more than 30% in each. This implies that due to the shortage of science and mathematics teachers in secondary schools academic performance is low, especially in these subjects, therefore, there is need to recruit more teachers in science and mathematics subjects.

According to Massi (2013), in Tanzania some measures which were taken by the Government to overcome the problem of mathematics teachers' shortage are programs like provision of full sponsorship to mathematics students, which was held at Tumaini University in Iringa, from

2003-2007. Another programme was loan given to students who studied mathematics in their degree course. There was also a crush program for science and mathematics teachers where form six leavers were trained for one month and given a teaching license with the condition that they should go for further studies to get a diploma or degree within three years after being given the teaching license. All these programmes aimed at increasing the number of teachers, but the problem of mathematics and science teachers' shortage is still a staffing problem in the teaching profession, such that according to Karatu District Educational Statistics (2022), there is a total of 118 shortages of science and mathematics teachers in secondary schools in Karatu district. Thus, there is need to carry out this study on the assessment of the Shortage of Science and Mathematics Teachers and its Effects on Secondary School Education in Karatu District Council.

1.1 Research Questions

1. What are the effects of shortage of science and mathematics teachers on syllabus coverage in secondary schools?
2. What are the effects of shortage of science and mathematics teachers on students' learning behaviour in secondary schools?

2. Literature Review

2.1 Theoretical Framework

This study was underpinned in Social Cognitive Theory started as the Social Learning Theory in the 1960s by Albert Bandura. It developed into Social Cognitive Theory in 1986 and posits that learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behaviour. The unique feature of Social Cognitive Theory is the emphasis on social influence and its emphasis on external and internal social reinforcement (Bandura, 1986).

Social Cognitive Theory considers the unique way in which individuals acquire and maintain behaviour, while also considering the social environment in which individuals perform the behaviour. The theory takes into account a person's past experiences. These past experiences influence reinforcements, expectations, and expectancies, all of which shape whether a person would engage in a specific behaviour and the reasons why that engagement in that behaviour (Albert, 1986). Since behaviour is learnt, supplementary teaching and learning materials are subjecting students to interactive and interesting teaching and learning (Muller, Hunter & Stollak, 1995).

Bandura's social learning theory says that people learn violent behaviour through modelling or direct

reinforcement (Bandura 1977) states that most human behaviour is learned observationally through modelling: from observing others one forms an opinion on how new behaviours are performed, and on later occasions this coded information serves as a guide for action.” Social learning can influence children and adults positively or negatively (Louw & Edwards, 1993).

2.1.1 Application of Social Learning Theory in this Study

Therefore, better educational upbringing in secondary schools and students’ performance in science and mathematics is influenced by adequate and skilled science and mathematics teachers in secondary schools. This is also influenced by teaching methods such as teacher centred method, students’ centred method and type of homework assignments offered to students for syllabus coverage and curriculum implementation, learning environment or learning facilities in science and mathematics as well as shaping students’ learning behaviour such that all these are influenced by adequate science and mathematics teachers for better educational achievement in secondary schools.

2.2 Empirical Literature Review

Teachers’ shortage, especially qualified teachers, is a worldwide problem many countries in the worldwide are threatened by shortage of teachers as ILO Report (2012) showed that the world is facing a shortage of qualified teachers, especially in science and mathematics. The report further stated that 18 million new teachers would be needed to teach all children, youth and adults by 2015 as stated in the Millennium Development goals (MDGS) and Education for All movement. In the French speaking countries of West and Central Africa to meet these demands, countries are using contract teachers. UNESCO (2005) reported that lack of science and technology teachers is particularly striking and in an attempt to solve the problem, non-teachers are sometimes asked to teach courses like biology.

Stutz (2005) revealed that the shortage of Mathematics and science teachers was becoming worse. The report from researchers at the University of Texas in Australia also found that the shortage of teachers, particularly in schools with lower income students. The most acute teacher shortages in Texas are said to be in secondary Mathematics and science since, those shortage are said to have increased dramatically, especially in science where the shortage has jumped 30 per cent.

Science and mathematics education in secondary education in Tanzania is faced with several challenges. As a result, the failure rates and lack of interest among students in science and mathematics in secondary schools is becoming a serious problem. It has been reported that

pass rates in physics was 26.3% in 2008 and dropped to 13.7% in 2011, while that of chemistry was 32.9% in 2008 and dropped to 15.8% in 2011. A similar trend can be observed in biology and mathematics. For instance, the pass rate for biology dropped from 15.1% in 2008 to 9.4% in 2011, while that of mathematics dropped from 9.2% in 2008 to 5.8% in 2011 (MoEVT, 2012).

In addition, there is severe shortage of qualified school science teachers in Tanzania. According to the World Bank project paper (World Bank, 2014), the country needs 26,998 secondary school science teachers immediately but the tertiary education institutions in the country can only produce 2,300 graduates annually. The project paper added that of the current 10,400 in-service secondary school science teachers, many do not have sufficient pedagogical and subject content knowledge. The World Bank (2014) report emphasised on the recruiting enough science and mathematics teachers as secondary school education is faced with shortage of teachers in respective subjects.

A study by Chuwa (2014) on the determinants of Mathematics and Science Career Choices among Secondary School Female Students in Ilala District Dar es Salaam Region used descriptive cross-sectional, whereby data was collected in a single place at a time. Questionnaires, interviews and observation-checklists were used to collect data from 160 respondents. The participants were clustered in the groups of students, teachers and parents, from each cluster, the sample was taken. The major findings revealed that science and mathematics teachers used tuitions, extra hours and weekends to assist students in those subjects. Although the majority of parents assist their female students in mathematics and science in doing their homework - thus encouraging them to do science and mathematics subjects, the home environments continue to follow the traditional gender roles that leave household duties to females hence impeding them from concentrating on school work.

Furthermore, the findings revealed that, although the few present science and mathematics teachers were trying to cover the syllabus early, the quality of schools in promoting science and mathematics related subjects was poor due to lack of laboratories, laboratory supplies and inadequate number of qualified science and mathematics teachers.

3. Methodology

This study employed a survey research design for the purpose of describing a situation systematically and accurately (Gay et al., 2015). The target population for the study consisted of students, science and mathematics teachers, heads of schools and the district education officer. Cochran formula was used to obtain the study sample which consisted of 2 education officers, 6 heads of schools, 102 students and 48 teachers to make a total number of 158 respondents. The samples were selected

using stratified and purposive sampling techniques. The researchers used self-responding questionnaires and interview guides as the tools for data collection whereby students and teachers filled the questionnaires while the heads of schools and education officers were interviewed. These tools were first validated by three experts in the field of research before being used for data collection. Reliability was estimated using Cronbach alpha whereby coefficient Alpha values of 0.91 and 0.89 were obtained for teachers and students questionnaires respectively. Descriptive statistics was used to analyze the quantitative data from questionnaires whereas frequencies and percentages were generated through the aid of SPSS version 25. For the case of qualitative data thematic analysis was used to generate themes rising from the data as per research questions.

4. Results and Discussion

Table 1: Quantitative Findings on the Effects of Shortage of Science and Mathematics Teachers on Syllabus Coverage in Secondary Schools in Karatu District

| Effects of Shortage of Science and Mathematics Teachers on Syllabus Coverage in Secondary Schools | Students n=102 f(%) | Teachers n=48 f(%) | Total n=150 f(%) |
|--|------------------------------------|-----------------------------------|---------------------------------|
| Slow coverage of syllabus as teachers take many sessions per day | 77(75) | 39(81) | 116(77) |
| Poor syllabus coverage due to overload of teaching sessions among science and math teachers | 99(97) | 41(85) | 140(93) |
| Slow mastery of content among students as teachers teach frequently | 95(93) | 39(81) | 134(89) |
| Students are overdosed due to a lot of assignments and home works | 90(88) | 37(77) | 127(85) |
| Teachers fail to cover the topics since they are few | 100(98) | 43(90) | 143(95) |
| Poor preparation of lesson plans and scheme of work | 97(95) | 40(44) | 137(91) |

f = frequency, % = percentages, values in brackets are percentage of students who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

The findings in table 1 indicated the assessment of the effects of shortage of science and mathematics teachers on syllabus coverage in secondary schools in Karatu district. Accordingly, 77(75%) of students and 39(81%) of secondary school students which made the total of 116(77%) of respondents who agreed that shortage of science and mathematics teachers results to the slow coverage of syllabus as the few teachers are overburdened due to many sessions per day. The results showed that 77% of respondents indicated that shortage of science and mathematics teachers leads to slow pace of syllabus coverage early even though the few teachers present take many sessions per day. However, due to many classes which are also overcrowded, the rate of syllabus coverage is regrettably low. The findings also indicate that there is a tendency of the few science and mathematics teachers to take many sessions per day and in extra hours to cover the syllabus. The study findings opine that the few science and mathematics teachers present volunteered in extra hours and in the weekends to take science and mathematics

The findings were discussed in regard to research objectives.

4.1 Effects of Shortage of Science and Mathematics Teachers on Syllabus Coverage in Secondary Schools in Karatu District

Objective one of this current study assessed the effects of shortage of science and mathematics teachers on syllabus coverage in secondary schools in Karatu district. Table 1 presents the summary of the responses and the results of quantitative findings through questionnaires on the effects of shortage of science and mathematics teachers on syllabus coverage in secondary schools in Karatu district.

sessions with the aim of covering the syllabus on time. This revealed that the few science and mathematics teachers in secondary schools in Karatu district use a lot of efforts to cover the syllabus early with mechanisms of taking many sessions per day, extra hours and even in weekends as they are few and they aim at covering the syllabus early but there effort which nonetheless appreciated does not bore much fruits.

The findings are in agreement with the study by Chuwa (2014) on the determinants of mathematics and science career choices among secondary school female students in Ilala District Dar es Salaam Region. The major findings revealed that science and mathematics teachers use tuitions, extra hours and weekends to assist students in those respective subjects although the majority of parents assist their female students in mathematics and science in doing their homework. By encouraging them to do science and mathematics subjects, the home environments continue to follow the traditional gender roles that leave

household duties to females hence impeding them from concentrating on school work. Therefore, from the findings, it implies that, the present few science and mathematics teachers in Karatu district are putting their efforts in covering the syllabus early but still the quality of education in those respective subjects is poor in secondary schools.

In table 1 the results show that, 99(97%) of secondary school students and 41(85%) of secondary school teachers which made a total of 140(93%) of respondents were in agreement with the statement that among the effects of shortage of science and mathematics teachers is poor syllabus coverage due to overload of teaching sessions among science and mathematics teachers while 7% held contrary opinion. The majority of respondents (93%) indicated that, although the present few science and mathematics teachers are trying their level best and put more efforts in syllabus coverage but still there is poor syllabus coverage especially in effective teaching and learning. The results reported that, there is the use of extra hours, weekends and tuitions to cover the syllabus in science and mathematics subjects but still there is poor syllabus coverage as the students are overloaded and the teachers also get exhausted. Further, the findings indicated that, for effective teaching and learning in science and mathematics subjects, there should be with adequate and qualified science and mathematics teachers for ensuring effective coverage of syllabus in respective subjects.

The findings concur with a study by Projest (2013) on the shortage of teacher's on implementation of the Curriculum used cross-sectional survey aimed at collecting data from large number of samples of various categories at a particular time so as to describe the nature of the problem. From the findings, it implies that, although few science and mathematics teachers in secondary schools in Karatu district are putting more efforts in syllabus coverage especially in science and mathematics subject still some of the subjects were not covered or taught at all due to the shortage of science and mathematics teachers.

The results in table 1 show that, slow mastering of content among students is the effect of shortage of science and mathematics teachers especially in syllabus coverage as 95(93%) of secondary school students and 37(77%) of secondary school teachers agreed to the statement to make a total of 134(89%) of respondents while 11% of respondents were contrary to the statement. This majority of respondents (89%) of respondents indicated that, due to the fact that there is shortage of science and mathematics teachers in secondary schools in Karatu district, it brings the negative effects to the students as they fail to cover the subject content as the teachers trying to cover the syllabus and forget that teaching and learning should be effective. The findings reported that, most of teachers in science and mathematics subjects have many sessions per week and they have acquitted with many streams, therefore they teach frequently and quickly as a result the students fail to master the content matter of a particular subject.

The findings are supported by the project papers of MoEVT (2012) & Semali (2013) who added that, of the current 10,400 in-service secondary school science teachers, many do not have sufficient pedagogical and subject content knowledge. While science and mathematics account for 46 percent of the curriculum, only 28 percent of teachers are qualified to teach these subjects. It has been revealed that students fail to master the subject content in science and mathematics due to the shortage of science and mathematics teachers. Several interventions exist to address the situation. Some of the interventions include the School Science project, the School Mathematics Project, and iSPACES. For instance, the iSPACES project aimed to enable students and teachers in secondary schools use Information and Communication Technologies (ICT) to improve the quality of teaching and learning science, mathematics and English (Semali, 2013). The majority of these projects have been focused on students as well as equipping schools with ICT equipment. However, less effort has been made to upgrade science and mathematics teachers in pedagogy and subject content knowledge of the subjects they teach. Therefore, from the findings it implies that, there are implementations taken to improve the coverage and mastering of content knowledge in science and mathematics resulting from the shortage of science and mathematics teachers in secondary schools the students seen to be slow in covering the subject matter in these subjects.

Also, the results in table 1 show that, among the effects of shortage of science and mathematics in covering the syllabus is that, students are overdosed due to a lot of assignments and home works as 90(88%) of secondary school students and 37(77%) of secondary school teachers agreed to the statement to make a total of 127 (85%) of respondents while 15% of respondents were contrary to the statement. The majority of respondents (85%) of respondents reported that, due to the shortage of science and mathematics teachers in secondary schools in Karatu district, the teachers put more efforts in syllabus coverage and therefore the student are provided with a lot of assignments at schools and home works while at home. The findings indicated that, students are coming to school in the weekends and also the are extra hours in the evening for the science and mathematics subjects and this make the students to be overloaded with a lot of assignments whereby most of dislike teachers together with science and mathematics subjects.

The findings are in line with the study by Chuwa (2014) on the determinants of Mathematics and science career choices among secondary school female students in Ilala District Dar es Salaam Region. The major findings revealed that, science and mathematics teachers use tuitions, extra hours and weekends to assist students in those respective subjects although the majority of parents assist their female students in mathematics and science in

doing their homework thus encouraging them to do science and mathematics subjects, the home environments continue to follow the traditional gender roles that leave household duties to females hence impeding them from concentrating on school work and make them dislike the subjects.

Furthermore, the results in table 1 show that, due to shortage of science and mathematics teacher there is poor preparation of lesson plans and scheme of works as 97(95%) of secondary school students and 40(44%) of secondary school teachers agreed to the statement to make a total of 137(91%) of respondents while 9% of respondents were contrary to the statement. This majority of respondents (91%) reported that, due to shortage of teachers the preparation of lesson plans and scheme of works are not improved rather most of science and mathematics teachers are using outdated lesson plans and scheme of works which is caused by the presence of many sessions per one teacher. The findings indicated that, due to shortage of science and mathematics teachers there is

4.2 Effects of Shortage of Science and Mathematics Teachers on Students' Learning Behaviour in Secondary Schools in Karatu district

no improved teaching methodology and there is cooperative instructional methods among teachers rather they use the same methods often.

The findings are in agreement with Maina (2009) who revealed that the characteristics of instructional theory were not implemented in the classroom and among the factors which contributed to this were: teachers' poor methodology; lack of teaching aids; inadequate number of books; language and different ability of learners. Maina suggested that there was a need to strengthen teachers teaching colleges and demonstration schools in term of facilities, to improve teachers' motivation, to employ laboratory technicians and also the revision of the current syllabus. Therefore, from the findings, it implies that, shortage of science and mathematics teachers, results to poor methods in teaching, poor preparation of teaching aids and poor preparation of lesson plans which results to poor implementation of classroom instructions.

Objective two of this current study was set to assess the effects of shortage of science and mathematics teachers on students' learning behaviour in secondary schools in Karatu district. Table 2 presents the summary of the respondents' responses and the results of quantitative findings through questionnaires on the effects of shortage of science and mathematics teachers on students' learning behaviour in secondary schools in Karatu district.

Table 2: Quantitative Findings on the Effects of Shortage of Science and Mathematics Teachers on Students' Learning Behaviour in Secondary Schools

| Effects of Shortage of Science and Mathematics Teachers on Students' Learning Behaviour in Secondary Schools | Students n=102 f(%) | Teachers n=48 f(%) | Total n=150 f(%) |
|---|------------------------------------|-----------------------------------|---------------------------------|
| De-motivates the habits of students to learn science and mathematics. | 97(95) | 41(85) | 138(92) |
| Developing negative attitudes towards science and mathematics that are tough subjects | 101(99) | 46(95) | 147(98) |
| Shortage of teachers lead to poor class attendance in science and mathematics | 91(89) | 38(79) | 129(86) |
| Shortage of science and mathematics teachers makes students to ignore the subjects | 93(91) | 40(44) | 133(87) |
| Shortage of science and mathematics teachers makes students fail to learn on their own | 83(81) | 29(60) | 112(75) |
| Shortage of science and mathematics teachers makes students to dislike the subjects | 98(96) | 42(88) | 140(93) |

f = frequency, % = percentages, values in brackets are percentage of students who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

In table 2 the results show that among the effects of shortage of science and mathematics teachers on students' learning behaviour is that it de-motivates the students to learn the respective subjects as 97(95%) of secondary school students and 41(85%) of respondents agreed to the statement to make a total of 138(92%) of respondents who were in agreement with the statement while 8% of

respondents were contrary to the statement. The majority of respondents (92%) indicated that, for students to learn it needs adequate and qualified teachers to facilitate teaching and learning. Also, the findings indicated that, psychologically the students should be motivated to learn especially in science and mathematics subjects which are seemed to be with some sort of complexity. Further, the

majority of respondents reported that, students' learning behaviour in science and mathematics subjects should be acquitted with enough teachers to cooperate as a team work and provide motivation to students to learn, contrary if there is inadequate science and mathematics teachers the students lose their passion to learn in these subjects.

The findings are in agreement with the report of García & Weiss (2019) on the teacher shortage is real, large and growing, and worse than we thought. The findings revealed that, shortage of teachers harms students, teachers, and the public education system as a whole. Lack of sufficient, qualified teachers and staff instability threaten students' ability to learn and reduce teachers' effectiveness, and high teacher turnover consumes economic resources that could be better deployed elsewhere. The teacher shortage makes it more difficult to build a solid reputation for teaching and to professionalize it, which further contributes to perpetuating the shortage..

The results in table 2 show that, 101(99%) of secondary school students and 41(85%) of secondary school teachers agreed to the statement that, shortage of science and mathematics teachers develops negative attitudes towards science and mathematics subjects that, are very complex subjects. This made a total of 147(98%) of respondents who were in agreement with the statement while 2% of respondents were contrary to the statement. The majority of respondents (98%) reported that, it is the fact that arts subjects' teachers are exceeding science and mathematics teachers in secondary schools in Karatu district. Therefore, this develops negative attitudes towards science and mathematics subjects that are very complex subjects. The findings reported that, although science and mathematics subjects have some sort of complexity but the shortage of science and mathematics teachers strengthen this attitude among students and this makes the students to take arts subjects over science and mathematics.

The findings are supported by the study of Masele (2018) on Efficacy of Information Provision Strategies for Promoting Mathematics Education in Tanzania: A Case of Selected Secondary Schools in Dar es Salaam. Findings revealed limited use of various sources of information in promoting mathematics education and there is no specific session which discusses the importance of mathematics importance for career development. Dependable sources of information for students are mainly teachers, parents and peer groups. There was poor usage of media and the internet in promoting mathematics. The study urges the need to harness the Web and available media in the publicising mathematics education information. Information professionals are urged to liaise with policy makers to rally together in influencing other practitioners in mathematics education to promote this subject. Therefore, from the findings, it implies that, the shortage of science and mathematics teachers, results to the stereotype among students that science and mathematics subjects are difficult.

Also, the results in table 2 show that, shortage of science and mathematics teachers bring effects on students' learning behaviour in secondary schools such that, it leads to poor class attendance in science and mathematics sessions as 91(89%) of secondary school students and 38(79%) of secondary school teachers agreed to the statement which made a total of 129(86%) of respondents who agreed to the statement while 14% of respondents were contrary to the statement. This mass of respondents (89%) indicated that, most of students tend to dodge science and mathematics sessions due to shortage of science and mathematics teachers as one teacher fail to manage the large class and many streams thus the students avoid the science and mathematics sessions which limits their learning in these subjects.

Moreover, the results in table 2 show that, shortage of science and mathematics teachers makes students to ignore the subjects and take over on arts subjects as 93(91%) of secondary school students and 40(44%) of secondary school teachers were in agreement to the statement which made a total of 133(87%) of respondents who agreed to the statement while 13% of respondents were contrary to the statement. The majority of respondents (87%) indicated that, most of secondary schools' students tend to ignore science and mathematics subjects due to the shortage of teachers and it is also due to poor coverage of the topics whereby most of the students take arts subjects over science and mathematics subjects. The findings reported that, most of students are feeling doubt about few number of science and mathematics teachers, if they would succeed in teaching all the topics for these subjects, hence from this doubt the students ignore science subjects and basing on arts or business subjects.

