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The Open University of Tanzania Faculty of Education

P. O. Box 23409 Dar es Salaam

Tanzania

Email: jipe@out.ac.tz

Website: www.out.ac.tz

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Editorial

On behalf of the editorial and production team, I am humbled and privileged to kindly introduce to you this Issue Number 2, Volume 14 of the Journal of Issues and Practices in Education (JIPE), of the Faculty of Education – the Open University of Tanzania. I sincerely acknowledge the contribution of all authors and reviewers who dedicated their time to writing and reviewing the manuscripts that form the current Issue. I also appreciate the hard work of the Editorial Board of JIPE and the secretariat team for bringing out this issue of the Journal.

The Journal of Issues and Practice in Education (JIPE) is a refereed journal. The journal is published twice a year – June and December. JIPE is designed to inform both academics and the public on issues and practices in the field of education. The current issue comprises six (6) articles. These articles delve into *Interplay of Management Communication Pattern and Organizational Commitment; Structural and Process Quality in Pre-primary Education in Tanzania; ICT-Based Assistive Technology for Empowering Persons with Visual Impairment; Conflict Management Styles in Secondary Schools in Tanzania; Misspellings of Swahilized English loanwords committed in Kiswahili functional writing by form four learners; The Influence of Learning Environment in the Mastering of 3rs in Public Primary Schools; and Bottlenecks to Inclusive Higher Education for Students with Disabilities during the COVID-19 Pandemic*. The editorial team expects that you will benefit from reading the articles published in this issue. I look forward to receiving more manuscripts for the forthcoming JIPE issues.

Dr Mohamed Msoroka
CHIEF EDITOR

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Interplay of Management Communication Pattern and Organizational Commitment: Implication on Selected Research Institutes in Southwestern Nigeria

¹Ayansina, S.O; ²Soaga, R.A; ³Ogunwale, A.B; ⁴Ayinde, A.F.O. and ⁵Joshua, Y.
drayansina@gmail.com¹

¹Federal University of Agriculture, Abeokuta, Nigeria.

²Ladoke Akintola University of Technology, Ogbomosho, Nigeria

ABSTRACT

The study examined the relationship between management communication patterns and organizational commitment in three selected research institutes in Southwestern Nigeria. Multi-stage random sampling technique was used to select 198 (15%) respondents from 1,344 employees from the three organizations. Structured questionnaires with a Cronbach Alpha coefficient of 0.79 was used to collect data on the socioeconomic characteristics of the respondents. Pearson Correlation, linear regression and analysis of variance were used to test the hypotheses. Results revealed that the trends of communication patterns in the study organizations were horizontal ($x=3.87$) followed by upward ($x=3.31$), downward ($x=3.16$), and diagonal communication patterns ($x=2.99$). The most constraints to the communication process were status difference ($x=3.53$), poor listening skills ($x=3.48$) and information overload ($x=3.41$). Employees were normatively ($x=3.43$) committed to the organization followed by continuance commitment ($x=3.21$) and affective commitment ($x=3.19$). In the tested hypotheses, the results of correlation analysis revealed a significant but negative relationship between family size ($r=-0.20$, $p<0.05$), the pattern of organizational communication ($r=0.00$, $p<0.05$); and employees' commitment to the organization. Analysis of Variance (ANOVA) revealed a significant difference ($F=0.65$) in the pattern of communication operated in different institutes selected for this study, with the specific values of NIHORT ($x=67.62$), FRIN ($x=66.19$) and IAR&T ($x=65.99$) respectively. It is concluded that patterns such as horizontal, upward, and downward communication in the study institutes have enhanced the commitment of the employees to their respective institutes. The organization is therefore recommended to improve on the diagonal pattern of communication to improve task-related and periodic report processes in various departments. Lastly, the organization should rectify constraints to the communication process like status differences, employees' poor listening skills, inadequate trust and information overload.

Keywords: Communication pattern, constraints, organizational commitment, management communication

INTRODUCTION

Communication is a very powerful tool of operation in any activity. It is mostly related to and needed in organizational areas of human life and activities. Therefore, there is no segment of private life or organizational work in which communication is not required. Communication describes concepts such as information or knowledge transfer, as well as concepts related to the exchange of feelings and creative ideas (Semren, 2017). Communication in the context of an organization means a process whereby members gather, send, and interpret relevant information about the activities in the organisation and the changes occurring within a given establishment. Through communication, the sender sends a message to the receiver verbally or non-verbally for desired feedback. However, it is not just a mere design of sending or imparting knowledge but should involve the understanding of the meaning and the intent by both the sender and the receiver. It is obvious that an idea without a successful transmission and correct understanding, no matter how great it is, is useless (Robbins, 2010).