The findings are in agreement with a report by MoEVT (2012) whereby it has been reported pass rates in physics was 26.3% in 2008 and dropped to 13.7% in 2011, while that of chemistry was 32.9% in 2008 and dropped to 15.8% in 2011. A similar trend can be observed in biology and mathematics. For stance, the pass rate for biology dropped from 15.1% in 2008 to 9.4% in 2011, while that of mathematics dropped from 9.2% in 2008 to 5.8% in 2011. The report revealed that, those pass rate are caused by the science and mathematics education in secondary education in Tanzania to be faced with several challenges which is associated with shortage of science and mathematics teachers, as a result, the failure rates and lack of interest among students in science and mathematics in secondary schools is becoming a serious problem. Therefore, from the findings, it implies that, shortage of science and mathematics teachers results to the poor pass rate which is caused by lack of interest to take science and mathematics subjects among secondary school students.

Furthermore, the results in table 2 show that, shortage of science and mathematics teachers makes students to learn

on their own as 83(81%) of secondary school students and 29(60%) of secondary school teachers agreed to the statement to make a total of 112(75%) of respondents who were agreed to the statement while 25% of respondents were contrary to the statement. The majority of respondents (75%) indicated that, the shortage of science and mathematics teachers in secondary schools reduce the passion to learn on their own pace among students. This is due to the lack of teaching and learning materials in science and mathematics subjects and lack of guidelines from the teachers as there is shortage of teachers. The findings reported that, due to the fact that, science and mathematics subjects need to be facilitated by the teachers, there should be with enough teachers in secondary schools especially in these subjects and if there is shortage of science and mathematics teachers it makes students failing to learn on their own pace.

The findings are in agreement with Mazana, Montero & Casmir (2020) on assessing students' performance in mathematics in Tanzania: the teacher's perspective. The findings revealed that, Poor background is a hindrance to acquiring higher order mathematics skill in higher levels. Poor background in mathematics can be attributed to characteristics such as lack of content knowledge, and poor instructional strategies and this limit the students to learn on their own pace. Also, the quality and quantity of instructions were among the evident factors in their data. The quantity of instruction in their study was indicated by less contact hours due to teacher absenteeism leading to poor coverage of the syllabus or high pace of instruction that had an impact on students' grade. Such results are supported by Michael (2015) on Factors Leading to Poor Performance in Mathematics Subject in Kibaha Secondary Schools where in his study students admitted having obtained low marks in mathematics due to teachers coming late to the classes or missing classes and that the lost sessions are not usually compensated which also results to lack of individual learning strategies especially learning on their own pace in science and mathematics subjects.

With regard to the Effects of Shortage of Science and Mathematics Teachers on Syllabus Coverage in Secondary Schools in Karatu district, the study discovered that there are Effects of Shortage of Science and Mathematics Teachers on Syllabus Coverage in Secondary Schools in Karatu district as the DEOs commented that:

DEO 1 commented that:

Shortage of science and mathematics teachers limits the effective teaching & learning and syllabus coverage. Teachers revolve around directives from school administrators to finish the syllabus at an earlier date. The limiting of time to complete the syllabus has an effect on instruction delivery and student learning. Teachers move faster

to finish the content within the given time as a result the focus shifts from student learning to content coverage. The authority instructs the teachers to complete the syllabus within a short period of time that is the first offense; therefore shortage of science and mathematics teachers could affect content coverage among students as the teachers have been given a time limit for completing the syllabus. (Personal Interview, 26th April, 2022).

DEO 2 reported that:

There are shortage of science and mathematics teachers in secondary schools in Karatu district and syllabus coverage has become a challenge in these subjects such that, there are poor preparation of scheme of work and lesson plans and the schemes and plans are outdated and this is caused by science and mathematics teachers to have many sessions with many streams (Personal Interview, 26th April, 2022).

Also, one among school heads commented that:

Shortage of science and mathematics teachers in secondary schools affects the early coverage of syllabus, such that, few present science and mathematics teachers trying their level best in covering the topics but some of the topics are not finished and some of topics are not covered at all. Also, since teachers are instructed to finish syllabus at a given time they put more efforts on syllabus coverage while most of content matter are left without being taught (Personal Interview, 27th April, 2022).

The findings concur with a study by Project (2013) on the shortage of teacher's on implementation of the Curriculum. The major findings revealed in this research were as follows: the shortage of teachers seemed to be a major factor hindering the implementation of Curriculum such that, the few present teachers were trying their level best to cover the syllabus and some subjects were taught effectively while other not taught at all, the shortage resulted into student indiscipline behaviour where most of the time spent without teachers in classes is misused by student involving themselves in immoral behaviours such as love affairs. The researcher found that, the school administration used various strategies to alleviate the shortage of teachers such as the use of form six-leavers, part time teachers and remedial classes to reduce the

problem. From the findings, it implies that, although few science and mathematics teachers in secondary schools in Karatu district are putting more efforts in syllabus coverage especially in science and mathematics subject still some of the subjects were not covered or taught at all due to the shortage of science and mathematics teachers.

With regard to the Effects of Shortage of Science and Mathematics Teachers on Students' Learning Behaviour in Secondary Schools in Karatu district, the study discovered that there are Effects of Shortage of Science and Mathematics Teachers on Students' Learning Behaviour in Secondary Schools in Karatu district as the DEO 1 commented that:

The shortage of science and mathematics teachers affects students' learning behaviour in secondary schools; firstly students' lose the passion to learn science and mathematics and decide to take arts subjects over science subjects. Secondly, due to the shortage of science and mathematics teachers, students develop negative attitudes towards science and mathematics subjects that are difficult subjects and the students decide to leave the subjects (Personal Interview, 28th April 2022).

Also, one among HSs reported that,

The shortage of science and mathematics teachers affects students' learning behaviour in secondary schools such that, especially to girls students whereby students develops the stereotype belief that mathematics and science subjects is difficult for women but easy for men, a situation which discourages girls to participate fully in mathematics and science education (Personal Interview, 28th April 2022).

The findings supported by the study of Masele (2018) on Efficacy of Information Provision Strategies for Promoting Mathematics Education in Tanzania: A Case of Selected Secondary Schools in Dar es Salaam. Findings revealed limited use of various sources of information in promoting mathematics education and there is no specific session which discusses the importance of mathematics importance for career development. Dependable sources of information for students are mainly teachers, parents and peer groups. There was poor usage of media and the internet in promoting mathematics. Challenges related to mathematics subject improvements include motivational, technical, managerial and financial. Furthermore the stereotype belief that mathematics and science subjects is difficult for women but easy men, a situation which

discourages girls to participate fully in mathematics education. Efficient use of media is emphasised for mathematics education promotion. The study urges the need to harness the Web and available media in the publicising mathematics education information. Information professionals are urged to liaise with policy makers to rally together in influencing other practitioners in mathematics education to promote this subject. Therefore, from the findings, it implies that, the shortage of science and mathematics teachers, results to the stereotype among students that science and mathematics subjects are difficult which affects their passion to learn on their own.

5. Conclusion and Recommendations

5.1 Conclusion

From the findings this study concludes that, there is shortage of science and mathematics teachers in all the visited public secondary schools compared with the requirement. There was an acute shortage of teachers, particularly in science and mathematics subjects in public secondary schools in Karatu district. In this situation, it was very difficult for school curricula to be implemented accordingly. In order for subjects to be taught effectively, enough number of qualified science and mathematics teachers should be available in Schools. In all the visited schools, school curricula were not being implemented effectively is required due the shortage of science and mathematics teachers.

Also, this study concludes that, the shortage of science and mathematics teachers is a growing problem in secondary schools not only in Karatu district but also beyond the district and for the growing teacher shortage it affects students' achievement, such that, few science and mathematics teachers in public secondary schools in Karatu district put more efforts in syllabus coverage rather than content coverage among students. This is because the school administrators provide a limited time for teachers to cover the syllabus at a given time. Therefore, the few science and mathematics teachers focus on syllabus coverage rather than content-coverage among students and this result to poor academic performance in secondary schools.

5.2 Recommendations

1. In order to mitigate the shortage of science and mathematics teachers, the government should introduce new systems to recruit, support, and retain teachers. Recruiting new science and mathematics teachers would address the problem of shortage of science and mathematics teachers in secondary schools and those recruited teachers should be deployed immediately after finishing their studies.

2. To school administrators, there should be a cordial relationship between head of schools and science and mathematics teachers such that since science and mathematics teachers are few they could not be given a limited time to cover syllabus but should be given a time to master content in the subjects. Also, availability of teaching and learning materials should be adequate such as enough text books and reference books, teaching models in order to simplify the work of teaching science mathematics and create attractive working environment and hence job satisfaction to science mathematics teachers in performing their work comfortably and focusing on content mastering among students.
3. There is a need for the government, through the Ministry of Education and Vocational Training, to encourage more young Tanzanians to join teachers' training in science programme so as to produce enough and competent science and mathematics teachers.
4. Moreover, the shortage of science and mathematics teachers sometime can be caused by geographical factors for example the peripheral districts. Science and mathematics teachers in the peripheral districts should be given hardship allowances so as to be encouraged and attracted remain in those areas.

References

- Bandura, A. (1986). *Social Cognitive Theory*. Boston: Boston University.
- Aydin, H. and Aslan, D. (2016). Determining Attitudes towards Pedagogical Teacher Training: A Scale Development Study. *Journal of Education and Learning*, Vol. 5, No. 3; 2016.
- Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- BBC News (2001). *Truth about Teacher Shortages*, January 13. [Online] Available [url:http://news.bbc.co.uk/1/low/education/correspondents](http://news.bbc.co.uk/1/low/education/correspondents).
- BBC News Online (2001). *Teacher Shortage a 'National Crisis'*. January 18. Available URL: <http://news.bbc.co.uk>.
- Chuwa, M.J. (2014). *Determinants of Mathematics and Science Career Choices among Secondary School Female Students in Ilala District Dar es Salaam Region*. Tanzania: The Open University of Tanzania.
- Darling-Hammond, L., and Carver-Thomas, D. (2019). Understanding teacher shortages: An analysis of teacher supply and demand in the United States. *Education Policy Analysis Archives*, 27(35).
- Garcia, C., and Weiss, J. (2015). *The Ultimate Guide to Effective Data Collection*. Retrieved from <http://socialcops.com/ebooks/data-collection>.
- Gay, L. R., Mills, G. E. and Airasian P. (2015). *Educational Research: Competencies for Analysis and Application*. London: Pearson.
- ILO Report (2012). *Joint ILO–UNESCO Committee of Experts on the Application of the Recommendations Concerning Teaching Personnel*. Geneva: ILO-UNESCO.
- Ingersoll, R. (2002). *High turnover plagues schools, USA Today*. Cambridge, USA: Harvard Press.
- Karatu District Council (2021). *Karatu District Socio-Economic Profile*. Tanzania: Karatu District Secondary Education Office.
- Karatu District Educational Statistics (2022). *Secondary Schools Face the Shortage of 118 Science and Mathematics Teachers*. Karatu: Educational Office.
- Louw, D. & Edwards, D. (1993). *Psychology: an Introduction for Students in Southern Africa*. Johannesburg, South Africa: Lexicon Publishers.
- Maina, K.A. (2009). *The Analysis of Teaching Chemistry in Ordinary Level Secondary schools for Performance Improvement a Case Study in Coast Region*. Master of Education (Science Education) Dissertation: University of Dar es Salaam.
- Masele, J.J. and Tweve, J. (2018). Efficacy of Information Provision Strategies for Promoting Mathematics Education in Tanzania: A Case of Selected Secondary Schools in Dar es Salaam. *University of Dar es Salaam Library Journal Vol 13, No 1 (2018), pp-69-87*.
- Massi, J.W. (2013). *Effects of Mathematics Teachers' Turnover on Students' academic Performance in Tanzania: a Case of Selected Schools in Mbeya City*. Mbeya: Teofilo Kisanji University.

- Michael, D. (2015). When districts encounter teacher shortages? The challenges of recruiting and retaining math teachers in urban districts. *Leadership and Policy in Schools*, 7(3), 296–323.
- MoEVT (2014). Proposed Secondary Education Development Program II (SEDP II) 2010 - 2014. Tanzania: MoEVT.
- MoEVT.(2012). *Report and Analysis of the Results*. Dar es Salaam, Tanzania: MoEVT.
- Muller, R.T., Hunter, J.E., and Stollak, G (1995). The intergenerational transmission of learning materials: A comparison of social learning and temperament models. *Journal of Child Abuse & Neglect*, 19(11):1323–1335.
- National Research Council. (2002). *Learning and Understanding: Improving Advanced Study of Mathematics and Science in U.S. Schools*. Washington, DC: National Academies Press.
- Project, G. (2013). *The Effects of Shortage of Teachers on Curriculum Implementation in Community Secondary Schools in Tanzania, the Case of Bukoba Municipality*. Tanzania: The Open University of Tanzania.
- Santiago, P. (2001). *Teacher Shortage*: Available URL <http://www.oecdobserver.org/news>.
- Schramm-Possinger, M. (2011). *The Importance of Training Highly Skilled Teachers*. Retrieved on 10/03/2016 from The Importance of Training Highly Skilled Teachers (4).pdf.
- Semali, L. (2013). The iSPACES Framework to Restructure Culturally Responsive Secondary Science Curriculum in Tanzania. *Journal of Contemporary Issues in Education*, 8(2), 32–46.
- Montero, R. & Casmir, N. J. (2020). *Designing a Qualitative Research Project: Conceptual Framework and Research questions*. Indaba Agricultural Policy Research Institute (IAPRI).
- Stutz, T. (2005). Texas Teacher Shortage in Math, Science Worsens. *The Dallas Morning News*, February 10, 2005.
- UNESCO (2005). *Meeting on UNESCO Teacher Training initiative for General problems for Teacher Training identified for the High – level Experts*. Paris: UNESCO.
- UNESCO (2018). *Issues and Trends in Education for Sustainable Development*. Paris- France: UNESCO.
- World Bank (2014). *Tanzania Science and Technology Higher Education Project Additional Financing and Restructuring*. Geneva: World Bank.



Availability of Information and Communication Technology and Its Influence on Students' Academic Performance in Karatu District, Tanzania

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Abstract: *This study assessed the availability of ICT and its influence on students' academic performance in Karatu District. Specifically, the study identified the availability of ICT and its influence on student's learning behaviour and determined the availability of ICT and its influence on effective teaching and learning in Secondary Schools. This study employed descriptive survey design. Six schools were randomly selected. Total of 99 respondents participated in the study which included 60 students, 21 teachers selected using stratified and simple random sampling while 6 Head of Schools, 6 IT Experts and 6 Planning Officers were purposively selected. Questionnaires were used to collect quantitative data while interview guide was used to collect qualitative data. Reliability for students' (0.89) and teachers' questionnaire (0.91) was estimated using Cronbach alpha. Quantitative data was analyzed using descriptive statistics and qualitative data was analyzed thematically. The study revealed that ICT influence students' learning behaviour such that, it transform students' learning behaviour into great passion to learn through audio-visuals and through practical aids in the classroom setting. Moreover, availability of ICT in secondary schools influence on effective teaching and learning such that ICT is used in facilitating curriculum implementation in secondary schools. The study recommends that, since it has been revealed that availability of ICT has a great influence on students' academic performance in secondary schools, the government should provide ICT equipment: computers, printers, projectors and internet in secondary schools to help them integrate ICT in schools in order to attain the goals of education.*

Keywords: *Information, Communication, Technology, Students, Performance*

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1. Introduction

The rapid global technological advancement and economic development place a great investment into education because information and technology have been developing very quickly in recent years and have opened new directions in the area of education (Fidelis & Onyango, 2021) such that education has to go with

technological changes to cope with the current world changes. Educational system has felt the impact and influence of information and communication technology, which has become a crucial factor for most organizations and businesses. The emergence of ICT has caused many education reforms (Zhang & Aikman, 2007). As a result, ICT enhances day to day management in organizations and enables schools to improve their efficiency and cope with the rapid changing world (Ngeze, 2017). Therefore,

there is a need to cope with technological advancement, especially Information and Communication Technology and integrate it with education.

Tapera & Kujeke (2019), ICT is a type of technology that supports activities involving information, such as gathering, processing, storing and presenting data. In school setting, for example, ICT can be used to store information such as financial records transactions and to teach. Khan et al., (2015) stated that ICT refers to technologies that provide access to information through communication devices, which may include computers, scanners, printers and internet connection. Likewise, Ufuophu & Ayobami (2012) assert that ICT includes internet, cable data transmission and computer equipment. Wanjiru (2013) asserts that technology is a term that includes any communication devices or application including cellular phones, television, radio, computers and network hardware and software.

The availability of ICT materials in Tanzanian secondary schools differ from public and private secondary schools. In Tanzania, secondary schools, urban private schools prevail more in ICT use than government schools (Malero, et al., 2015). However, in government schools, ICT is mostly applied to secondary schools with teachers without basic ICT skills. Currently, the Government of Tanzania in collaboration with the Swedish Government, through Swedish International Development Cooperation Agency (SIDA) has been carrying out a project that trains principals, tutors, and students on ICT (Crallet, Ismail & Manyilizu, 2016). The training prepares ICT literate teachers to use ICT as a tool for teaching, learning, management and administration when implementing initiatives like e-school or e-learning (MoEVT, 2007). Despite the noticeable efforts in supporting ICT use in education in Tanzania, integration issues are very common in typical educational environments. Several reasons can account for this, including insufficient financial resources and overtime compensation to tutors who work overtime as well as scarcity of hardware and software resources (Swarts & Wachira, 2010). Therefore, it is crucial to take immediate implementation on the integration of ICT and secondary school education to compact with technological world.

Nwasinachi & Bernadette (2014) conducted a study on assessment and prospective application of information and communication technology among secondary school teachers in Enugu Urban, Nigeria; the findings show that ICT facilities were not fully available in many schools. This hindered the adoption of ICT in teaching and learning. That means to integrate the ICT effectively, there should be available ICT facilities, including software and hardware connections. Furthermore, Asabere (2017) conducted a study on an ICT model for integrating teaching, learning and research in a technical university education in Ghana. The findings revealed integrating ICT in education was quite difficult due to poor wireless connectivity. In Kenya, the study by Mingaine (2013) on

challenges in the implementation of ICT in public secondary schools found that high cost of acquisition and maintenance of ICT equipment was a barrier that had hindered the adoption and the integration of ICT. Particularly, the study found that lack of stable electricity is a serious problem in the implementation of ICT integration in schools.

According to Minja (2015) integration of ICT and teaching and learning is still low since the availability of appropriate ICT facilities for teaching in secondary schools at Karatu District Council is still a challenge. It has been observed that there was lack of enough ICT Facilities which means some of the secondary schools had few ICT facilities which are computer and projector. Also, most of secondary schools in Karatu district had no appropriate ICT facilities; therefore that situation affected service delivery in those schools. Several programmes and initiatives that aim at integrating ICT in the teaching and learning process have been implemented. Such initiatives include National Programme on ICT for Secondary School Teachers, the e-Schools Project and the introduction of ICT Curriculum in Secondary schools. Therefore it was crucial to carry out this study on the availability ICT and its influence on students' academic performance in secondary in Karatu District.

1.1 Research Questions

The following research questions guided the study:

1. To what extent does the availability of Information and Communications Technology influence student's learning behaviour in Karatu District?
2. How does the availability of Information and Communication Technology influence effective teaching and learning in Karatu District?

2. Literature Review

2.1 Theoretical Framework

This study based on Diffusion Innovation Theory by Rogers (2003). Rogers (2003) explained that the innovation-decision process is based on time and five distinct stages. The first step is knowledge; in this stage, the person or adopter must first learn and become aware of the innovation and have some idea of how it functions. The second stage or step is persuasion; in this stage, the adopter must form a favourable or unfavourable attitude towards the innovation before he/ she adopts it. The third stage, there is a decision to be made by the adopter to either adopt or reject the innovation. The fourth stage is the implementation where the person put into practice the innovation; this involves putting the innovation into actual use. The fifth stage is the confirmation where the person

evaluates the results of innovation and confirms that the decision to adopt the innovation was appropriate.

According to Kaminski (2011), the theory serves a diverse range of innovation adopters such as administrators, teachers and students information technologists and change agents as well. The diffusion of innovation also benefits the targets of change since respect and consideration for all involved stakeholders are intervened with robust strategies for implementing innovative change. The theory helps the community to identify qualities such as relative advantage, compatibility among others that would make innovation more appealing to potential users who in this case, are teachers, students. Technologies are constantly changing and hardware and software components are being introduced. It is therefore imperative to have solid understanding of how to introduce these new ideas in the social system. Diffusion theory helps further such understanding (Yates, 2001).

However, the theory based much on the innovation of technology but it ignores how the technology is imparted from one generation to another. The theory fails to explain the methodological procedures for technology innovation and transformation. The theory focused on the innovation but ignored how to introduce new technological system in the society. Despite the weaknesses, the diffusion theory can be used to explain predict and account for factors that increase or impede the influence of ICT on student's academic performance. It helps education practitioners to identify qualities that would make the use of ICT in schools more appealing to teachers and other stakeholders. The communication channels used to spread word about adoption of any innovation and the nature of the society determines the rate of adoption of a new technology. In schools, this can be achieved through training or ICT literacy upgrading courses.

2.2 Empirical Literature Review

2.2.1 Influence of Availability of ICT on Students' Learning Behaviour

According to World Bank Report (2007) on the Information and Communication for Development: Global Trends and Policies used survey design and revealed that, Tanzania has just finalized its Information and Communication Technology (ICT) Policy for Basic Education which incorporates the integration of ICTs in pre-primary, primary, secondary and teacher education, as well as non-formal and adult education. The policy has been developed in consultation with stakeholders, including a workshop in October 2006. The policy considers issues of infrastructure; curriculum and content; training and capacity development; planning procurement and administration; management, support and sustainability and monitoring and evaluation. The report of World Bank revealed the need to consult the educational stakeholders to incorporate ICT in education.

According to URT (2014) on the references to ICTs are also prominent in all three policy documents that govern the education sector in Tanzania in general. These are the Education and Training Policy of 1995, the Primary Education and Development Plan (PEDP) 2002-2006, and the Secondary Education Development Plan (SEDP) 2004-2009. Both the PEDP and SEDP prioritise ICT-based information management at all levels and an introduction of computer courses into primary and secondary education. As in many other countries in Africa, implementation of ICT projects tends to precede the policy and strategy phases, thereby allowing uncoordinated efforts and sometimes wastage due to duplication of effort. ICT in education initiatives in Tanzania started in 2002 when a stakeholders' workshop was called by the ministry with support from the International Institute for Communications Development (IICD), a Dutch NGO. These projects helped to raise awareness of the benefits and the potential gains in adopting ICT in the education sector which in turn elevated ICT to a priority area in education planning.

According to Swarts & Wachira (2010) on the study Tanzania: ICT In Education Situational Analysis, revealed that the government and the MoEVT recognize the potential of ICT to act as a tool for improving education delivery, outcomes and impact, as evidenced through the national plans, policies and strategies. The Tanzania Vision 2025, the key national development strategy, recognizes the role of education as a strategic change agent for transformation of the economy to a knowledge economy, and identifies the potential of ICT to address most of the development challenges, including those presented by education. The National ICT Policy recognizes that ICT can enhance education opportunities and advocates for the introduction of an e-education system. The Education Sector Development Plan (ESDP) recognizes the role of computer studies in fostering technological and scientific developments, with the education sector review reiterating the need to expand the use of ICT to improve on the quality of education.

2.2.2 ICT Integration on Academic Performance in Secondary Schools

A study conducted by Mwiluli (2018) on Influence of ICT Integration on Academic Performance in Public Secondary Schools in Kenya; A Case of Makeni County, adopted a descriptive research design in collecting data from the respondents. The target population comprised of an aggregate of individuals with similar characteristics and with respect to a particular area of the study. This target population was therefore constituted of all public secondary schools in Makeni County totalling to 379. The teachers were 3158. The data collection instrument for the research study was questionnaires. The research study used descriptive data analysis method. Pearson correlation coefficient was used to determine the relationship between the study variables. Data was then

presented in a tabular summarized form. The study revealed that there was a strong positive and significant correlation between ICT and its Integration in School Administration and academic performance of public secondary schools.

The study concluded that ICT integration in administration positively and significantly influences academic performance of public secondary schools in Makueni County. Computers, and photocopiers were highly available and ICT is used to some extent in preparation and maintenance of staff meetings records, accounting, maintenance of teachers' performance records, personnel management records and student's admission records. Also ICT integration in teaching positively and significantly influences the academic performance in public secondary schools in Makueni County. ICT improved the presentation of material in lessons, enhanced understanding during lesson presentation, made teaching more interesting for learners, positively changed the relationship between the students and gave them confidence when teaching. ICT also made preparation of lessons to be easy and faster. In examination management and e-learning ICT influenced the academic performance in public secondary schools in Makueni County significantly.

Ngeze (2017) researched on the ICT Integration in Teaching and Learning in Secondary Schools in Tanzania: Readiness and Way Forward. Data were collected from 202 teachers selected from 32 Secondary Schools from all the Educational Zones in Tanzania. The study revealed that most schools do not have ICT infrastructure in place. In schools where ICT infrastructure is present, student to computer ratio is very high. On the other hand, teachers are ready to use ICT in their teaching and learning activities if and only if they have the skills and knowledge to do so. The findings revealed that most of the secondary school teachers (77.0%) now possess either a laptop or a Smartphone or both. This is an implication that they are ready to use such tools in the teaching and learning process if they are directed how best they can be used. It has been observed that, ICT upgrade memory capacity among learners. The study recommends the Ministry of Education, Science, Technology and Vocational Training (MoESTVT) to increase the effort in training teachers on ICT, setting up adequate ICT infrastructure in many schools and setting up a framework for the implementation of the same.

3. Methodology

This study used a descriptive survey design. The survey design, according to Kothari (2008), is said to be useful because it does not only secure evidence on conditions but

also identifies standards or norms and traditions with which to superimpose the present conditions on the future next step. The area of study was in Karatu District Council. Karatu district council is one among six councils in Arusha region. The target population for this study consisted of students, teachers, school heads, IT experts and Planning Officers in Karatu District.

From the target population, stratified and purposive sampling procedures were used to obtain the study sample that consisted of 60 students, 21 teachers, 6 heads of school, 6 ICT experts and 6 planning officers to make a total number of 99 respondents. Instruments for data collection included questionnaires, interview guides and observation guides. The questionnaires contained closed and open ended questions and were used to collect data from the sampled teachers and students. Interview guides had probing questions and were used to collect data through verbal conversation between the ICT experts, planning officers and heads of schools. Finally the observation guide helped the collection of observable data about the availability of ICT resources in the visited schools. Prior to data collection, these instruments were validated through member checking whereby three experts in the field of educational research were requested to judge the relevance of the items, language clarity and adequacy of the items in address the research questions. These experts provided suggestions for improvement. Reliability on the other side was estimated using Cronbach alpha whereby the alpha of 0.89 and 0.91 for students' and teachers questionnaire were obtained respectively.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Availability of Information and Communication Technology and Its Influence on Student's Learning Behaviour in Karatu District

Objective one of this current study was set to identify the availability of ICT and its influence on student's learning behaviour in Karatu District. The sampled students and teachers were administered to questionnaires and they were required to agree or disagree with the items which were in the questionnaires. Table 1 presents the summary of the respondents' responses and the results of quantitative findings through questionnaires on the availability of ICT and its influence on student's learning behaviour secondary schools in Karatu District.

Table 1: Quantitative Findings on the Availability of Information and Communication Technology and Its Influence on Student's Learning Behaviour

| Influence | Students | Teachers | Total |
|------------------------------------|----------|----------|--------|
| | n=60 | n=21 | n=81 |
| | f(%) | f(%) | f(%) |
| Motivates students to learn | 55(92) | 17(81) | 72(89) |
| Students learn at their own pace | 50(83) | 15(71) | 65(80) |
| Influences career prospects | 53(88) | 19(90) | 72(89) |
| Influences online addiction | 57(95) | 16(76) | 73(90) |
| It makes learning more interesting | 59(98) | 18(86) | 77(95) |
| Reveals students' talents | 51(85) | 14(67) | 65(80) |
| Influences students' attendance | 56(93) | 16(76) | 72(89) |

Source: Field Data (2022)

The results in table 1 show that, 55(92%) secondary school students and 17(81%) secondary school teachers were in agreement to the statement that availability of Information and Communication Technology motivates the students' behaviour to learn. This indicates that a total of 72(89%) respondents agreed to the statement while 11% of respondents were contrary to the statement. This majority of respondents (89%) indicated that most of the secondary school students interested to learn through audio-visuals or displays and when the teachers are using computers and projectors as a teaching aid students' learning behaviour or the passion to learn among students is motivated.

The findings are in agreement with Ikpeama (2015) on the study impact of information and communications technology (ICTs) on students' academic performance. Five secondary schools in Enugu were selected for the study. Data on students' familiarity and attitude towards ICTs, and information on the possible relationship between students' use of ICTs and study habits were collected through questionnaire and interview methods. The results of the data analysis revealed: that students have a positive attitude towards ICTs. As such they use them to facilitate learning; that students constantly change their study habits based on the type of ICT they use to ease studies; that ICTs can and would empower teachers and learners, motivating and transforming teaching and learning processes from being highly teacher-dominated to student-centred, and that this transformation would result in increased learning gains for students and could reveal students' talents behaviours. Therefore, from the results, it implies that, the availability of ICT in secondary schools in Karatu district transforms the students' behaviour to learn into highly due empowering of ICT in teaching and learning.

The findings in table 1 reported that, the availability of ICT influences students' learning behaviour such that,

students learn on their own pace as 50(83%) secondary school students and 15(71%) secondary school teachers agreed to the statement. This made a total of 65(80%) respondents while 20% were contrary to the statement. The majority of respondents (80%) indicated that, the availability of ICT enhance learner-centred method whereby students could learn on their own with minimum supervision. The findings reported that availability of ICT enhances students to be independent on finding the materials themselves with little supervision from their teachers as facilities like computers or tablets are easy to use on finding wide range of teaching and learning materials.

The findings concur with Minja (2015) on the contribution of Information and Communication Technology on service delivery in secondary schools in Tanzania: A case study of Karatu District Council. The findings from the study revealed that there is contribution of ICT on service delivery in secondary schools at Karatu district as it helps in making teaching learning more interesting, enhances quality of work of teachers, makes teachers to be updated in various disciplines, and also makes decision making of management concerning education easy and faster and enhances learner-centred method as students can learn on their own pace. It can be concluded that the majority agreed that ICT contributes to quality service delivery in education sector whereby it also influenced students' attendance in ICT classes, therefore it is recommended that there is a need for more studies to be done to see what can help to improve ICT facilities in secondary schools so as to improve contribution of ICT to quality service delivery. From the findings, it implies that, availability of ICT influences students' learning behaviour such that, learners could learn themselves without or with minimum supervision from the teachers.

The findings in table 1 show that the availability of ICT influences students' learning behaviour in secondary schools in Karatu district such that it enhances students' carrier prospects as 53(88%) secondary school students and 19(90%) secondary school teachers agree to the statement. This made a total of 72(89%) respondents who were in agreement to the statement while 11% of respondents were contrary to the statement. The findings reported that, through ICT secondary school students can find their carriers for future. The results further reported that, ICT is the tool for educational succession among students when it is properly utilised and the students could find what to do to enhance their future dreams and successions.

The findings supported by Rogers (2003) on the diffusion theory that diffusion involves the flow of knowledge, which could be used for future prospects. This involves knowledge persuasion, decision, implementation and confirmation where the person evaluates the results of innovation and confirms that the decision to adopt the innovation was appropriate. The diffusion theory can be used to explain predict and account for factors that increase or impede the influence of ICT on student's academic performance. It helps education practitioners to identify qualities that would make the use of ICT in schools more appealing to teachers and other stakeholders. The communication channels used to spread word about adoption of any innovation and the nature of the society determines the rate of adoption of a new technology which enhances the future succession among learners. Therefore, from the findings it shows that the availability of ICT in secondary schools enhances diffusion of knowledge which could be used for future succession among learners.

In table 1 the results further indicated that, the availability of ICT influence students' learning behaviour through online addiction as 57(95%) secondary school students and 16(76) secondary school teachers agreed to the statement. This made a total of 73(90) respondents who agreed with the statement while 10% of respondents were contrary to the statement. The findings reported that, ICT is wide range of technology where internet services cannot be excluded in ICT. Therefore, the availability of ICT among secondary school students influence the students' learning behaviour as they could addicted in browsing internet blogs and media which in turn affects their academic performance.

The findings are in agreement with Almasi, et al., (2017) on the study on Internet Use among Secondary Schools Students and its Effects on Their Learning. The results unveiled that majority of students 170 (54.8%) had access to the internet through Smartphone, internet cafes 100(32.3%) personal computers, 15(4.8%) via schools infrastructures, and homes 25(8.1%). Findings report that although the internet uses for educational purposes had improved among secondary school students most of them used the internet as a social media for chatting and socializing, watching movies and listening to music.

Wastage of time, delay on schoolwork submission, poor academic results and school dodging were reported among the effects associated with the internet use among secondary students. However, educational related websites widely used was the National Examination Council of Tanzania (NECTA), e-SHULE, and e-School programme. The results of this study shed light on the most effective use of ICT in the teaching-learning process among students on the proper use of the internet. Therefore, from the findings, it implies that, availability of ICT influences online addiction behaviour among secondary school students in Karatu district through accessing of internet services with ICT facilities such as Smartphone and personal computers.

Moreover, the results in table 1 show that availability of ICT in secondary schools in Karatu district makes learning more interesting as 57(95%) secondary school students and 16(76%) agreed to the statement. This made a total of 73(90%) respondents who agreed to the statement while 10% of respondents were contrary to the statement. The findings reported that, the use of ICT facilities such as computers and projectors and televisions makes learning more interesting through audio-visuals whereby students can see actions of teaching and learning and also the notes are seen clearly, therefore teaching and learning become more interesting.

The findings are in agreement with study conducted by Mwiluli (2018) on the Influence of ICT Integration on Academic Performance in Public Secondary Schools. The study revealed that there was a strong, positive and significant correlation between ICT and its Integration in School Administration and academic performance of public secondary schools. The study concluded that ICT integration in administration positively and significantly influences academic performance of public secondary schools. Computers, photocopiers were highly available and ICT is used to some extent in preparation and maintenance of staff meetings records, accounting, maintenance of teachers' performance records, personnel management records and student's admission records. Also ICT integration in teaching positively and significantly influences the academic performance in public secondary schools. ICT improved the presentation of material in lessons, enhanced understanding during lesson presentation, made teaching more interesting for learners, positively changed the relationship between the students and gave them confidence when teaching. Therefore, from the findings it, implies that teaching and learning among secondary school learners become more interesting when the availability of ICT in secondary schools is integrated with teaching and learning.

4.2 Availability of Information and Communication Technology and Its Influence on Students' Academic Performance in Karatu District

Objective two of this current study identified the availability of ICT and its influence on students' academic performance in secondary schools in Karatu District.

Table 2: Quantitative Findings on the Availability of Information and Communication Technology and Its Influence on Students' Academic Performance in Karatu district

| | Students | Teachers | Total |
|---|----------|----------|--------|
| | n=60 | n=21 | n=81 |
| | f(%) | f(%) | f(%) |
| Faster coverage of syllabus and content there by better academic performance | 56(93) | 18(86) | 74(91) |
| Influences attentive listening, hence quality grades and scores above C average | 53(88) | 15(71) | 68(84) |
| Improve remembering ability (long term memory) hence better performance | 58(97) | 17(81) | 75(93) |
| Influences academic performance through good visual of printed questions | 55(92) | 16(76) | 71(88) |
| Makes teaching and learning effective hence better academic performance | 59(98) | 19(90) | 78(96) |

Source: Field Data (2022)

The sampled secondary school students and secondary school teachers were administered to questionnaires and they were required to agree or disagree with the items which were in the questionnaires. Table 2 presents the summary of the respondents' responses and the results of quantitative findings through questionnaires on the availability of Information and Communication Technology and its influence on students' academic performance in secondary schools in Karatu District.

The results in table 2 show that, 56(93%) secondary school students and 18(86%) secondary school teachers indicated that, availability of ICT influence students' academic performance in secondary schools in Karatu district as it influences faster coverage of syllabus and content. This made a total of 74(91%) respondents who agree to the statement while 9% of respondents were contrary to the statement. The majority of respondents (91%) reported that, through availability of ICT, teachers prepare their lesson plans and scheme of work easily. Also, through ICT there is practical teaching aids whereby the students understand the content in a short period of time which in turn results to early coverage of syllabus and content among learners and this would makes the learner to revise what they taught which influence better academic achievement.

The results are in agreement with Horn & Siew (2011) who reported that, Information and communications technology simplifies the administrative support levels of their academic in various levels of the academic pursuit. Student's services like records, admission / recruitment, class schedules, attendance, registration, time tabling and accessing results can be realized via network of computers and other communication avenues called student portals. Also, ICT assists in preparing lessons and assessment and evaluation records which results to early coverage of syllabus and content coverage in teaching and learning. The study further revealed that, availability of ICT facilitate faster coverage of syllabus through lesson planning, report writing, curriculum planning, as a lesson resources (e.g. website), time tabling, school policy development, reprographics/ photocopying, presentation of demonstrations, marking and assessment, monitoring pupils progress, record keeping (e.g. data base entry), special educational weeds coordination, development planning, exam entries and results, records of achievement and extra curriculum activities which all these influence academic performance in secondary schools.

In table 2 also the findings show that, 53(88%) secondary school students and 15(71%) secondary school teachers in Karatu district indicated that, availability of ICT influence students' academic performance in secondary schools as

it influences attentive listening, hence quality grades and scores above C average. This made a total of 68(84%) respondents who agree to the statement while 16% of respondents were contrary to the statement. The majority of respondents (84%) indicated that, the availability of ICT facilities especially computers, and projector displays enhance attentive listening in classroom and this is because it uses practical teaching aids which students could remember easily during classroom assessments and evaluations which results to better academic performance.

The findings supported by Ayere, Odera & AGak (2010) who explained that setting up of centres of excellence in ICT was to promote the integration of ICT in schools. The findings revealed that the e-learning gives better results both in learning and teaching. ICT training concerns the extent to which teachers become ICT literate. In this view, Abbott (2003) explains that training received should influence their ability to teach using ICT as a potential tool in teaching other curriculum subjects and ICT related subjects. Similarly, Crallet, Ismail & Manyilizu, (2016) maintain that teacher literacy is developed through basic learning of computer skills and some principles of computer operations. Computer studies as a subject helps teachers to gain skills on teaching, learning, classroom management, assessment and record keeping which improve learners' learning ability through audio-visuals such as picture or video displays which makes teaching and learning to be effective hence it influences academic performance.

Also, the results in table 2 show that, 58(97%) secondary school students and 17(81%) secondary school teachers indicated that, availability of ICT influence academic performance as it improves remembering ability or long term memory among students. This made a total of 75(93%) respondents who were in agreement to the statement while 7% of respondents were contrary to the statement. The majority of respondents (93%) reported that, availability of ICT enhances teaching and learning through audio-visuals, picture displays and practical aids, which improve remembering ability or long-term memory among learners. The results further indicated that, when students acquitted with good remembering ability they could answer the questions correctly both in school and national examinations.

The findings concur with Ngeze (2017) who researched on the ICT Integration in Teaching and Learning in Secondary Schools in Tanzania: Readiness and Way Forward. Data were collected from 202 teachers selected from 32 Secondary Schools from all the Educational Zones in Tanzania. The study revealed that most schools do not have ICT infrastructure in place. In schools where ICT infrastructure is present, student to computer ratio is very high. On the other hand, teachers are ready to use ICT in their teaching and learning activities if and only if they have the skills and knowledge to do so. The findings revealed that most of the secondary school teachers (77.0%) now possess either a laptop or a Smartphone or both. This is an implication that they are ready to use such

tools in the teaching and learning process if they are directed how best they can be used. It has been observed that, ICT upgrade memory capacity among learners.

Furthermore, the results show that, 59(98%) secondary school students and 19(90%) secondary school teachers indicated that, availability of ICT influence academic performance through facilitating effective teaching and learning in secondary schools. This made a total of 78(96%) respondents who were in agreement to the statement while 4% of respondents were contrary to the statement. The majority of respondents (96%) reported that, for better academic performance there should be with effective teaching and learning. The findings further reported that, effective teaching and learning is influenced by the availability of adequate ICT facilities such as computers, projectors and screen displays which enhance effective acquisition of skills and knowledge as a result of better academic performance.

The findings are in agreement with Mwiluli (2018) on the Influence of ICT Integration on Academic Performance in Public Secondary Schools in Kenya. The study revealed that there was a strong, positive and significant correlation between ICT and its Integration in School Administration and academic performance of public secondary schools. The study concluded that ICT integration in administration positively and significantly influences academic performance of public secondary schools. Computers, photocopiers were highly available and ICT is used to some extent in preparation and maintenance of staff meetings records, accounting, maintenance of teachers' performance records, personnel management records and student's admission records. Also ICT integration in teaching positively and significantly influences the academic performance in public secondary schools. ICT improved the presentation of material in lessons, enhanced understanding during lesson presentation, made teaching more interesting for learners, positively changed the relationship between the students and gave them confidence when teaching. Therefore, from the findings it implies that, availability of ICT influence students' academic performance through facilitating effective teaching and learning.

With regard to the Availability of Information and Communication Technology and its Influence on Students' Learning Behaviour in Secondary Schools in Karatu district, the study discovered that there is the Influence of Availability of Information and Communication Technology on students' learning behaviour in Secondary Schools in Karatu district.

One among the HSs had reported that:

Availability of ICT can influence students' learning behaviour positively or negatively. Positively the availability of ICT acquires secondary school students with skills and knowledge on the use of ICT facilities such as

computers, Smartphone and internet access where students can acquire life skills for their better future. Negatively, through ICT which facilitate internet services can provide students with online addiction especially accessing nude websites and blogs which deteriorate their studies (Personal Interview, April, 2022).

Also, IT 1 had commented that:

There is the influence of availability of ICT on students' learning behaviour such that, ICT enhances learning through practical means such a way that, most of students are likely to learn through audio-visuals and practical aids as it influences the habits for students to learn. Also, the availability of ICT transform a student from being a consumer of teaching and learning materials to be a producer of teaching and learning materials (Personal Interview, April 2022).