The patterns of communication through which the entire process can take are; upward, downward, horizontal or lateral and diagonal communications (Greenberg & Baron, 2008). It is impossible to imagine an organisation devoid of vibrant and adequate patterns of communication making such an organisation's business processes a well-operated and executed activities. The communication process between employers and employees must therefore be continuously flowing and updated from time to time. Also, our personal and professional success often depends on how well we understand others and how well others understand us in the organizations. Communication tends to create the basis for creating awareness, consensus building, making informed decisions, resolving conflicts, and generating participation in processes of change and development. When addressing any development context, population issues, violence, food security, and use and conservation of natural resources, to name a few, it is a large-scale change in the way people live and work with each other that will make a difference (Fraser & Restrepo-Estrada, 1998). Communication thus, is related to success in organizations' performance, commitment and social (and environmental) Change. This is based on participation and empowerment. This is a distinct way of doing communications, and it is one of the few ways it can be sustained because it is largely because ownership of both the message and the medium – the content

and the process – resides with the individuals or communities affected (Gray-Felder & Deane, 1999). Therefore, there is no way one can separate communication from human organisations. Communication is a basic element in organisational structure and functioning; it is the key mechanism for achieving integration and coordination of the activities of specialized units at different levels in the organisation. In the commitment profile, employees' commitment can be defined as the degree to which the employee feels devoted to their organisation (Akintayo, 2010). Ongori (2007) described employee commitment as an effective response to the whole organisation and the degree of attachment or loyalty employees feel towards the organisation. Though a lot has been said about employees' communication and organizational performance in some institutions, much has not been said about its relationship with pattern and hence its effect on organizational commitment. It is against this background that this study is evolved to examine the interplay of organisational communication patterns and employee's commitment in the Forestry Research Institute of Nigeria (FRIN), National Institute of Horticultural Research, (NIHORT) and Institute of Agricultural Research and Training (IAR&T).

Hypotheses of the Study

- H₀₁: There is no significant relationship between the personal characteristics of the respondents and their commitment towards their organisation.
- H₀₂: There is no significant relationship between the pattern of organisational communication and employee's job commitment.
- H₀₃: There is no significant difference in the organisational communication pattern in the selected research institutes.

Methodology

The study was conducted among the employees of the three selected research institutes in southwestern Nigeria. A multistage random procedure consisting of simple and proportionate stratified sampling technique was used to select varying proportions of respondents from different research Institutes. Out of 198 sampled respondents (15% of 1,344 population), 59 respondents were selected from IAR&T, 91 from NIHORT and 48 respondents from FRIN. A validated structured questionnaire by professionals from the Department of Agricultural Administration; and Agricultural Extension and Rural

Development was used to collect data from the sampled respondents. A reliability test was conducted using 20 respondents from another organization. A Cronbach-Alpha test of internal consistency was conducted with a Reliability Coefficient of 0.79. The socioeconomic characteristics of the respondents were measured on ordinal and nominal levels. The patterns of management communication were taken on a set of generated statements as suggested by Bouckenooghe, Devos & Broeck(2009) and measured on a Likert type of scale. Likewise, constraints to communication and organizational commitment were also measured on a Likert scale of level of severity and generated statement by Allen and Meyer (1990). The data collected were subjected to descriptive statistics such as frequency counts, percentages and mean scores. Inferential statistics such as Pearson Product Moment Correlation and Regression Analyses were employed to test the hypotheses set for the study to establish the relationship between the selected variables in the study.

Table 1: Distribution of Respondents from the Study Institutes

Institute	Department	Sampling Frame	Sample Size (15%)
IAR&T	Crop Production	187	28
	Agricultural Engineering and	145	21
	Environmental	71	10
	Biotechnology		59
NIHORT	Agricultural Research System and	340	51
	Extension		
	Human Resource Development	184	27
	Agricultural Administration	89	13
			91
FRIN	Forest Economics & Extension Services	112	16
	Administrative and Personnel	102	15
	Forest Conservation and Protection	114	17
			48
	Total	1344	198

Results

Socioeconomic Characteristics of the Respondents

Table 2 below indicates that the mean age of respondents was 42.5. The majority of the respondents (72.6%) were below 50 years of age, while 27.4% were between the ages of 51-60. In this trend, it is inferred that respondents are young and expected to be vibrant with their job preference and hence, commitment to their organizations. The result corroborates with Kahn et al; (2013) who expressed that young employees tend to have more sense of obligation and vibrantly manage communication and hence, committed to their organization. Further, the table indicates that the selected organizations had 64.5% male and 35.5% female, suggesting that the organizations had more male than female employees. The result agrees with Julie (2013) who opined that male employees enjoyed higher preference in agricultural establishments. Further, on the table, the majority (92.5%) were married while 56.5% had Msc degrees. This suggests that many of the employees were married individuals and well educated.