The findings are similar with the study which revealed that, with the use of technology, some teachers are adopting the flipped classroom approach. This allows students to study the material at home and come to school to engage in more discussions, exercises, and activities. According to Song & Kapur (2017), few studies have reported how to develop students' problem solving skills and enhance their conceptual understanding in flipped classroom in mathematics inquiry. While in this setting, students are learning more on their own, they are missing out on some of that lecture time that can spark deep conversation on problems. This article looks at the different benefits and concerns of a flipped classroom. Fisher, et al., (2014) discuss how classrooms are turning to technology for teaching and learning, and how teacher's roles have changed. The teacher becomes the facilitator, who takes the students on their learning journey, learning with them instead of 'teaching' them. A student needs to make judgements about and be able to calculate the value of the content they gather. Learners are also self-assessing using technology. This helps to move learners from being the consumers of information to being producers of it. Therefore from the results, it shows that, through availability of ICT the students can be moved from the consumer of learning materials to be a producer of learning materials.

With regard to the Availability of Information and Communication Technology and its Influence on effective teaching and learning in Secondary Schools in Karatu district, the study discovered that there is the Influence of Availability of Information and Communication Technology on Effective Teaching and Learning in Secondary Schools in Karatu district.

The IT 2 had reported that:

Availability of ICT in secondary schools in Karatu district has a great influence on effective teaching and learning such that ICT used in lesson planning, report writing, curriculum planning, as a lesson resources (e.g. website), time tabling, school policy development, reprographics/ photocopying, presentation of demonstrations, marking and assessment, monitoring pupils progress, record keeping (e.g. data base entry), special educational needs coordination, development planning, exam entries and results, records of achievement and extra curriculum activities (Personal Interview, April 2022).

Also, PO 2 commented that:

Information and Communication Technology should be integrated with education in secondary schools. Although there is lack of ICT facilities in most secondary schools in Karatu district but ICT has a great influence in effective teaching and learning such that, it enhances early coverage of syllabus, curriculum implementation and content matter among learners through practical aids in the classroom setting and outside the classroom which enable students to acquire life skills (Personal Interview, April 2022).

The findings are in line with Horn & Siew (2011) who reported that, Information and communications technology simplifies the administrative support levels of their academic in various levels of the academic pursuit. Student's services like records, admission / recruitment, class schedules, attendance, registration, time tabling and accessing results can be realized via network of computers and other communication avenues called student portals. Also, ICT assists in preparing lessons and assessment and evaluation records which results to early coverage of syllabus and content coverage in teaching and learning. The study further revealed that, availability of ICT facilitate faster coverage of syllabus through lesson planning, report writing, curriculum planning, as a lesson resources (e.g. website), time tabling, school policy development, reprographics/ photocopying, presentation of demonstrations, marking and assessment, monitoring pupils progress, record keeping (e.g. data base entry), special educational needs coordination, development planning, exam entries and results, records of achievement and extra curriculum activities. All these influence effectiveness in teaching and learning in secondary schools.

5. Conclusion and Recommendations

5.1 Conclusions

From the findings, this study concludes that ICT in secondary schools in Karatu district is used to perform different tasks, such as preparing assignments, classroom activities and planning their lessons more efficiently. The use of ICT improves students' competencies, computer based skills that might be very supportive in improving their organizational behaviours in practical fields. Furthermore, the effective ICT use integrated with teaching and learning practice add interest, encouragement and motivation among the students that helped the students to process information in a better way and increases their understanding and expands their memory. The results of the undergoing research, it was established that ICT had a significant and positive impact on students' academic performance.

Also, this study concludes that ICT contributes to quality service delivery in their schools rather than old method of chalk and talk. According to the study, ICT facilities enhance time management for both teachers and students, it enhances service coordination, it enhances proper record keeping and it is cost effective. Also, what is seen there is an access of teaching learning materials from different sources of website and ICT helps in making teaching learning more interesting as majority of respondents agreed on that.

5.2 Recommendations

1. Since it has been revealed that availability of ICT has a great influence on students' academic performance in secondary schools, therefore, the government should provide ICT equipment like computers, printers, projectors, laboratories, and among others in secondary schools to help them integrate ICT in schools in order to attain the goals of education.
2. Teachers may be provided incentives to complete the computer literacy program and professional development programmes at all levels. These incentives may include laptops, mobile phones having internet facility. Teachers over a certain age need to be encouraged in more distinctive ways to be involved in in-service.
3. There should also be continuous and periodic training of teachers on computer and ICT skills acquisition. This will help provide them with practical and functional knowledge of the computer, the internet and associated areas of ICT with the hope of integrating it with instructional methods of teaching and learning.

References

- Abbott, Y. (2003). *Information & Communication Technology and its Influence on University Education: A Systematic Review. Article reuse guidelines: Sage Publication.*
- Almasi, et al., (2017). H. M. (2013). *Opportunities and Challenges of Integrating ICTs in Education Delivery in the Institute of Continuing Education at the Open University of Tanzania: Masters Dissertation, The Open University of Tanzania.*
- Asabere, N. Y. (2017). AIDS: An ICT Model for Integrating Teaching, Learning and Research in Technical University Education in Ghana. *The International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 13(3), 162-183.
- Ayere, P. et al., (2010). Activation, and Individual Differences. *Cogn. Affect. Behav. Neurosci.* 8(99), 2008. *African Business Review* 17 (1) 98-127
- Crallet, V., Ismail, A. & Manyilizu, M. (2016). Support of ICT use in Tanzania Secondary Schools. The Case of Dodoma Municipality. *International Journal of Computer Applications*, (0975 – 8887) Volume 134 – No.16, January 2016.
- Fidelis, F. and Onyango, D.O. (2021). Availability of ICT Facilities and Teachers' Competence in the Use of ICT among Public Secondary Schools in Ngara District, Tanzania. *East African Journal of Education and Social Sciences*, January – March 2021, Vol. 2, No. 2, pp. 34-40.
- Horn, M. and Siew, K. (2011). *Motivating people on the way towards organizational performance. Covalence Analyst Papers. Melbourne, Australia.*
- Fisher, M. et al., (2014). Mapping out the ICT integration terrain in the school context: Identifying the challenges in an innovative project. *Irish Educational Studies*, 32(3), 309-333.
- Kaminski, J. (2011). *Diffusion of Innovation Theory*. Retrieved on 12th June 2016 from <http://cjni.net/journal>.
- Khan, R. et al., (2015). The Impacts of ICT on the Students' Performance: A Review of Access to

- Information. *Research on Humanities and Social Sciences*, 2224- 5766.
- Kothari, C. R. (2008). *Research methodology: methods and techniques* (Revised, Ed.). New Delhi, India: New Age International Publishers.
- Ikpeama, V. (2012). *Non- probability sampling*. *East African Journal of Education and Social Sciences*, January – March 2021, Vol. 2, No. 2, pp. 30-34.
- Malero, A., Ismail, A & Manyilizu, M. (2015). ICT usage readiness for private and public secondary schools in Tanzania, a case of Dodoma municipality. *International Journal of Computer Applications*, vol. 129, no. 3, pp. 2013–2016, 2015.
- Mingaine, L. (2013). Leadership Challenges in the Implementation of ICT in Public Secondary Schools, Kenya. *Journal of Education and Learning*, 2 (1).
- Minja, E. S. (2015). *Contribution of Information and Communication Technology (ICT) on Service Delivery in Secondary Schools in Tanzania: A Case Study of Karatu Council*. Masters Dissertation: Mzumbe University.
- MoEVT (2007). *Information and Communication Technology (ICT). Policy for Basic Education*. United Republic of Tanzania: Ministry of Education and Vocational Training (MoEVT).
- MoEVT (2014). *Information & Communication Technology (ICT). Policy for Basic Education*. Tanzania: Ministry of Education and Vocational Training (MoEVT).
- Mwiluli, P.M. (2018). *Influence of ICT Integration on Academic Performance in Public Secondary School in Kenya. A Case of Makueni County*. University of Nairobi: Project Planning and Management.
- Ngeze, L.V. (2017). ICT Integration in Teaching and Learning in Secondary Schools in Tanzania: Readiness and Way Forward. *International Journal of Information and Education Technology*, Vol. 7, No. 6, June 2017.
- Nwasinachi, M.U., & Bernadette, U. M. (2014). Assessment and Prospective Application of Information and Communication Technology Usage among Secondary School Teachers in Enugu, Urban, Nigeria. *Journal of Education, Society and Behavioural Science*, 336-3349.
- PEDP (2002-2006). *Education Sector Development Programme. Primary Education Development Plan*: Dar-es-salaam: Basic Education Development Committee (BEDC).
- Rogers, E.M. (2003). *Diffusion of Innovations*. New York: London Free Press.
- SEDP (2004-2009). *Education Sector Development Programme. Secondary Education Development Plan*. Dar-es-salaam: Ministry of Education and Culture.
- Swarts, P. and Wachira, E.M. (2010). *Tanzania: ICT in Education Situational Analysis*. Global e-Schools and Creative Initiatives: <http://creativecommons.org/licenses/by-ncsa/3.0/>.
- Ufuophu, E. and Ayobami, O. (2012). Usage of information and communication technologies and job motivation among newspaper workers in Nigeria. *Journal of communication and media research*, 4(1), 89-92.
- Visscher, T. and Finegan, G. (2009). Information and communication technology (ICT) challenges in teaching chemistry. A case study of Zimbabwean Polytechnics. *International journal of advanced research and innovative ideas in education*, 5 (1), 2395- 4396.
- Wanjiru, K.R. (2013). *The Use of Information and Communication Technology in Improving Teaching and Learning in Public Primary Schools in Gatanga District, Muranga County*. Kenya: Masters Dissertation, University of Nairobi.
- World Bank (2007). *Information and Communication for Development: Global Trends and Policies*. Washington, D.C.: The World Bank Institute.
- Yates, L. B. (2001). *Applying Diffusion Theory: Adoption of Media Literacy in Schools*. Washington DC & USA: Paper Presented to the Instructional and Developmental Communication Division, International Communication Conference.
- Zhang, P. and Aikman, S. (2007). *Attitudes in ICT Acceptance and Use, Proceedings of the International Conference on Human Computer Interaction: Beijing*.



Contribution of School Quality Assurance Supervisory Role on Teacher's Efficacy in Public Secondary Schools in Monduli District, Tanzania

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Abstract: This study assessed the contribution of school quality assurance supervisory role on teachers' efficacy in public secondary schools in Monduli district. Specifically, the study examined the teachers' views on the role of SQA and established the influence of SQA supervisory roles on teachers' efficacy. The study was guided by Role theory and it used convergent parallel design under mixed methods approach. It targeted teachers, heads of schools, Ward Education Officers, District Education Officer and District School Quality Assurer. The study sample consisted of 72 teachers (selected randomly), 8 heads of schools, 5 WEOs, one DSQA and 1 DEO, who were purposively selected, making a total of 87 respondents. Questionnaires and interview guides were used as tools for data collection. These tools were validated by experts in research. Cronbach alpha was used to test the reliability ($SQ=0.76$ and $TQ=0.88$). The collected data were analyzed using descriptive statistics whereby mean scores, frequencies and percentages were generated. Thematic analysis was used for qualitative data and presented in words being supported by direct quotations. The study found that SQA supervisory roles directly influence teachers' efficacy. The study recommended to the government to emphasize on the supervisory roles by SQA so as to make them in a better position of executing their responsibilities. It was also recommended for the government of Tanzania, through the ministry of education, science and technology, to monitor the implementation of different policies pertaining to the roles of SQA.

Keywords: School, Quality, Supervision, Efficacy, Assurance

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1. Introduction

School Quality Assurance (SQA) in education, through school supervision by national governments is not new in the education system. Quality Assurance is a planned and systematic appraisal of a programme to determine

maintenance and promotion of good standards. It aims to build public confidence in the education system by ensuring that education is provided within standards that are at least acceptable and improving, and that learners acquire good learning outcomes (Gkolia et al., 2014). On the hand, teacher's efficacy is the level of confidence teachers have in their ability to guide students to succeed.

It is stated that the first school inspection or school supervision originated from France under Napoleon's regime at the end of 18th century (Gurova, 2018). Later, the idea spread to other European countries in the 19th century. Okumbe (2007) points out that the history of supervision can be traced back to the early American Education System in the year 1642. The five stages identified through which supervision evolved to reach the current practice in educational institutions were the administrative inspection period (1642 – 1875), where the main focus of supervision was on appraising the general achievement of learners, evaluating methods of teaching, general management of the school and use of funds, adopting a judgmental approach to supervision; the efficiency orientation period (1876 – 1936), which focused on assisting teachers improve their teaching effectiveness; the co-operative group effort period (1937 – 1959), which saw the establishment of posts for superintendents of schools and special area supervisors; the research oriented period (1960 – 1990), which emphasized research procedures in studying school administration and supervision, and the diplomacy and political correctness period (1990 – present), where language has been used to improve human relations in all spheres of the economy, politics and business.

SQA aimed at setting high standards and working towards the goal that every learner in Tanzania will attend a good school. Reliably and consistently measuring the quality of school performance using the out comes to understand and learn about the national, regional, ward and individual school needs. Similarly, to guide planning for improvement, developing and enabling the school's leadership in its Internal Quality Assurance and helping to prioritize areas of focus in its planning for continuous improvement through accurate self-evaluation and effective whole-school development planning. The SQA is also aimed at supporting the work of Ward Education Officers (WEOs) in their close to school monitoring and ensuring timely, sustainable and measurable improvement in the work of individual and clusters of schools. Involving the community in their children's education, by inviting them to participate in the school's work using their expertise to enhance learning, responding to their concerns and sharing their aspiration (School Quality Hand Book, 2017). One may wonder why such situation exists in secondary schools in the context of the quality assurance practices. Secondly, how quality assurance findings and its recommendations improve teachers' efficacy in teaching and learning process. In view of this background, the current research sought to investigate the contribution of school quality assurance supervisory role on teachers' efficacy in public secondary schools in Monduli District, Tanzania.

1.1 Research Questions

This study was guided by the following research questions:

1. What are the teacher's views on the supervisory role of School Quality Assurance in relation to their work performance in public secondary schools in Monduli District?
2. What are the influences of the supervisory role of School Quality Assurance on teacher's efficacy in public secondary schools in Monduli District?

2. Literature Review

2.1 Theoretical Framework

This study was guided by Role theory because it provides the basis for explaining how individual performance can be enhanced within a social group or system (Briddle, 1986). Turner (2002) describes "Role" as a cluster of behaviors and attitudes that go together so that an individual is easily seen as acting consistently when performing the various components of a single role and inconsistently when failing to do it. Meanwhile Keller (1997) refers to roles as settled ways of engagement expected from persons holding certain positions in the society. Still in the views of Sesen (2015), role is the behaviour associated with a social position. Numerous definitions of roles do exist but important to note is that role is crucial in specifying responsibilities and expected outcomes within a social system.

The concept of roles is therefore very important in any organization as responsibilities to individuals are assigned and evaluated in terms of roles creating clear distinctions between jobs that make operation easy. For example, in a school context, the head teacher has to play managerial and supervisory roles to ensure the smooth running of the system and efficient performance, while teachers' role include preparing for teaching, delivering lessons, assessing learners and providing feedback.

2.2 Empirical Literature Review

Bhat (2016) conducted a study on the perception of teachers towards quality assurance in secondary school teachers of Kulgam district in Jammu and Kashmir in India. The study adopted descriptive survey design, with the sample of 200 teachers, who were randomly selected. Data for the study was collected by using survey tools and statistically analyzed through ANOVA. The findings revealed that there was significant difference between the teachers' perception and quality assurance practices in secondary school. The findings further concluded that female teachers in the school visited had positive perception on quality assurance than that of male teachers.

Another study conducted by Han et al (2018) investigated the perception of the teaching staff on the support given by the management towards teaching efficacy in Shandong province in East China. The study collected data from a sample of 2758 faculty members selected from 25 public institutions of higher education. The study found out that there was no statistically significant relationship between support given to teachers and their teaching effectiveness. Most of the teaching staff perceived to be given little support by their managers and hence they did not see the value of such support to their teaching effectiveness. The provision of teaching support is one of the roles of school assurance officers aimed at enabling the teaching staff to work effectively. Therefore, failure of the staff to provide such support may lead teachers to have negative perceptions on the role of quality assurance towards enhancing their effectiveness.

Adeyemi & Adeyemi (2020) did a study on the teachers' perception on implementation of Quality Assurance on senior secondary school students' academic performance in Ilesa West Local Government Area, Osun State, Nigeria. The study employed descriptive survey design with 250 teachers who were randomly collected from the secondary schools in Ilesa West Local Government Area, Osun State, Nigeria. Self-designed and validated questionnaire was used to collect the data. The analysis of data was done through SPSS with the use of descriptive statistics. The findings revealed that although quality assurance had the capacity to provide positive impact on the students' academic performance, still none of quality assurance components were implemented in the schools.

Supervision provides a vehicle and a structure which allows schools, departments and individuals to effectively respond to curriculum and instruction in order to achieve the stated educational objectives. For instance, Chika & Orjoka (2020) conducted a study on the influence of quality assurance technique on teaching and learning in secondary schools in Rivers State in South Africa. Descriptive survey design was used in the study. The sample of 348 teachers was randomly selected from 56 secondary schools. The researcher used questionnaire to collect the data. The findings revealed that quality assurance contributes to teaching and learning in terms of strengthening potentialities in covering course outline, completion of teaching working-load before the end of the semester or session. Awite and Raburu (2015) conducted study on the influence of head teachers' supervision on teacher curriculum development and provision of quality education in secondary schools in Kenya. The study found a strong relationship between head teachers' supervision of curriculum implementation and quality education provision.

In addition, Kabati, (2017) conducted study to investigate the effectiveness of school inspection in assuring the quality of primary education in Tanzania. The study adopted mixed research approach, whereby data were

collected from 70 respondents through questionnaire, interview and documents analysis. The study revealed that school inspection plays a potential role towards improving teaching and learning. Also study revealed that advice and feedback given through inspection reports and recommendations were useful in making improvements in school work performance. Furthermore, the study also found that making follow ups could enhance the implementation of the inspection and work efficiency of teachers. Also, Gobore (2017) found out that school inspection played a great role towards changing teachers' practices and that advice and feedback given through inspection reports were useful for making improvements in their work performance. The study further revealed that, school inspectors judged the performance of the schools according to schemes of work; lesson plans and pupils' exercise books, whereas classroom observations were not effectively carried out.

Also, in Tanzania, Sebastian (2020) conducted a study on teachers' perceptions on the implementation of Internal School Quality Assurance (ISQA) in public schools in Tanzania. The study employed mixed methods approach with multiple case study design. The study used 168 respondents and data was collected by using semi-structured interview, focus group discussion, questionnaire and document review. The findings indicated that school quality assurance practices increased the quantity of teaching documents however, it was ineffective in improving the teaching approaches in secondary schools.

3. Methodology

The study used convergent parallel design under mixed methods approach (Kinneer and Taylor, 2013). In the current study the target population included 28 Heads of public secondary schools, 387 teachers who provide learning instruction to students, 1 District school quality assurer, 20 WEOs and 1 DEO. This made a total of 437 target population where a sample size was selected. The study sample size consisted of 72 teachers (selected randomly), 8 heads of schools, 5 WEOs, one District Quality Assurer and 1 DEO who were purposively selected, making a total of 87 respondents. Questionnaires and interview guides were used as tools for data collection. These tools were validated by experts in research and Cronbach alpha was used to test the reliability (SQ=0.76 and TQ=0.88). The collected data were analyzed using descriptive statistics whereby mean scores, frequencies and percentages were generated. Thematic analysis was used for qualitative data and presented in words being supported by direct quotations.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Teachers' views on the role of School Quality Assurances in Relation to their work Performance

The research question aimed at finding out the teachers' views on the role of SQA in relation to their work performance in public secondary schools in Monduli District. Table 1 summarizes responses from teachers.

Table 1: Teachers' View on the Role of School Quality Assurances in Relation to their Work Performance in Public Secondary Schools in Monduli District

| Information | SD | | D | | U | | A | | SA | | Mean Score |
|---|----|------|----|------|----|------|----|------|----|------|-------------|
| | f | % | f | % | f | % | f | % | f | % | |
| SQA supervise my scheme of work, lesson plan and lesson notes preparation. | 7 | 9.7 | 7 | 9.7 | 7 | 9.7 | 20 | 27.8 | 31 | 43.1 | 3.85 |
| SQA teaching supervision helps teachers to perform better in class. | 4 | 5.6 | 4 | 5.6 | 16 | 22.2 | 23 | 31.9 | 25 | 34.7 | 3.85 |
| SQA regularly supervise class during lessons. | 8 | 11.1 | 16 | 22.2 | 11 | 15.3 | 26 | 36.1 | 11 | 15.3 | 3.22 |
| SQA teachers are more qualified and competent than SQAOs | 12 | 16.7 | 11 | 15.3 | 17 | 23.6 | 24 | 33.3 | 8 | 11.1 | 3.07 |
| Supervision role has a great positive on teacher's pedagogic productivity in secondary schools. | 0 | 0 | 14 | 19.4 | 0 | 0 | 36 | 50 | 22 | 30.6 | 3.92 |
| SQA process does not add any positive influence in the improvement of teacher's pedagogic skills. | 18 | 25 | 17 | 23.6 | 12 | 16.7 | 14 | 19.4 | 11 | 15.3 | 2.76 |
| Teachers look forward for SQA visits | 6 | 8.3 | 7 | 9.7 | 12 | 16.7 | 18 | 25 | 29 | 40.3 | 3.79 |
| Total Mean Score | | | | | | | | | | | 3.49 |

Source; Field Data (2022)

Key: SD = Strongly Disagree, D = Disagree, U= Undecided, A= Agree SA= Strongly Agree

Table 1 represents views of teachers on the role of school quality assurances in relation to their work performance in Public Secondary Schools in Monduli District. The findings showed that most (70.9%) of teachers indicated that SQA supervise their scheme of work, lesson plan and lesson notes preparation in secondary schools by a mean (M=3.85). Results further show that 70.9% of teachers agreed with statement "SQA supervise my scheme of work, lesson plan and lesson notes preparation. This implies that majority of teachers agreed that the supervision of professional documents helps the teachers to formulate well the goals and the objectives of the education through writing of the scheme of work, lesson plan and subjects' notes. As supported by Agu and Okeke (2018), quality assurance in schools helps in the realization of teaching and learning goals for better productivity and performance. These findings also correspond to Sebastian (2020) who reported that school quality assurance practices increased the quantity of professional documents and it was ineffective in improving the teaching approaches in secondary schools.

The findings showed that most of teachers indicated that SQA teaching supervision helps them to perform better in class by M=3.85. Results also show that (66.6%) of

teachers agreed, 11.2% of the teachers disagree while 22.2% of the teachers were undecided on the statement "SQA teaching supervision helps teachers to perform better in class." This implies that majority of teachers, (66.6%), who participated in this study agree that SQA teaching supervision helps teachers to perform better in class. This is also supported by Chika & Orjoka (2020) who revealed that quality assurance contributes to teaching and learning in terms of strengthening potentialities in covering course outline, completion of teaching working-load before the end of the semester or session. This indicated that quality assurance provides necessary guide for teaching and learning process and therefore enhances teachers' efficacy.

In addition, the findings in table 1 show that 51.4% of teachers agreed with the statement "SQA regularly supervise class during lessons." while 33.3% of teachers disagreed and 15.3% were undecided that SQA regularly supervise class during lessons. This implies that majority of teachers agreed that SQA regularly supervise class during lessons by M = 3.22. By doing so, the teacher will be more effective and efficient. These findings were supported by Nurfadilla & Surhato (2020) who found that quality assurance makes the teachers to be more effective

in teaching and learning process by increasing their innovation and the capacity building.

This indicates that during quality assurance practices teachers are required to develop students' communication ability by use of participatory teaching methods probably because it is one of the best ways for students to acquire knowledge, competency and develop their communication and thinking skills. Also some of teachers had no habit of using participatory methods during class lesson but after guidance by SQA, they are motivated to start using them so as to be competent to avoid mistakes during another quality assurance visit. Therefore, in school where there are regular quality assurance visits, teachers become effective in developing students' communication and

thinking skills. As Oluhundare & Shola (2020) pointed out that teachers' effectiveness was high in the schools with quality assurance practices than those without.

4.2 Influences of The Supervisory Role of School Quality Assurance on Teacher's Efficacy in Public Secondary Schools in Monduli District

Research question two aimed at finding out the influences of the supervisory role of school quality assurance on teacher's efficacy in public secondary schools in Monduli district. Table 2 summarizes responses from teachers.

Table 2: Teachers Responses on the Influence of the Supervisory Role of School Quality Assurance on Teacher's Efficacy

| Statement | SD | | D | | U | | A | | SA | | Mean score |
|--|----|------|---|------|----|------|----|------|----|------|-------------|
| | f | % | f | % | F | % | f | % | f | % | |
| Enables teachers to have sufficient knowledge of their subject. | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 55.6 | 32 | 44.4 | 4.44 |
| Enables teachers to use various forms of students' assessment for evaluation to foster learning. | 0 | 0 | 4 | 5.6 | 8 | 11.1 | 29 | 40.3 | 31 | 43.1 | 4.21 |
| There is improvement in students' internal assessments as a result of supervision of teachers by SQAOs. | 0 | 0 | 4 | 5.6 | 3 | 4.2 | 36 | 50 | 29 | 40.3 | 4.25 |
| Supervision by SQA improves Teachers abilities in updating your professional activities. | 0 | 0 | 4 | 5.6 | 8 | 11.1 | 24 | 33.3 | 36 | 50 | 4.28 |
| Teachers are regular for their lessons | 0 | 0 | 3 | 4.2 | 17 | 23.6 | 25 | 34.7 | 27 | 37.5 | 4.06 |
| Teachers discuss teaching/learning problems with SQA outside classes | 4 | 5.6 | 8 | 11.1 | 7 | 9.7 | 28 | 38.9 | 25 | 34.7 | 3.86 |
| Corrections usually done by SQAOs after supervision and advice are given to teachers concerning their professional efficacy. | 8 | 11.1 | 0 | 0 | 11 | 15.3 | 25 | 34.7 | 28 | 38.9 | 3.90 |
| Total mean score | | | | | | | | | | | 4.14 |

Source; Field Data (2022)

Key: SD = Strongly Disagree, D = Disagree, U= Undecided, A= Agree SA= Strongly Agree

The findings in table 2 represents the teachers' responses on the influence of the supervisory role of SQA on teacher's efficacy in public secondary schools in Monduli District. The findings showed that all teachers agreed that they have sufficient knowledge of their subject by M = 4.44. The findings from table 2 indicated that 100% of teachers agreed to the fact that they have sufficient knowledge of their subject while none of the teachers either disagreed or was undecided that they have sufficient knowledge of their subject. This means that all the teachers agreed that they have sufficient knowledge of their subject. The findings indicated school quality assurance has great impact on teaching as they help teachers to have sufficient knowledge of their subject, probably because frequent visit makes teachers active and prepare them well so as they could not be found with any

weakness in teaching. The finding is in agreement with Chika & Orjoka (2020) who found that quality assurance contributes to teaching and learning in terms of strengthening potentialities in covering course outline, completion of teaching work-load before the end of the semester or session.

Further, table 2 presents that teachers agreed that they use various forms of students' assessment for evaluation to foster learning by M = 4.21. In table 2, a total of 83.4% of the teachers agree that they use various forms of students' assessment for evaluation to foster learning while 5.6% disagreed that they use various forms of students' assessment for evaluation to foster learning. However, 11.1% were undecided that they use various forms of students' assessment for evaluation to foster learning. This

means that majority of the teachers in public schools in Monduli District agreed that they use various forms of students' assessment for evaluation to foster learning. The findings indicated that school quality assurance contribute to application of various assessment method because one of supervisory role is to ensure students are properly assessed thus, it compels teachers to learn and practices various assessment methods for evaluation to foster learning. These finding are in line with Agu & Okeke (2018) who revealed that Quality assurance in schools helps in the realization of teaching and learning goals for better productivity and performance.

Moreover, 83.3% of teachers agreed supervision by SQA improves teachers' abilities in updating their professional activities." while 5.6% of teachers disagreed and 11.1% were undecided. This implies that majority of teachers agreed that supervision by SQA improves teachers' abilities in updating their professional activities by M= 4.28. By doing this, teachers could be more effective and efficient in teaching. These findings were supported by Nurfadilla & Surhato (2020) who found that quality assurance make the teachers to be more effective in teaching and learning process by increasing their innovation and capacity building.

While answering the same research question which was aimed at finding out the influence of the supervisory role of SQA on teacher's efficacy, one head of school interviewed responded that;

There is need to motivate teachers to do their work willingly. Similarly, teachers should be encouraged and unnecessary confrontation should be avoided in order to enable them improve students' academic performance. I normally build good relations with my teachers and this has helped them not to fear any more while having one on one meeting with external quality assurers as they have all documents needed (Personal interview on 21st April, 2022).

Also another head of school said;

"...some argue that no good performance if there is no supervisionmost of teachers perform very well when supervised (Personal interview on 22nd April, 2022).

These findings imply that school quality assurance greatly contributes in improving teachers, work performance though quality assurance practices. The findings indicate that school quality assurers visits to public secondary schools frequently has positive impact on teachers work performance thus leading to proper preparation of academic documents, early syllabus coverage as teachers perform their work effectively fearing to be found irresponsible during SQA visits. Therefore findings from heads of school are similar with that of teachers.

On answering the same research question which was aimed at finding out the influence of the supervisory role of school quality assurance on teacher's efficacy, WEO said;

Our frequent visits in poor performing public secondary schools for supervision and guidance has resulted in teachers' performance increase and consequently increasing the performance of the entire school (Personal interview on 13th April, 2022)

Also during interview with DEO, the following was put forth;

One of their roles is to make sure teacher performance is good in their ward and that is the reason for having school quality assurance. Schools in wards with active and committed school SQA have recorded good performance. (Personal interview on 15th April, 2022)

These findings correlate with that of head of schools and teachers which confirm that school quality assurance practices has positive impact on teachers' work performance. SQA visits not only affect teachers' performance but also the entire teaching and learning process which results into improvement of quality of education provided in public secondary schools. Therefore, there is need for schools quality assurers to be empowered in terms of funds and transport that could help them to visit all public secondary schools in their areas frequently and on time.

5. Conclusion and Recommendations

5.1 Conclusion

Supervisory roles by SQA highly influences teachers' efficacy. Through regular observation of teachers in actual classroom performance, teachers become used to the preparation and use of teaching and learning resources. Supervisory roles by SQA also make the teachers to use appropriate methods of teaching and assessing the acquisition of knowledge.

Generally, quality assurance practices in secondary school in Monduli district, to large extent, improves teachers' self- motivation and effectiveness in teaching and learning process. Moreso, SQA visits encourage teacher to develop students' communication and thinking skills, increase effectiveness of teachers, motivate teacher to be more creative, accountable and committed. However, the practice should also focus on identifying and addressing areas for improvement through SQA conducting training on quality assurance to teachers and providing necessary advice and support for improvement.

5.2 Recommendations

1. The government of Tanzania, through the ministry of education, science and technology should set, implement and monitor the implementation of different policies pertaining to the roles of SQA. This will make the members of SQA to be guided by principles when performing their roles.
2. Members of SQA should enhance their supervisory roles so as to enhance teachers' efficacy. Results of this study showed that there is a strong influence of supervisory roles by SQA and teachers efficacy. Therefore, enhancing the roles of SQA will ultimately lead into improved teachers' efficacy which in turn will lead into improved teaching and learning and finally improving the performance of students in both internal and external examinations.
3. Quality assurers could have great impact on teachers' self-motivation if they could be conducting seminars and training after giving feedbacks to teachers. This also could help change teachers' negative perception on quality assurance knowledge and skills acquired during seminar could help them work on the feedback given. As Psychologist Richard Gregory (1970) argued that knowledge, skills and information are what changes perception. Therefore, training and seminars can be useful for changing teachers' perceptions towards the role of SQA.

References

Adeyemi, S., and Adeyemi.O. (2020). Teachers' Perception of Implementation of Quality Assurance on Senior Secondary School Students' Academic Performance in Ilesa West Local Government Area, Osun State, Nigeria. *KIU Journal of Humanities*.183

Agu, P. and Okeke, F. (2018). Perceived Impact of Quality Assurance in Education on Staff Performance in Public Secondary Schools in Nsukka Education Zone of Enugu State, Nigeria. *Knowledge Review Volume 37 No 2*.

Awite, T. and Raburu, G. (2015). Effectiveness of School Quality Assurance Officers Communication Styles on Improving Teaching and Learning in Arusha City Public secondary schools. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*. 160-165

Bhat, B. (2016). Teachers' Perception towards Total Quality Management in Secondary Schools.

International journal for education studies.41-45

Briddle, O. (1986). *Factors Affecting Effectiveness of Heads of School in Implementation of Quality Assurance: The Case of Government Secondary Schools in Arusha City, Tanzania. International Journal of Innovation in education and Business* .1-18

Chika, A .and Orjoka,U. (2020). Influence of quality assurance technique on teaching and learning in secondary schools in Rivers Stat, South Africa. *British International Journal of Education and Social Sciences*.

Gkolia, F. (2014). The Relationship between Efficacy and the Instructional Practices of Special Education Teachers and Consultants. *Alberta Journal of Educational Research 34(2)* 148 - 165

Gobore, S. (2017). *The Influence of School Inspection in Changing Teachers' Practices in Primary Schools*. Babati District, Manyara Region. Open University of Tanzania .Unpublished Dissertation.

Gurova, G. (2018). Soviet, post-Soviet and neo-liberal: Governing Russian schools through quality assurance and evaluation. *Policy Futures in Education*, 16(4), 398–415. <https://doi.org/10.1177/1478210317743648>

Han et al., (2018) *Educational Evaluation, Assessment and Monitoring: A Systematic Approach*. Lisse. Swets and Zeitlinger. International School Improvement Project.

Keller, W. K. (1997). Teacher Efficacy: Its Meaning and Measure. *Review of Educational Research*, 68(2), 202–248. <https://doi.org/10.3102/00346543068002202>

Kinnear, R. and Taylor, H. (2013). What matters to supervisors and is this reflected in what they do? Analysing the work of university supervisors of the practicum. *Journal of Education for Teaching*, 45(3), 262–276. <https://doi.org/10.1080/09589236.2019.1599509>

Nurfadilla, I. and Surhato,N.(2020). Quality Assurance in Private School Reviewed From the Effectiveness of Supervision. *Advances in Social Science, Education and Humanities Research, volume 526*

Oluhundare, S. and Shola, A. (2020). *Quality Assurance Strategies as Determinants of Public Secondary Schools' effectiveness*. Kwara State, Nigeria: *BSUJEM* Vol. 2 No. 1 2020.

- Sebastian, J. (2020). Teachers' Perceptions on the Implementation of Internal School Quality. *Journal of Educational Research in Developing Areas*.230
- Sesen, P. (2015). Teachers' Attitude towards Quality Assurance and Standards officers in Primary schools in Evurore, Mbeere North sub-County, Embu County, Kenya. *Journal of Educational Research in Developing Areas*.230
- Turner, G. (2002). Effectiveness of Supervision. *Advances in Social Science, Education and Humanities Research, volume 526*



Influence of School Learning Environment on Quality Education in Public Secondary Schools in Arusha City Council, Tanzania

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Abstract: The study investigated influence of school learning environment on quality education in public secondary schools in Arusha City Council. The study objectives were to: find out the influence of school learning environment on quality education in public secondary schools and determine the intervening measures to the challenges the school management face in providing the necessary school learning environment in public secondary schools in Arusha City. The study adopted convergent mixed methods design to gather data. The sample size of one CEO, 6 school heads – purposively involved in the study, 30 teachers and 61 students selected by simple and stratified random sampling techniques participated. Questionnaires and interview guide were used for data collection. The research experts evaluated the instruments to determine content validity. Reliability of the questionnaires were tested in pilot study and Cronbach Alpha coefficient and found TQ at $r = 0.705$ and SQ at $r = 0.705$. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions. The study findings revealed that adequate facilities create healthy learning environment & adequate staffing also influence quality education. Moreover, Poverty, staffing, cooperation, provision of adequate funds and facilities are possible measures to address the challenges facing school management in the provision of school learning environment. The study recommends that school heads should maintain good public relations with education stakeholders for healthy school environment necessary for quality education.

Keywords: Environment, Learning, School, Quality and Education

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1. Introduction

School learning environment is a place where the learners learn and interact with learning facilities in order to be socialized and face the challenges in the society (Eze, 2010). Basically, environment consists of all elements;

physical, biological and social attributes existing around the school which exert some influence on its wellbeing (Asikhia, 2016). According to Entwisle (2018), school environment plays a vital role in the personality development of the students. A proper and conducive environment is necessary for fruitful learning of the

children. The child spends most of his or her time in school, and here the environment is exerting a different influence on skills through curricula, teaching techniques and relationship thus, it is important to maintain a healthy school environment that will enhance their education.

On the other hand, in the views of Suber (2012), quality education is an all-round education that focuses on the holistic development of a child that is, socially, emotionally, mentally, physically and cognitive development of each student regardless of gender, race, ethnicity, socio-economic status, or geographic location. It prepares the child for life, not just examination. It is the actualizing of human potential so that the individual can become somebody more than what he was before (HakiElimu, 2015). In a related study, Asikhia (2016) maintained that the characteristics of quality education are professional leadership, common vision and goals. Other features include existence of a conducive learning environment, high quality of learning and teaching, availability of resources, high expectations of students and teachers, positive development of students and positive support from stakeholders. These are only made possible through good school management.

The 2019 Annual Education Sector Performance Report (AESPR) indicates that the total number of secondary schools increased by 24% from 4,884 in 2018 to 5,001 in 2019. The number of government schools increased by 2.9% that is, from 3,636 in 2018 to 3742 in 2019. The new schools established includes a Special Needs school, which accommodates 640 students in form 1 to 1V in Arusha District (HakiElimu, 2018). The school has eight classrooms, an administration building, a dining hall, kitchen, laboratories, ICT room, library and dormitory. The government continues with investment, giving more focus on underprivileged areas to ensure equitable access. In this study, environment includes all the external condition and influences in the school that help the student to get quality education necessary in solving environmental problem (Hallack, 2016). Others include laboratory equipment, library facilities, qualified teachers, furniture, school buildings, school mapping, water, electricity, good administrative management, teacher pupil relationship and school location. The physical appearance and general condition of school facilities are the striking basis upon which many parents make initial judgment about the quality of education in the school. They are often turned off by dilapidated school blocks with leaking roofs, profane writings on walls, broken windows, bushy lawns and overgrown hedges. In Tanzania today, school environment plays a crucial role in the quality of education hence it is an important factor when evaluating quality of education. Previous findings have linked environment with the quality of education. However, the outcome of education in public secondary school falls below the required quality thereby creating a gap that the current study sought to investigate.

1.1 Research Questions

The study answered the following research questions.

- i. How does the school learning environment influence quality education of students in public secondary school in Arusha City?
- ii. What are the intervening measures to the challenges the school management faces in providing the necessary school learning environment in public secondary school in Arusha City?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was guided by Humanistic Learning Theory by Maslow.

2.1 Humanistic Learning Theory

This theory focused on the capability of humans to reach their fullest potential rather than looking and trying to make sense of the dysfunctional brain (McLeod, 2007). By analyzing the environment, the theory posited that given the right environment human will develop to their fullest potential. Humanistic learning developed further and harness the idea that if students are upset, sad, or distressed, they're less likely to be able to focus on learning. This encourages teachers to create a classroom environment that helps students feel comfortable and safe so that they can focus on their learning. Humanism seeks to engage the learner as a whole, where their intellect, feelings, social capacities, artistic and practical skills are given attention in the learning process. The purpose of education is for learners to progress towards autonomy and the realization of one's full potential (referred to as self – actualization)

2.1.1 Application of the Theory to the Current Study

Humanism placed a great deal of emphasis on learning environment that meets the human desires/choice and controls their education. Learners are encouraged to focus on a specific subject of interest for any amount of time they choose, with a reason. Learners should be motivated and engaged in the material they are learning, and this happens when the topic is something the students need and want to know (Baafi, 2020).

The study observed that there is need to increase the school learning environment in education matters in order to improve quality education. Such environment include, physical facilities, classrooms arrangement, sanitation, school mapping, school environment management, school teachers to provide students with a non – threatening environment so that they will feel secure to learn. Once students feel secure, learning becomes easier and more meaningful.

2.2 The Influence of School Learning Environment on Quality Education in Public Secondary School

Ashrad (2019) carried out the investigation on the influence of school environment in academic achievement in English subject in Rawalpindi district, Pakistan. All the secondary school students constituted the population of the study. The research study on the classroom environment has revealed that physical arrangement plays a vital role in teaching and learning process. It can affect the quality of education of both teachers and students. The learning setting comprised of different learners, teachers and physical environment (Lipman, 2010). Physical classroom environment refers to the physical room in which teacher and learner are the main element, including its spatial elements floor, windows walls as well as other classroom equipments, desk, chairs, kegs, chalkboards, tack boards, easels, counters and computer equipment but not limited to these things (Koroye, 2016).

Another study by Afework and Asfaw (2014) found negative effect of inadequacy of physical facilities and resources of school on teaching and learning practice. The study concluded that the availability of physical facilities in the school helps to improve quality achievement as well as to achieve the educational goals. The good learning environment of school such as spacious classrooms, attractive school buildings and better facilities reduce tension, depression, frustration and anxiety. The school size as well as physical infrastructure affects the attitude and the process of personality development of the students. Learning environment improves confidence level and student's potential. In the views of Naz et al., (2013), institutional environment for instance physical condition of infrastructure, affect the social as well as sociological development process of students.

On the other hand, Arshad (2019) reported that unhealthy school environment in which rules are unclear or arbitrary, bullying is accepted if not condoned, and teacher attitudes are indifferent, hostile or unnecessarily punitive is likely to cause high absenteeism, behavior and interpersonal aggression. Also the researcher added that a favorable school environment reduces dropout and a good environment in education is a precondition for learning, especially where a school environment is built upon caring relationships among all.

According to Reuben (2012) in Morocco, on impact of teachers knowledge in provision of quality education, the study interviewed 45 primary teachers, the results shows education is seen as an instrument for change in most of the developing countries, therefore teachers with knowledge and qualification plays a vital role towards change in developing countries. The study indicate that teachers are key ingredient in determining quality education since the quality education is directly related to the quality of teaching and learning. HakiElimu (2018)

asserted that the quality of an education system cannot exceed the quality of its teachers, and quality teachers contribute more on learner achievement than any other factor. Therefore the study suggested that all students deserve the teachers who can help him/her to be independent learner.

2.3 The Intervening Measures to Challenges the School Management Face in Providing the Necessary School Learning Environment in Secondary Schools

Chukwuemeka (2012) examined the influence of environmental factors on the academic performance of students in Port Harcourt local government area of Rivers State. Four research questions guided this study. An instrument titled "Environmental influence on Academic Performance of Secondary School Students Questionnaire" was utilized to elicit information from the respondents. Data was analyzed and percentages were used to find solutions to the research questions. The major findings of the study were; performance is affected by environment, improper maintenance of furniture led to below average student's performance, home background has effect on the academic performance of students, the use of internet has made students to be lazy in their academic works.

A study conducted by Nkuba (2015) on the climate of eight secondary schools in Mvomero district, Morogoro also examined the relationship and influence between school climate and students' academic achievement. The study employed quantitative approach within ex-post facto research design using three climate questionnaires for secondary schools. The study revealed that the climates of all secondary schools were non – conducive or negative. Reuben (2012) noted that, Students' academic achievement is related and influenced by the school climate. Therefore, school climates need to be conducive or positive for the survival and well- being of such schools.

Makoye (2014) conducted the study on assessment of students' academic performance under Secondary Education Development Plan (SEDP 1) implementation in Nyamagana District, Tanzania. Data were collected using structured and non- structured interviews. Field observations and secondary data supplemented the data collected using questionnaires. Purposive sampling procedure was used to select 5 schools that were in place before and after SEDP 1 implementation. The results suggest that major factors which could have affected students' academic performance included poor teaching/learning environment such as inadequate classrooms, text books, basic laboratory and library equipment/facilities. According to a report by HakiElimu

(2015), poor learning environment is largely attributed to inadequate funding of the planned activities, misallocation of funds, poor participation by the key stakeholders and untimely disbursement of funds. In light of the above it is recommended that successful implementation of future similar programmes should take into consideration the following, provision of adequate funds for budgeted activities and proper financial management, sensitization of key stakeholders in programme/project management, provision of regular in service training to teachers aiming at improving teaching methodology and professional skills, and training more teachers in mathematics and science based subjects in order to reduce the existing deficit.

3. Methodology

This study adopted convergent mixed methods design. According to Creswell and Creswell (2018), convergent mixed methods design involves the collection of quantitative and qualitative data simultaneously for the purpose of understanding the research problem. The purpose of this design is to have both forms of data whereby the weakness of one form of data is supplemented by the strength of the other form. The sample size of one CEO, 6 school heads – purposively involved in the study, 30 teachers and 61 students selected

by simple and stratified random sampling techniques formed part of the respondents in the study. Questionnaires and interview guide were used for data collection. The research experts in the university evaluated the instruments to determine content validity. Reliability of the questionnaires were tested in pilot study and Cronbach Alpha coefficient was correlated and found TQ at $r = 0.705$ and SQ at $r = 0.705$. Quantitative data was analyzed using descriptive statistics in the SPSS version 20 and results were presented in tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions

4. Results and Discussion

The findings were discussed with regard to research objectives as follows:

4.1 The Influence of School Learning Environment on Quality Education in Public Secondary Schools in Arusha City

The objective of the study intended to get responses on how school learning environment influence Quality education in Public Secondary School Arusha City. Table 1 presents the summary of the finding as follows:

Table 1: Findings on Influence of School Learning Environment on Quality Education in Public Secondary School

| Statement | Students n=61 f(%) | Teachers n=30 f(%) | Total n=91 f(%) |
|---|--------------------------|--------------------------|-----------------------|
| Availability of teaching and learning materials affect quality education | 42(64) | 26(87) | 68(70) |
| Adequate school buildings& offices have an effect on quality education | 48(72) | 28(93) | 76(83) |
| Infrastructure and physical facilities influence quality education | 38(57) | 30(100) | 68(75) |
| Availability of qualified teachers affects quality education | 45(67) | 30(100) | 75(82) |
| Reliable electricity and clean water influence quality education | 53(79) | 30(100) | 83(86) |
| Teacher's timely coverage of syllabus influence quality education | 37(55) | 24(80) | 61(63) |
| Good administrative management affect quality education | 45(67) | 29(97) | 74(77) |
| Provision of exercise, test and examination have an effect on quality education | 50(75) | 28(93) | 78(85) |
| Availability of playing ground affects quality education | 44(66) | 30(100) | 74(81) |
| Proper time management affects quality education | 41(61) | 30(100) | 71(78) |

f=Frequency, %=Percentages, n=Number of respondents, values in brackets are percentage of Students and teachers who agreed with the statement. Hence those with contrary opinion to the statement are implied. **Source: Field data (2022)**

Table 1 show the results of the findings from a total number of 91 respondents who participated in the study. On the sub-item availability of teaching and learning material affect quality education, 26(87%) of teachers agreed that availability of teaching and learning material affect quality education and 42(64%) of the students also agreed. Thus, 68(70%) of the entire respondents observed that availability of teaching and learning material affect quality education positively while 23(30%) of the respondents held contrary opinion. The researcher established that the permutation of adequate teaching and learning materials in educational institution is sure bet for quality education. According to UNESCO (2014), the availability of adequate teachers, good quality instructional materials such as text books, influence teacher's satisfaction and motivation as well as educational outcomes. Teachers should be consulted on the types of teaching and learning materials they will use and be involved in their choice and development. In addition, there is need to prioritize the availability of good-quality teaching and learning materials. Education policy may also promote creative solutions to maximize instructional effectiveness.

On the other hand, 76(83%) of respondents out of 91 agreed that adequate school buildings and offices affect quality education while 15(17%) disagreed. In this case, 28(93%) of teachers agreed and 48(72%) of students were in agreement. To put this to context, the finding shows that the perception of majority of the respondents was based on the influence of adequate school buildings and offices which affect quality education. School buildings and offices are responsible for effective delivery of education programmes and at minimum, the infrastructure should provide a physical environment that is comfortable, safe, secure, and accessible. Building design plays an important role in quality education. The respondents reported that school buildings are designed to support easy movement, which in turn support teaching and learning, well-being, and safety of students and teachers hence quality education. To support this finding, Afework and Asfaw (2014) found negative effects of inadequacy of physical facilities and resources of school on teaching and learning practice in Harari, Ethiopia. The study concluded that the availability of physical facilities, at school helps to improve quality achievement as well as to achieve the educational goals.

Furthermore, a total of 68(75%) respondents agreed that availability of infrastructure and physical facilities influence quality education positively. In this case 38(57%) of students and 30(100%) of teachers agreed on the mentioned item. The finding shows that the majority of the respondents support that good infrastructures helps teachers and students to accomplish quality education. School infrastructure include classrooms, laboratories for science practical, the halls, equipments, dormitories and sanitation facilities all these affect quality education positively. There is strong evidence that quality

infrastructure and physical facilities facilitates improve student outcome and reduce dropout rates. The findings are in agreement with Equity Theory of Humanistic Learning Theory by Maslow. This theory focused on the capability of humans to reach their fullest potential rather than looking and trying to make sense of the dysfunctional brain (McLeod, 2007). By analyzing the environment, the theory posited that given the right environment, human beings would develop to their fullest potential. Humanistic learning developed further and harnessed the idea that if students are upset, sad, or distressed, they're less likely to be able to focus on learning. Although education policymakers are increasingly focusing on the quality of education and school learning environments, the comfort of students should also be considered.

Additionally, on the sub item availability of qualified teachers influence quality education, a total of 75(82%) out of 91 respondents agreed. Further, 30(100%) teachers and 45 (67%) of students were in support. The findings show that majority of the respondents were in agreement with the statement that availability of qualified teachers influence quality education positively. The study conducted in Australia by Methew et al. (2018) on the relationship between teacher qualification and the quality of the early childhood education reported that good working conditions and availability of qualified teachers directly influenced quality education. Generally, the results show that higher the teacher qualifications are significantly correlated with higher quality of early childhood education and care. Honeycutt (2020) pointed out that quality is closely linked to the level of staff qualification, which may indicate that it is important to have teachers with qualification higher than secondary education working with young children. The professionalization of early childhood sector through more qualified staff may lead to significant gains for children and their families, contributing towards life-long outcomes that will benefit all society

Reliable electricity and clean water affects quality education was also supported by a total of 83 (86%) out of 91 respondents while 8(14%) disagreed. This finding is in agreement with Naz et al., (2013) who argued that good learning environment in school such as spacious classrooms, attractive school buildings and better facilities reduce tension, depression, frustration and anxiety. The school size, as well as physical infrastructure, affects the attitude and the process of personality development of the students. Learning environment improves confidence level and student's potential. Similarly, physical condition of infrastructure in an institution, influence, the social as well as sociological development process of student.

Moreover, 24(80%) of teachers out of 30 agreed while on the other hand 57(55%) of the students agreed that teacher's timely coverage of syllabus influence quality education. The results are in agreement with the study done by UNESCO (2014) that found the relationship between environment and design with the classroom from

a theoretical perspective. They found that physical environment of the classroom acts as a Silent Curriculum (SC). It means that classroom environmental design can facilitate and improve the learning process like the overt curriculum. According to Njoroge (2012), attainment of timely coverage of syllabus is mainly achieved through teachers and hence secondary schools should consider putting more emphasis on teachers' relational factors such as effective communication, conflict resolution, coordination and attitude and pay attention to students' attitude, entry behavior and work environment as a basic requirement for timely syllabus coverage.

Besides, on good administrative management affect quality education, a total of 74(77%) respondents gave their contribution as follows: 29(97%) of teachers out of 61 and 45(67%) of students agreed that good administrative management affect quality education. This is in agreement with Odeh (2015) who investigated the influence of school environment on academic achievement of students in secondary school. The study recommended that school authorities should provide appropriate and conducive school environment that has good climate for effective teaching and learning. Such environment should be safe, students treated fairly by teachers and happy to be in school as well as feel they are a part of the school.

Regarding the provision of exercise, test and examination have an effect on quality education, 78(85%) out of 91 respondents were in agreement. Exercise and test are activities which influence the quality education and improve academic performance in the subject matter. The exercise and tests given after the lesson help student to be competent and help in creating memory for students. On the other hand, examination play a vital role in education as the information received helps in selection, placement, and determining the instructional effectiveness of program of study. All these depend on the correct data from the examination. For instance, a student who performs well in regular test and exercise gets more knowledge and becomes knowledgeable in different subjects. This finding is in agreement with Methew et al., (2018) who argued that the school environment may influences students' emotions and health behaviors as well. Further, the study added that a positive school environment enhances motivation, increases educational aspirations (doing more exercise) and improves attendance and retention. The findings show that majority (81%) of the respondents were

in agreement with the statement that availability of play ground affects quality education positively. This is also in agreement with the study done by Shahidullah (2014) on the school playground and its impact on children's learning and development. The study reported that children spend a reasonable amount of time in school, therefore school playground and school playtime are fundamentally important to children for their fun and relaxation as well as for their good health and well-being. School playground is significant in their daily life for fulfilling their interest, development and learning needs. For example, schools should have basic facilities like playground and open fields for children's outdoor play in front of schools.

Finally, on proper time management affects quality education, a total number of 71(78%) out of 91 respondents agreed, whereby 30(100%) teachers and 41(61%) students positively agreed with the item mentioned. Time management plays a vital role in improving learners' and teachers' achievements. Saghir and Ayesha (2019) conducted a study on Path Relationship of Time Management and Academic Achievement of students in distance learning institution. The study found that Human resource and its function controlled by associations can be improved over the span of time or be changed with the passage of time. However, the main resource that cannot be changed, controlled, obtained or put away is time itself. This implies that time is significant and it might really influence quality education. It is necessary to acquire skills to manage time and every learner must use these skills for the sake of quality education. A student can only survive if he/she has ability of using time effectively.

4.2 The Intervening Measures to Challenges the School Management Face in Providing the Necessary School Learning Environment in Secondary school

The objective was investigated using questionnaires for teachers and students, the respondents gave their opinion on the intervening measures to the challenges the school management face in providing the necessary school learning environment. Table 2 summarized the findings.

Table 2: Quantitative Findings on the Intervening Measures to Challenges the School Management Face in Providing the Necessary School Learning Environment in Secondary School

| Statement | Students n=61 f(%) | Teachers n=30 f(%) | Total n=91 f(%) |
|--|--------------------------|--------------------------|-----------------------|
| Provision of adequate teaching and learning materials | 51(76) | 28(93) | 79(82) |
| Reliable electricity and clean water affects quality education | 44(66) | 30(100) | 74(81) |
| Increased government capitation grants | 45(67) | 30(100) | 75(78) |
| Embracing participatory leadership | 41(61) | 29(97) | 64(73) |
| Improved school learning environment | 53(79) | 26(87) | 79(82) |
| Individual attention to student | 42(64) | 28(93) | 70(73) |
| Timely disbursement of capitation grants | 48(72) | 26(87) | 74(77) |
| Parents support | 48(72) | 30(100) | 78(81) |
| Building more classes | 45(67) | 30(100) | 75(77) |
| Availability of enough funds to support managerial activities | 36(54) | 30(100) | 66(69) |
| Political support | 44(66) | 30(100) | 74(77) |
| Adequate school buildings and offices affect quality education | 52(78) | 28(93) | 85(83) |
| Adequate classrooms | 46(69) | 26(87) | 72(75) |

f=Frequency, %=Percentages, n=Number of respondents, values in brackets are percentage of Students and teachers who agreed with the statement. Hence those with contrary opinion to the statement are implied **Source: field data (2022)**

Table 2 shows various responses from the students and teachers on the provision of adequate teaching and learning material as the measures to the challenges facing the school management in providing the necessary school learning environment in public secondary schools in Arusha City. The findings show that a total of 79(82%) of the respondents agreed that provision of adequate teaching and learning material is needed. In other words they suggested the need to improve quality of education by providing enough teaching and learning materials. The researcher established that teaching and learning resources play an important role in the delivery of quality education. Consequently, stakeholders in education should give more attention to the provision of teaching and learning material in order to enhance the necessary school learning environment. The findings were related to what the study found in the literature review section where Oladejo et al., (2011) referred to instructional materials as objects or devices, which help the teacher to make a lesson much clearer to the learner. Instructional materials are also described as concrete or physical objects which provide sound, visual or both to the sensory organs during teaching. According to Namugaan (2012), the provision of enough reading materials in the school, coverage of syllabus on time, commitment of teachers to their work, adequate teaching and learning materials, and secure

environment help to improve the quality of the academic achievement of students in schools.

The majority of respondents that is, 74(81%) of the respondents reported that availability of reliable electricity and clean water affect quality education as a measure to the challenges facing school management in providing the necessary school learning environment. Most schools in the study area do not have electricity due to lack of connection to the main power line or as a result of school building that do not meet standards required for electric installation. Besides, availability of clean water is also a requirement that most schools in the study area grapple with. However, for healthy school learning environment that enhances quality education, there is need to provide electricity with a backup such as a generator and clean water with reliable storage tanks or bore holes. In support of this, Hallack (2016) identified physical facilities as the main factor contributing to academic achievement in the school system. These include the school buildings, clean water, classrooms, furniture, libraries, laboratories, electricity, recreational equipment, apparatus and other instructional materials.

Majority of teachers felt that in order to realize quality education, the government should increase government capitation grants, while on the same sub-item, 45(67%) of

student supported the idea for increased government capitation grants while 16(26%) held contrary opinion. Therefore, a total of 90% of respondents suggested that the government should increase capitation grants. Teachers maintained that the capitation grants allocated to secondary schools at the moment is not commensurate with the inflation rate hence the management is not able to purchase the necessary basics requirements such as paying bills, payment for non teaching staff and buying pieces of chalks. In fact, the grants are so limited that at some point non teaching staff hardly receives their salary on time (Makoye, 2014). Students also reported that inadequate government financial allocation per student has compelled their parents in collaboration with school management to initiate lunch programme. For parents who are economically unstable, their children are forced to forego lunch, which negatively affects their school environment.

In order to provide necessary school environment, there is need to embrace participatory leadership in schools in order to create conducive learning environment. In this respect only 1 (3%) disagreed while 90(97%) supported the idea. Therefore, the respondents suggested that the leader within the organization should apply participatory style of leadership where opinion of other teachers also matter in making decisions that affect the school environment in the working place in order to receive the necessary staff support. Equally, heads of schools should allocate responsibilities to the staff members and provide guidance where necessary. According to Mohamed (2016), it is the responsibilities of school heads to apply their leadership skills to ensure effective academic performance; hence the use of appropriate procedures of supervision by school heads is essential for the progress of teaching and learning. According to Igoro (2019), the possible measures to curb management challenges facing school administrators were through advising parents during schools visits on how to participate in school activities as well as to discuss and come up with a solution on how to handle school matters.

Majority of the respondents 66(69%) felt that availability of enough funds to support managerial activities is the measures which school management should initiate in order to improve school learning environment. Those who disagreed opined that for a long time secondary schools have operated on limited funds. Therefore, to identify availability of enough funds as a measure to improve school environment without suggesting the necessary strategies to increase funds is inappropriate. For instance, schools should establish income- generating activities as the way to mobilize more resources for quality education. Consequently, the allocation of more funds by the government is the best way to address school management challenges. Hence, improvement and allocation of sufficient budget to school is very important for positive outcomes (Makoye, 2014).

In addition, political support is a measure in order to provide quality school learning environment. This

challenge need to be addressed by educational stakeholders. School management should find collaboration with political leaders for practical solutions to challenges bedeviling improved quality education in secondary schools in Arusha city. The findings are in consonance with the finding in the study by Bill (2013) who observed that the real challenge facing most schools is no longer how to improve but, more importantly, how to sustain improvement. The study also found that adequate school buildings and offices affect quality education. This means that for all intent and purpose, the government has the responsibility of providing schools building and staff offices in schools. On this sub-item, 6(17%) of the respondents disagreed. They observed that, the government had increased infrastructure so as to address the gap of inadequate classroom. The findings are in consonance with finding in the study by Charles (2020) who concluded that educational stakeholders could help in building school learning environment and finally recommended that the government should allocate more funds to school, employ more teachers and school administrators should cooperate with all educational stakeholders in curbing management challenges in order to close the achievement gap among students. In a nutshell, there is need to ensure that every students is taught by a well trained teachers.

During interview, a respondent put forth the following views;

In order to attain good school learning environment, there is need for proper implementation of the curriculum, timely syllabus coverage, good relationship between school heads and staff members and frequent rotation of school heads to avoid monotony in school administration (Personal interview, 27thApril, 2022).

The views put forth by participant, shows that if school heads and staff members fail to keep a good relationship in school, it will create frequent misunderstandings between the school heads and staff members, also within staff members themselves. The respondents added that the existence of misunderstandings brought by poor relationship within school lowers teachers' job performance and consequently will result to poor school learning environments. Frequent rotation of school heads to avoid monotony in school administration is a good measure to address issues affecting school learning environments. The findings concur with Platisa, Reklitish and Zimeras (2015) who conducted a study on job satisfaction and its dimensions on job performance in small and medium enterprise in Ibadan and Southwestern Nigeria. The study found that as a leader, one should build a good working relationship among the teachers, students, community at large and with other stakeholder of education.

Similarly, while outlining how learning environment influences quality education, a respondent observed that;

It is imperative to note that adequate classroom, desks and chairs that ensures no congestion in one class and security creates healthy learning environment. Similarly, adequate staffing where all classes are attended will influence quality education (Personal interview, 27th April, 2022).

The observation implies that learning environment influences quality education by creating conducive environment for students to learn. Similarly, peaceful school environment is necessary for effective teaching and learning. Kiptun (2018) pointed out the aspects of school physical environment such as poor light, noises, and high levels of carbon dioxide in classrooms and inconsistent temperatures that make teaching and learning difficult. Teachers are likely to be motivated to effectively play their role and make a solid contribution to quality primary education when they experience satisfaction. It was noted that one of the factors that promote teachers satisfaction is school environment, which constitutes a whole range of factors that influence the teaching – learning process within the school. Others include classrooms, library, technical workshops, quality teaching methods and peers.

While suggesting the intervening measures to the challenges facing the school management in providing the necessary school learning environment, one education officer reported that;

Proper management of resources, managing all planning programmes according to the calendar and participatory leadership will enable the school manager to provide the needed school learning environment (Personal interview, 28th April, 2022).

The theme identified in this case was Management of Resources and Participatory Leadership. The views by the city education officer (CEO1) are also shared by one school head. However, the school head further emphasized on the need for proper management of resources in schools through participatory leadership, increased budget allocation to secondary schools and need for management seminars and workshops in order to train the newly appointed school heads on management roles. In regard to intervening measures, the study by Makoye (2014) recommended that successful implementation of healthy learning environment should take into consideration the following; provision of adequate funds for budgeted activities and proper financial management. Additionally, sensitization of key stakeholders in programme/project management, provision of regular service training to teachers aiming at improving teaching methodology and profession skills, and training more teachers in mathematics and science based subjects in order to reduce the existing deficit are necessary for healthy learning environment. The study concluded that if

the practices are observed, healthy school learning environment that influence Quality Education will be achieved.

5. Conclusion and Recommendations

5.1 Conclusion

The study found that availability of adequate teaching and learning materials, adequate school buildings, availability of playing ground, proper time management and offices, influence quality of education offered in secondary schools. Furthermore, availability of qualified teachers affects quality education. Teachers' timely coverage of syllabus, good administrative management, availability of enough classrooms to reduce congestion in classes, motivated student with higher entry behavior and self drive among teachers and students also influence quality education in secondary schools.

The study also concludes that provision of adequate teaching/learning materials, reliable electricity and clean water, increased government capitation grants, embracing participatory leadership, improved school learning environment and individual attention to students are measures necessary to improve school learning environment for quality education. Equally, timely disbursement of capitation grants, parents' support, building more classes, availability of enough funds to support managerial activities, political support, and Offices affects quality education. Besides, adequate school buildings and adequate classrooms when attended to will enable the school management to provide healthy learning environment in public secondary school.

5.2 Recommendations

Based on the research findings, the following recommendations are given forth;

- i. The government should construct enough classrooms, provide more desks and chairs in order to avoid overcrowded classes, which are difficult for teachers to handle teachers to control and deliver learning instructions effectively.
- ii. The government should increase budget allocation to the ministry of education science and technology for increased capitation grants to schools. Similarly, schools should strive to improve community participation in order to enhance the provision of healthy school environment for quality teaching and learning.

References

- Afework,A. and Asfaw (2014). *Availability of School Facilities and their Effects on the Quality Education in Government Secondary*

- Schools of Harari Regional State and East Hararaghe Zone*. Ethiopia: African Journey.
- Asikhia, I. (2016). *The Influence of School Environment on Academic Performance of Biology Students in Secondary Schools in Ukanafun Local Government Area of Akwalbom State*. Nigeria: Ibo State University.
- Arshad, M., Qamar, Z. A., Gulzar, F. H., & Ahmed, G. (2019). *School Environmental Effects on Academic Achievement in English Subject at Secondary Level in District Rawalpindi, Pakistan*. Indian Journal of Science and Technology, 12(6).
- Bill, R. (2013). *School physical Environment and Student Academic Performance Advances in Physical Education*: Ghana.
- Baafi, I. A. (2020). *Supervisory Strategies as Correlate of Quality Education among Secondary Schools in Ibadan Southwest Local Government Area of Oyo State*. An Unpublished Med Thesis: University of Ibadan.
- Charles (2020). *Management Challenges Facing School Administrators and Pupils' Academic Performance in Public Primary Schools*. Tanzania: Sengerema District Mwanza.
- Chukwuemeka, O. (2012). *Department of Social Studies*. Ignatius Ajuru University of Education Port Harcourt.
- Creswell, J. R. and Creswell, J. D. (2018). *Resign Design: Qualitative and Mixed Methods Approach*. 5th Ed. USA: Sage Publication.
- Entwisle, L. O. (2018). *Library and information science text for Africa*: Ibadan third world information services limited.
- Hallack, A. (2016). *Strategies to Distributed Generation*. New York: Springer.
- HakiElimu (2018). *Working Condition of Teachers in Tanzania*. Dar es Salaam- Tanzania: HR-Consult.
- HakiElimu (2015). *A Study on the Working Condition of Teachers in Tanzania*. Dar es Salaam- Tanzania: HR-Consult.
- Honeycutt, D. (2008). *The Relationship of Teacher Qualifications, Quality of Care and Student Achievement Outcomes in the Arkansas Annarbor*
- Igoro, P. A. (2019). *A handbook on Educational Research*. Nairobi: New Kemit Publishers
- Kiptum, J. K. (2018). *Influence of School Physical Environment on Teachers' Satisfaction in Selected Public Primary Schools in Elgeyo Marakwet County*. Kenya: Kenyatta University Kenya.
- Koroye, T. (2016). *The Influence of School Physical Environment on Secondary School Students' Academic Performance*. Bayelsa State. *Asian Journal of Educational Research*, 2016.
- Lipman, L. O. (2010). *Library and information science text for Africa*: Ibadan third world information services limited.
- Makoye, S. (2014). *Assessment of Students' Academic Performance*. Nyamagan: Ukerewe Tanzania. (Mgbodile, 2004).
- Mgbodile, R. W. (2004). *The Role of Parents in Promoting Effective Learning in Public Schools*. Unpublished Thesis. Nairobi: Catholic University of Eastern Africa.
- Matthew et al., (2017). *The Relationship between Teachers Qualification and the Quality of the Early Childhood Education and Care Environment*. Australia.
- Mohamed, T. O. (2016). *Fundamentals in Education administration Enugu*. Magnet Business Enterprises: Nigeria.
- Naz et al., B. (2013). *Classroom Learning Environment in Encyclopedia of Science Education*. Gunstone, Dordrecht: Springer.
- Nkuba, L. (2015). *Influence of School Climate on Secondary Performance*. Open University of Tanzania.
- Namugaan, A. (2012). *Time Management Skills Impact on Self Efface and Academic Performance*. Journal of American science.
- Njoroge, D. (2012). *Education Players in Bid to Improve Performance Educational New*. Uganda.
- Odeh, R. et al., (2015) *Influence of Learning Environment on Academic Achievement of Students*. University of Agriculture: Makurd.
- Oladejo, R. C. Plista, S. and Rexo, F. G. (2011). *Influence of School Environment on Academic Achievement of Students in Secondary Schools*.

Zone "A" Senatorial District of Benue state
Nigeria International journal of Recent
Scientific Research Vol 6.

Platisa at el., (2015) *On Job Satisfaction and Its
Dimensions on Job Performance in Small and
Medium
Enterprise: Nigeria*

Reuben, S. (2012). *On Impact of Teachers Knowledge in
Provision of Quality Education: Morocco.*

Shahidullah.S. (2014). *School Playground. Its Impact on
Children's learning and Development.*
Bangladesh

Saghir, Z. and Ayesha, C. (2019). *Path Relationship of
Time management and Academic Achievement of
Students in Distance Learning Institution;*
Nigeria

Suber ,A. (2012). *Facilitates Management Quality and
User Satisfaction in Out Sourced Services,*
Sch. BultEnvironment.Liverpool.Joonmoores
University. Englend.

UNICEF (2014). *Defining Quality in Education A Paper
Presented by UNICEF at the UNESCO, France:*
A challenge and a vision Conceptual Paper.



Assessment of the Challenges Facing Post-graduate Students in Research: A Study of Universities in Arusha Region

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Abstract: *This study investigated the challenges facing post-graduate students in conducting research in Universities in Arusha Region. The study assessed the significance of post-graduate students to conduct research in universities and suggested the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha Region. The theory of Communicative Exchanges in Supervision guided the study. Convergent mixed methods design was adopted whereby the researcher collected both quantitative and qualitative data, analyzed them separately, and then compared the results to see if the findings confirm or disconfirm to each other. Data were collected using the questionnaire and structured interview. The study targeted 600 master students and 34 post-graduate lecturers. The sample size consisted of 130 respondents (10 Postgraduate Lecturers and 120 Postgraduate students). The instrument was tested for reliability where Cronbach coefficient Alpha was found to correlate at $r = 0.858$. While the trustworthiness of instrument for collecting qualitative data was done by ensuring its credibility, transferability and dependability indicating that the instruments were fairly reliable for the study. Quantitative data was analyzed using descriptive statistics in the SPSS version 25 and results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions. The study revealed that Post-graduate research provides students with decision making and problem solving skills. The study suggested that research experts should disseminate enough knowledge and skills on research methodology to the post-graduate students and the number of research experts in universities in Arusha region should be increased.*

Keywords: *Post-graduate, Students, Research, University, Arusha*

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1. Introduction

According to Claudius (2016), postgraduate research is a form of study offered by a university or an institution of advanced learning such that, the emphasis of postgraduate research is to develop systematic skills of investigation in research process. It is not necessarily aimed at producing ground breaking innovation or extending knowledge as is commonly perceived. Most postgraduate research involves basic and to a lesser extent applied or collaborative research.

NurAfiqah & Nadwah (2019) carried out a study to investigate the relationship between research method skill and autonomous learning among 125 postgraduate students from the Department of Arabic Language and Literature at the International Islamic University Malaysia, by using Pearson Correlation Coefficient. The study found that the knowledge of research methodology and the skills of applying it in research are two important things required by postgraduate student in producing a good research. A postgraduate student who is equipped with research skill or knowledge of research methodology and able to apply it while conducting research therefore, should be autonomous in research writing.

According to Bhome, et al., (2015), research is an essential and powerful tool in leading man towards progress. Without systematic research there would have been very little progress. Research is significant both in scientific and non-scientific fields. It is important for the following reasons: A research problem refers to a complexity which a researcher or a scientific community or an industry or a government organization or a society experiences. It may be a theoretical or a practical situation. It calls for a systematic understanding and possible solution, research on existing theories and concepts help us recognize their range and applications, it is the bank of knowledge and provides strategy for solving problems, mathematical and logical research on business and industry reduces the problems in them, it leads to the identification and categorization of new materials, new living things and new stars. Note that inventions can be done through research. Social research helps find answers to social problems (Kikula & Quorro, 2007). They explain social phenomena and try to find solution to social problems. Thus, research is the fountain of knowledge for the sake of understanding and an important source of providing guidelines for solving different business, governmental and social problems. It is a category of formal training which enables one to understand the new developments in one's field in a better way.

Mapolisa & Mafa (2012) stated that in the world over, universities are recognized as places where knowledge generation, research and innovation are advanced. Postgraduate programmes are considered conduits

through which universities develop research capacity and also generate high skills needed for a functional economy and in addressing complex issues such as global financial recessions, climate change and poverty alleviation. Postgraduate research takes various forms but generally requires those admitted to such programmes to have completed bachelor's degree or a diploma (Botha & Simelane, 2007).

Consequently, nomenclatures such as postgraduate diploma, master's degree, master of philosophy, PhD or higher PhD are now commonly encountered in tertiary education systems. Postgraduate qualifications may be classified as traditional/academic or professional degrees. The traditional postgraduate qualifications tend to be generic while professional ones reflect a deeper understanding of a discipline (Mapolisa & Mafa, 2012). The requirements for admission into postgraduate programs vary from institution to institution or from one jurisdiction to another. Universities the world over are recognized as places where knowledge generation, scholarship and innovation are advanced (Kearney, 2008).

Postgraduate students have faced the challenges in writing their research project. In spite of the existence of the challenges in conducting research; there are limited studies which have been conducted to investigate the nature and scope of this phenomenon (Claudius, 2016). Therefore, this study was triggered by the limited knowledge on the nature and scope of challenges facing the majority of postgraduate students in Tanzanian in the context of writing theses and dissertations.

1.1 Research Questions

To fulfill the purpose of the study the following research questions guided this study:

- i. What is the significance of post-graduate student to conduct research in universities in Arusha Region?
- ii. What are the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha Region?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was anchored on Communicative Exchanges in Supervision.

2.1 Theory of Communicative Exchanges in Supervision of Dissertations

Communicative Exchange Theory is understood as an aspect of power. The theory emphasise a multi-dimensional responsibility to support knowledge development in scientific writing and todo so in a way that leads to academically desirable outcome. Augustsson and Jaldemark (2014) argues that it is significant to recall that through the application of written statements in the drafts of the dissertation, the supervisor exercises a unique influence on the student's work by linking her or his opinions towards the student's specific situation. However, it is crucial to emphasize that the analysis is performed in the middle of a supervision process, which means that the statements from the supervisor for analysis constitute a reaction to a draft that the student has sent to the supervisor. In the next stage of the process, the students' reactions to the supervisor's statements would be included in the next draft, which, in turn, should be submitted for supervision at a later date. Supervision includes at least two geographical locations. This means that participation takes place on campus, usually during a one-to-one meeting and in classroom (De Beer & Mason 2009; Mac Keogh, 2006).

The theory succeeded to show that, Supervision is a relevant teaching practice for almost every student and teacher who participates in higher education. This practice includes supervisory meetings between students and teachers. During these meetings, students and teachers discuss drafts of the students' dissertation work (Sirajul. & Samsudin, 2020). By participating in such practice, the students are supposed to perform academic work that they cannot do alone, or in the words of Vygotsky (1987), do "more in the intellectual sphere than he/she is capable of doing independently". Therefore, students' participation in this practice should develop their academic research and writing skills, as they learn from more experienced writers, such as the supervisor, and more knowledgeable peers, such as other students.

2.1.1 Application of the Theory to the Current Study

The theory shows that the quality of supervisors' utterances embraces the difference between the application of comments, points of view, instructions, and questions. Supervisors use comments to increase students' independent responsibility for their work and are, as such, open for the students' own words. However, it is up to the student to closely read between the lines to interpret the message. This also means that supervisors can use questions formulated on the basis of a teaching curriculum to demand students to take independent actions. That is, supervisors allow students from a relatively authoritative supervision to independently come up with suitable

solutions to identified problems. Nevertheless, this depends heavily on the wording of the questions that they pose. Three types of identifications were revealed in the study: recommendations, developments, and problem solving. These types differ in that one is an opinion in favour of something. Whereas one asks for more details about something, the other one is an explanation of how these details may be related to each other and the topic in question. The outlined theory is enlightening because if the supervisor of a course about scientific writing, for example, would like to increase the degree of student autonomy, he or she could strategically do that in two stages. Firstly, it can be done by changing the quality of utterance for example, by increasing the number of comments and reducing the number of points of view and instructions. Secondly, it can be done by combining the chosen quality with the most suitable identification.

2.3 Empirical Literature Review

The empirical literature was reviewed with regard to research objectives namely;

2.3.1 The Significance of Post Graduate Students in Conducting Research

A study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University observed that research undertaking help post graduate students to comprehend nature and normalize phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, adds new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking. Similarly, a study by Mahammoda (2016) on factors affecting the quality of undergraduate research work in Bahir Dar University Ethiopia contend that conducting research for universities student is very significant because it allows disproval of lies and support of truth, build knowledge and facilitate learning, discover solutions to social problems and develop creativity.

A study by Olibie, Ngozi & Uzochina (2015) on Characteristics of Post Graduate Education Research Mentoring in Universities in Nigeria: Curricular Enhancement Strategies where two research questions were used. Proportionate stratified sampling technique was used to select 180 post graduate students for the study. A 27 -item questionnaire was used to collect data which was analysed using frequencies and percentages. Findings indicated that research mentoring across institutions was characterized by supervisor's criticisms without providing insights, setting of unrealistic deadlines and expectations, and erosion of students' self-esteem. Focus on improving technical research skills, communicating high expectations, self-monitoring processes, encouraging active knowledge construction process, widening networks for research improvements, and supervisor-

supervisee brainstorming, were almost lacking. The observed characteristics would not in any way serve as catalysts for research as they are most unlikely to promote quality post graduate research. Recommendations were made to propose curricular enhancement strategies to reinvigorate research mentoring for quality postgraduate research.

A study by Pillai, et al., (2015) on the significance of research in post-graduate education and ways to facilitate used survey design, the findings revealed that, there are various reasons why it is necessary to give attention and emphasis to postgraduate research. Postgraduate training lays a scientific, rational and ethical foundation for practice of medicine in the future. Most of the colleges have strengthened infrastructure and taken initiatives to foster postgraduate research. They include training in research methodology, establishment of institutional research and ethics committees, promoting students and teachers to write research projects and even providing funding for implementing research and presenting the same in conferences and meetings. However, some postgraduates prefer to walk on the trodden path, their mentors and teachers don't find enough time to guide them and strong funding options to support postgraduate research are practically nonexistent in the majority of the medical institutions in the country. There is a need for a radical reform in all these areas. Incentive approach both for students as well as teachers and sizeable funding for postgraduate research might significantly improve the quality and output of postgraduate research. According to Singh (2021) on the study Significance of Research Process in Research Work revealed that, Research process consists of a series of steps or actions required for effectively conducting research while formulating the research problem. Research encourages scientific and inductive thinking, besides promoting the development of logical habits of thinking and organisation.

A study by Sirajul & Samsudin (2020) focused on Characteristics, Importance and Objectives of research: An Overview of the Indispensable of Ethical Research. The main aim of their article is to emphasize on research ethics. Knowledge in characteristics, importance and objectives of research motivate to be ethical in research. It is the utmost importance knowing these three basic subjects of research for researchers especially for novice researchers. Ruchina, et al., (2015) researched on the Role of Research Work in the Training of Master Students Studying at Technical University. Thus, the main purpose of higher education is the development of new educational content ensuring relevance and competitiveness of graduates in the labour market. In this article, the authors investigated the research work of technical university students studying at Master's programs in the context of innovative changes in modern education. Research work is the process of shaping the future cognitive activities of individual aimed at obtaining new knowledge, solving theoretical and practical problems, self-education and self-realization.

2.3.3 Possible Measures to Address Challenges Facing Post-Graduate Students in Conducting Research

A study by Jeyaraj (2020) on academic writing needs of postgraduate research students in Malaysia, Used-structured exploratory interviews were carried out with six postgraduate students, so that a deeper understanding of their research writing needs could be obtained. Interviews were then analysed using a general inductive approach. It was found that students required support in three main areas: writing, supervision and ICT. Students sought English language support and more workshops and programmes which specifically dealt with thesis writing. They also believed that peer support groups would be beneficial. Secondly, more guidance was needed from supervisors to enable greater clarity on writing and institutional processes and procedures. Finally, students wanted greater access to ICT writing tools to facilitate writing and language learning. Ismail et al., (2011) researched on Improving the Development of Postgraduates' Research and Supervision. The study reported that, research and supervision have become a vital process in the successful of postgraduate studies. Building an academic career path needs intensive training and preparation. This culminates in writing of thesis or dissertation. In this process, the supervisor is designated to facilitate the student's research development based on good resources offered by the institution. At this stage, one of the most common complaints from research students concerns are infrequent or erratic contact with supervisors, who may be too busy with administrative or teaching responsibilities, have too many students or be away from the university too often. Developing skills towards an effective supervision needs to be tackled in various ways. Effective supervision is essential to guide postgraduate students during their progress in postgraduate study.

Panadero et al., (2020) revealed that, the important strategies towards the challenges facing the postgraduate students when conducting their research is through structuring postgraduate students self-efficacy in research process that give them confidence in writing the research project. Also, the postgraduate students must be confident enough to work on the supervisor's feedback and to communicate presentation improvements that they could have to further develop general skills and knowledge to become better and able to cope with challenges facing them in writing research. Noor & Barudin (2017) conducted a study on the Role of Supervisor in the Performance of Postgraduate Research Students. Using social learning theory as support, the study aims to empirically quantify the role of the supervisor in determining the performance of postgraduate research students. Thus, the study concludes that the better the quality of research supervision the more capable and confident the postgraduate research students are in learning and conducting research independently.

Chukwuere, et al., (2020) conducted a study on improving postgraduate nursing research output: A South African nursing science perspective. The study reviewed the relevant literature obtained from a computerised database search that focused on improving postgraduate nursing research throughput in South Africa (SA) to synthesize ideas and draw conclusions regarding the topic being discussed. The study revealed that postgraduate nursing research could be improved through enrolment of a greater number of Master's and doctoral students across universities and adequate provision of structures for accessing information, the latest technologies. The study also revealed the need for adequate support of supervisors with the necessary resources and continuous training of more supervisors in innovative methods for appropriate development of the requisite skills to strengthen research supervision. The study concludes that, there is a dire need to promote postgraduate nursing researchers owing to the importance of professional growth, development of new knowledge and university funding.

Ismail, Osman & Akramin (2020) did a research on the strategies of postgraduate students in completing studies and determined that, face-to-face interaction learning strategies among postgraduate students and their supervisors is one of the good strategy to be employed for the selection of the thesis title in order to judge decision whether the topic is relevant or not. Face-to-face meetings should continue for planned or unplanned series, especially bilateral discussions are preferred to be conducted in pleasant situations. The advantage of face-to-face plans is that the postgraduate students are not easily uninterested because the job of the supervisor is to act as a facilitator so that students would fully comprehend the thesis writing. Bushesha, et al., (2012) discusses problems facing supervisors and students in writing dissertations/theses. The paper refers to the Open University of Tanzania as the case study. The paper established that communication, supervisor- student relationship, access to literature, plagiarism, and poor writing skills among some students are some of the key challenges facing students and supervisors in writing dissertations/theses at the Open University of Tanzania. The paper recommends that communication between students and supervisors need to be strengthened through both parties abiding by professionalism. Strengthening the use of progress reports and arrangement of supervision seminars more frequently would minimize problems related to miscommunication. Students are encouraged to maximally utilize online sources of literature. The use of internet would enable the student and supervisor to

exchange ideas and opinions much easily and this will reduce unnecessary delays of supervisors' feedback.

3. Methodology

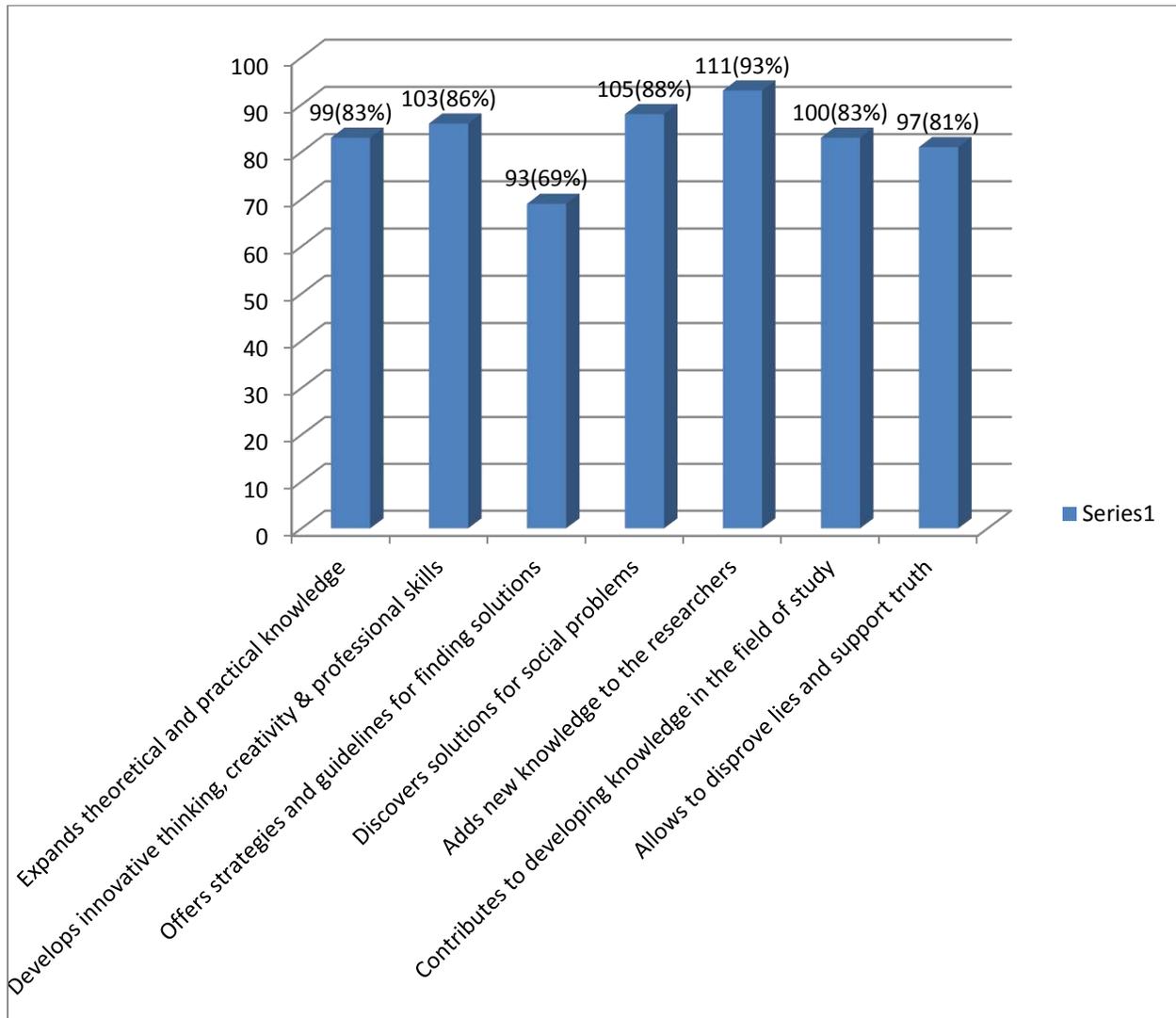
Convergent mixed methods design was adopted whereby the researcher collected both quantitative and qualitative data, analyzed them separately, and then compared the results to see if the findings confirm or disconfirm to each other (Creswell and Creswell, 2018). Data were collected using the questionnaire and structured interview. The study targeted 600 master students and 34 post-graduate lecturers. The sample size consisted of 130 respondents (10 Postgraduate Lecturers and 120 Postgraduate students). Simple random sampling was used to select 10 Postgraduate lecturers in university who were randomly selected from different departments while both stratified (gender) and simple random sampling was used to select 120 master students. From each university, two lecturers were chosen while 24 (12 female and 12 male) students were chosen from five Universities in Arusha region. Thus, a total of 130 respondents were involved in the study. The instrument was tested for reliability where Cronbach coefficient Alpha was found to correlate at $r = 0.858$. While the trustworthiness of instrument for collecting qualitative data was done by ensuring its credibility, transferability and dependability indicating that the instruments were fairly reliable for the study. Quantitative data was analyzed using descriptive statistics in the SPSS version 25 and results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Findings on the Significance of Post-graduate Students in Conducting Research in Arusha region

Figure.1 presents the summary of the respondents' responses and the results of quantitative findings using questionnaires on the significance of post-graduate student to conduct research in universities in Arusha region.



Values in brackets are percentage of post-graduate students who agreed with the statement. Those with contrary opinion to the statement are implied.

Figure 1: Quantitative Findings on the Significance of Post-Graduate Students to Conduct Research in Universities in Arusha region

In Figure 1, the results show that the significance of post-graduate students to conduct research in universities in Arusha region is that it expands the theoretical and practical knowledge as 83% of post-graduate students agreed to the statement while 17% held contrary opinion. The majority of respondents indicated that, when conducting research the researchers follow guideline and procedures to identify the problem and finding solutions through the guide of the theories, therefore, it is the way to use theories for practical knowledge whereby theories are used to test and discover the hypothesis and answer research questions. The findings are in agreement with the findings by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University. The study observed that research undertaking helped post graduate students to comprehend nature and normal phenomenon, offers strategies and guidelines for

finding solutions, assists to discover solutions for social problem, develops innovative thinking creativity and professional skills, adds new knowledge to the researchers, expands theoretical and practical knowledge and develops critical thinking.

The respondents also indicated that, through the procedures of conducting research among the researchers, especially post-graduate students acquitted with innovative skills in the identification of the problem, creating the methods and measures for solving the identified problem through their creativity and which in turn develops professional skills in research. Again, the findings supported by the study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University observed that research undertaking help post graduate students to comprehend

nature and normalize phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, adds new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking. Therefore, this shows that, when conducting research the post-graduate students in universities in Arusha region should be acquainted with creativity in finding the problem solving skills and creativity in completing the research problem.

Also, the results in figure 1 show that majority (69%) of respondents indicated that, before undertaking the research there are procedures which should be followed and likewise when conducting research there are procedures and guidelines which should be followed. Therefore, through research guidelines and strategies for solving the identified problem it offers the researcher to follow protocols and methods in undertaking the study which enhances excellent results and proper decision making as well as critical thinking among post-graduate students. The findings above concur with NurAfiqah & Nadwah (2019) who revealed that, the knowledge of research methodology and the skills of applying it in research are two important things required by postgraduate student in producing a good research. A postgraduate student who is equipped with research skill or knowledge of research methodology and able to apply it while conducting research therefore, should be autonomous in research writing.

Figure1 further shows that 88% of post-graduate students indicated that research helps to discover solutions for not only social but also scientific problems. Similarly, 93% of post-graduate students indicated that, research is the way out to discover solutions for social problems through strategies of carrying out research whereby it starts from problem identification, following research methodologies and later provide the solutions for the identified problems. The findings are supported by Ruchina, et al., (2015) who researched on the Role of Research Work in the Training of Master Students at University and the findings revealed that, contemporary society needs initiative and independent specialists capable of improving their professional skills continually.

In addition, the results show that, 81% of post-graduate students agreed that undertaking research allows disproving lies and supporting the truth. The majority of respondents indicated that, research is about finding the solutions pertaining social and scientific problems, therefore, this is to say that, finding the hidden solutions about the problems disproving the lies and revealing the truth through practical evidence is a significance of post-graduate student to conduct research in the universities. The findings are in agreement with a study by Mahammoda (2016) on factors affecting the quality of undergraduate research work in Bahir Dar University

Ethiopia. The study contend that conducting research for university students is very significant because it allows disproval of lies and supports of truth, build knowledge and facilitate learning, discover solutions to social problems and develop creativity.

During the interviews on the significance of post-graduate students to conduct research in universities in Arusha region, the study discovered that there is a great significance of post-graduate to conduct research in universities in Arusha region as majority of postgraduate lecturers (PLs) had the same ideas. In this regard PLs commented that:

Post-graduate research provides students with great skills of decision making, and problem solving skills since their researches are mostly focused on identifying the problems affecting the society and finding the solutions for those problems. Also, when conducting research the post-graduate students identify the gaps between scholars and reveal the truth about a certain phenomenon (Personal Interview, April, 2022).

PL 7 indicated that:

Post-graduate research is significantly to academicians and the policy makers since it provides the literature review to the coming researchers and also it may be used in policy making and taking government or institutional actions for development (Personal Interview, April, 2022).

The findings above are in agreement with a study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University. The study observed that research undertaking help post graduate students to comprehend nature and phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, add new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking.

4.2 Findings on the Intervening Measures to the Challenges Facing Post-graduate Students in Conducting Research in Universities in Arusha Region

Table 1 presents the summary of the respondents' responses and the results of quantitative findings using questionnaires on the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region.

Table 1: Quantitative Findings on the Intervening Measures to the Challenges facing post-graduate students in conducting research in universities in Arusha region

| Intervening Measures to the Challenges Facing Post-Graduate Students in Conducting Research | Post-graduate Students n=120 f (%) |
|--|---|
| Seeking for research knowledge and skills | 115(96) |
| Developing sense of commitment among the researchers | 100 (84) |
| Ensuring adequate financial resources | 117(98) |
| Proper time management between the supervisee and the supervisor | 99(83) |
| Ensuring enough research information resources | 105(88) |
| Enhancing cordial relationship between researcher and supervisor | 111(93) |
| Enough knowledge in topic selection | 113(94) |
| Provision of computer training course to post-graduate students | 98(82) |
| Ensuring adequate internet services in universities | 95(79) |
| High commitment to researchers and supervisors | 101(85) |

f = frequency, % = percentages, values in brackets are percentage of post-graduate students who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

In table 1, the findings show that, 96% of respondents indicated that, the researchers' especially post-graduate students should seek enough knowledge and skills about the research in order to address the challenge of lacking enough knowledge in carrying out the research in universities in Arusha region. Majority of respondents indicated that, post-graduate students should seek for research experts before conducting the research; they should consult research supervisors or their seniors for obtaining research procedures, research methods and research strategies for success in their researches. These findings are in agreement with Zhao & Dennis (2017) who pinpointed that, for the postgraduate students' expertise requiring specialized knowledge and skills and those who perceived researchers should be experts who receive specific training in reading literature, writing academic papers, and developing knowledge in statistics. In doing so, the research activities become a profession for the experts in the academic domain. Therefore, for postgraduate students research training gives the opportunity for developing the necessary levels of expertise and to be socialized into this profession.

The results in table 1 show that, 84% of respondents who were post-graduate students revealed that, among the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region is developing the sense of commitment among researchers. These respondents indicated that, post-graduate students should be committed themselves to their research, means they should have the passion and willing to conduct research as the most important part in post-graduate studies and should not take it as a punishment and disturbance. This would help in proper accomplishment of research among post-graduate students in universities in Arusha region. In support of the findings, Panadero et al., (2020) who revealed that, the important strategies towards the challenges facing the postgraduate students when conducting their research is through

structuring postgraduate students self-efficacy in research process that give them confidence in writing the research project. Also, the postgraduate students should be confident and committed enough to work on the supervisor's feedback and to communicate presentation improvements that they could have to further develop general skills and knowledge to become better and able to cope with challenges facing them in writing research.

Besides, 98% of respondents indicated that, before carrying out the study it is better for post-graduate researchers in universities in Arusha city to save money for their research, or finding support from the family, friends, from their working stations, from the government or from sponsors and non-governmental organisations. Also, it is important to avoid unnecessary purchases and focus only on the accomplishment of the study and this would help in addressing the challenge of funds for the study. These findings concur with Huenneke, et al., (2017) who did research on the challenges facing postgraduate students, their research studies conducted in different countries the situation shows lack of commitment by the government of some developing countries to support research activities so as to support the postgraduate students in higher learning institutions by setting aside enough funds in its budget. Consequently, efforts of developing research capacity remain low in higher learning institutions. The study recommends that individual researchers should save enough money for research and also support from the government, working stations of post-graduate students and non-government organisation to enable post-graduate students to be equipped with enough funds for carrying out their studies.

In addition, the results in table 1 show that 85% of respondents revealed commitment to the researcher and the supervisor is associated with proper communications, cordial relationships, proper feedback and proper guidelines from the supervisor to the researcher and vice

versa. These findings concur with Ismail, Omona (2013), who did a research on the strategies of postgraduate students in completing studies and determined that face-to-face interaction learning strategies among postgraduate students and their supervisors is one of the good strategies to be employed for the selection of the thesis title in order to judge decision whether the topic is relevant or not. Face-to-face meetings should continue for planned or unplanned series, especially bilateral discussions are preferred to be conducted in pleasant situations.

From qualitative findings, the current study found that there are intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region. Postgraduate Lecturer pointed out that:

Post-graduate students should work closely with research experts to acquire enough knowledge and skills on research methodology and this would help in early preparation of good research topic, follow ethical considerations, have high commitment, punctuality and cordial relationship with research supervisors which enhances proper communication, and proper feedback (Personal Interview, April 2022).

Findings from qualitative data indicate that there are a number of possible measures to the challenges facing post-graduate students in conducting research in universities. In this regard, a participant had this to put forth;

Post-graduate students should positively embrace supervisor's criticisms with provision of insights, setting of realistic deadlines and expectations, and emphasize on students' self-esteem. Besides, they should focus on improving technical research skills, communicating high expectations, self-monitoring processes, encouraging active knowledge construction, widening networks for research improvements, and supervisor-supervisee brainstorming (Personal Interview, April 2022)

These study findings are in agreement with a study by Jeyaraj (2020) on academic writing needs of postgraduate research students in Malaysia. The study employed Used-structured exploratory interviews, which were carried out with six postgraduate students, so that a deeper understanding of their research writing needs could be obtained. Interviews were then analysed using a general inductive approach. From the findings, it was found that students required support in three main areas: writing, supervision and ICT. Students sought English language support and more workshops and programmes, which specifically dealt with thesis writing. They also believed that peer support groups would be beneficial. Secondly, more guidance was needed from supervisors to enable greater clarity on writing and institutional processes and procedures. Finally, students wanted greater access to ICT writing tools to facilitate writing and language learning.

5. Conclusion and Recommendations

5.1 Conclusion

From the findings, this study concludes that despite the challenges facing post graduate students in conducting research in universities in Arusha region, there is a great significance of post-graduate to conduct research. The study found that post-graduate research provide students with great skills of decision making, and problem solving skills since their researches are mostly focused on identifying the problems of the society and finding the solutions for those problems. Also, when conducting research the post-graduate students identify the gaps between scholars and reveal the truth about a certain phenomena. Furthermore, post-graduate research is significant to academicians and the policy makers since it provides the literature review to the coming researchers and also it may be used in policy making and taking government or institutional actions for development.

These challenges could be solved by research experts to acquaint the post-graduate students with enough knowledge and skills on research methodology and this would help in early preparation of good research topic, saving funds for their study, following ethical considerations, having high commitment, punctuality and cordial relationship with research supervisors which enhance proper communication, and proper feedback. Also, they should embrace supervisor's criticisms with provision of insights, setting of realistic deadlines and expectations, and emphasizing students' self-esteem. Focus on improving technical research skills, communicating high expectations, self-monitoring processes, encouraging active knowledge construction process, widening networks for research improvements, and supervisor-supervisee brainstorming to enhance the quality of research.

5.2 Recommendations

The study put forth the following recommendations:

- i. The universities need to improve the training courses to post-graduate students such that before commencement of research study there is need for research methodology course which enhances technical skills, managerial skills and communication skills. The training course would strengthen post-graduate students' commitment, which would have positive influence in their research. Obviously, the importance of seminars, workshops and short courses to these postgraduate students should be done during the time of research to improve and update their knowledge on how to carry out their studies effectively.

- ii. The government should provide financial support to post-graduate students, especially when they are near to conduct research. This could be done through loans and grants to post-graduate students from the starting point of research to the accomplishment of the research. The researchers should also look forward on their time and grant the permission from their working stations so as to afford full time sessions and get enough time to apply the research methodologies during the period of research.
- iii. There is a need to look into ways of increasing the number of research experts in universities in Arusha region so that the post-graduate students would get ample time to submit their studies to different research experts for constructive recommendations.

References

- Augustsson, G. and Jaldemark .J. (2014). *Online Supervision: A Theory of Supervisors' Strategic Communicative Influence on Student Dissertations*. Sweden: Mid Sweden University.
- Bhome, S. M., Prajapati, N., Deshmukh-Ghate, D., and Ghosh, A. (2015). *Research Methodology (Tools and Analysis)*. India: Himalaya Publishing House.
- Botha, C.T. and Simelane, S. (2007). The Influence of e-learning on student's success rate in human resource development. Paper Presented at the WWW Applications Conference
- Bushesha, M., Mtae, H., Msindai, J. and Mbogo, S. (2012). *Challenges Facing Supervisors and Students in the Process of Writing Theses/Dissertations under ODL: Experiences from the Open University of Tanzania*. Dar-es-salaam: The Open University of Tanzania.
- Chukwuere, P.C. (2020). Improving Postgraduate Nursing Research Output: A South African Nursing Science Perspective. *African Journal of Health Professions Education*, 2020; 12(3):114-118.
- Claudius, S.K. (2016). Challenges of Writing Theses and Dissertations among Postgraduate Students in Tanzanian Higher Learning Institutions: *International Journal of Research Studies in Education*, 2016 July, Volume 5 Number 3, 71-80.
- Creswell, J. W. and Creswell, J. D. (2018). *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. (5th Edition). SAGE Publications, Inc.
- De Beer, M., and Mason, R. (2009). Using a Blended Approach to Facilitate Postgraduate Supervision. *Innovations in Education and Teaching International*, 46(2), 213–226.
- Huenneke, L., Stearns, D., Martinez, j., and Laurila, K., (2017). Key Strategies for Building Research Capacity of University Faculty Members. *Innovation in Higher Education*, 42(1):421–435.
- Ismail, M., Osman, Z and Akramin, M. (2020). Strategies of Postgraduate Students in Completing Studies. *International Journal of Academic Research in Business and Social Sciences*, Vol.10, No. 9, 2020, Pg. 300 – 308.
- Jeyaraj, J. J. (2020). Academic Writing Needs of Postgraduate Research Students. Malaysia: *Malaysian Journal of Learning and Instruction*, 17(2), 1-23.
- Kikula, I. S. and Quorro, M.A.S. (2007). *Common Mistakes and Problems in Research Proposal*.
- Mahammoda, S.A. (2016). Factors affecting the quality of Undergraduate research work in Bahir Dar University Ethiopia. *International Journal of Research and Development*, 2016.
- Mapolisa, T. and Mafa, o. (2012). Challenges Being Experienced by Undergraduate Students in Conducting Research in Open and Distance Learning. *International Journal of Asian Social Science*, 2(10):1672-1684.
- Noor, U. and Barudin, M. (2017). Role of Supervisor in the Performance of Postgraduate Research Students. *Journal of Research and Reflections in Education*, December 2017, Vol., No.2, pp 178-186.
- NurAfiqah, A. and Nadwah, D. (2019). A Relationship between Research Skills and Autonomous Learning among Postgraduate Students. *International Journal of Business, Economics and Law*, Vol. 18, Issue 6 (April) ISSN 2289-1552.
- Olibie, E.I., Ngozi, N.A. and Uzoechina, O.G. (2015). Characteristics of Post Graduate Education Research Mentoring in Universities in Nigeria: Curricular Enhancement Strategies. *Journal of Curriculum and Teaching*, Vol. 4, No. 1; 2015.
- Omona, J. (2013). *Sampling in Qualitative Research: Improving the Quality of Research Outcome*.
- Panadero et al., (2020). *Journal of University Teaching &*

Learning, Volume 17,
Issue 5, University of Finance and Economics,
China.

- Pillai, R.K., Sanjay, M., Shally, A. & Ravi V.G. (2015). The Significance of Research in Post-Graduate Education and Ways to Facilitate. *Clinical Epidemiology and Global Health*, 3 (2015) 58-62.
- Rajasekar, S. (2013). *Factors Affecting Completion of Research Projects by Students*. Cambridge: Cambridge University Press.
- Ruchina, A.V., Marina V. K., Denis A. P., and Zhang Xue Jin (2015). The Role of Research Work in the Training of Master Students Studying at Technical University. *Procedia - Social and Behavioral Sciences*, 215 (2015) 98 – 101.
- Singh, A. (2021). *Significance of Research Process in Research Work*. India: Department of Computer Science Patna Women's College, Bihar.
- Sirajul, I. and Samsudin, S. (2020). Characteristics, Importance and Objectives of Research: An Overview of the Indispensable of Ethical Research. *International Journal of Scientific and Research Publications*, Volume 10, Issue 5, May 2020, 2250-3153.
- Vygotsky, L. S. (1934/1987). Thinking and speech (N. Minick, Trans.). In R. W. Rieber, & A. S. Carton (Eds.), *the collected works of L.S. Vygotsky (Vol. 1, Problems of general psychology*, pp. 39–285). New York: Plenum.
- Zhao, P. and Dennis, B. (2017). Exploring Graduate Students' Understanding of Research: Links between Identity and Research Conceptions. *International Journal of Teaching and Learning in Higher Education*, 2017, Volume 29, Number 1, 73-86.