This affirms the position of Ayansina et al. (2020) that maturity and education enhance professional competency. Amangala(2013) attached higher qualifications to more responsibilities and high job commitment. Table 2 also depicts ₦165,346.17 as the mean income of the respondents with 79.0% earned ₦200,000 and below. Income is a strong incentive, therefore, an adequately paid staff is expected to be more loyal and committed to the organization. Again, the data showed that 76.3% have 2-5 members in their families and 39.8 had worked between 11- 20 years respectively. This indicates that the majority of the employees have a sizeable family size and are still young in the service; thus, they can serve the organization for more years provided their well-being is insured. The result on family size is supported by Adepoju and Obayelu (2013) who declared 5 and above as the reasonable and adequate size of a family for a civil employee. Adeniji (2010) also reported that the majority of workers in research institutes had less than 10 years of working experience. The variation may be responsible for recent recruitment in some Agricultural research institutes in Nigeria.

Table 2: Frequency Distribution showing Respondents' Characteristics (n=186)

Variables	Frequency	Percent	\bar{x}	S.D
Age of The Respondents			42.5	9.0
≤30	19	10.2		
31-40	77	41.4		
41-50	39	21.0		
51-60	51	27.4		
Sex				
Male	120	64.5		
Female	66	35.5		
Marital Status				
Single	14	7.5		
Married	172	92.5		
Religion				
Christianity	135	72.6		
Islam	51	27.4		
Educational Qualification				
Secondary	4	2.2		
OND/NCE	4	2.2		
HND/BSC	55	29.6		
MSc	105	56.5		
PhD	18	9.7		
Rank				
Junior	20	10.8		
Senior	166	89.2		
Monthly Salary			₦165346.17	65935.46
≤₦100,000	46	24.7		
₦100,001-₦200,000	101	54.3		
₦200,001-₦300,000	39	21		
Family Size			4.8	1.2
2-5	142	76.3		
6-9	44	23.7		
Work Experience			14.5	7.4
≤10	71	38.2		
11-20	74	39.8		
21-30	41	22		

Source: Field Survey, (2021)

Patterns of Organizational Communication

Communication patterns are structures in which communication flows in an organization. It is used to provide a systematic way of sharing important

information from the bottom. Table 3 below shows the profile of organizational communication and how they were operationalized with the following indices: horizontal, upward, downward and diagonal communication.

Horizontal Communication: This refers to the transmission of information between people, departments and units within the same level in an organization in this study, horizontal communication had a mean of 3.87. It was rated high by respondents. This is premised by: colleagues offer to each other the required support when interacting ($X=3.95, 0.76$), there is a good atmosphere between colleagues for work requiring communication/interaction ($x=3.92, 1.02$); and the possibility of discussions of personal matters with colleagues if desired ($x=3.88, 0.88$). This finding suggests good social support among employees. This finding is in connection with Robbins et al. (2010) who confirmed that this type of communication within an organization facilitates effective transmission of information and promotes synchronization among peers.

Upward Communication:- This involves the transmission of message from lower to higher levels of the organization. In this study, upward communication had a mean of 3.31; it was rated high by respondents. The respondents submitted that their superiors made them feel that the issue they presented were important ($X=3.69, 0.87$). They also conceded that their superiors notified them before any changes that affected their jobs ($X=3.68, 0.94$). Also, they indicated that they had the freedom to communicate job frustrations to superiors ($X=3.29, 1.15$). They also feel that their ideas are flowing as they travel up the hierarchy of positions ($X=3.28, 1.10$). These findings indicate that the management of the selected organizations was favourably disposed to information coming from the base. Robbins et al. (2010) support this idea as they declared that with upward communication, superiors get the chance to know the feelings of their subordinates about their work, colleagues, and the institution in general.

Downward Communication: - This refers to the transmission of information from upper levels to lower levels of the organization's hierarchy. In this study, downward communication had a grand mean of 3.15. This is premised by the respondents declaring that "my superior expresses his\her confidence in

ability to perform the job ($X=3.4, 0.99$); and “superior has willingness to tolerate argument and to give a fair hearing to all points of views ($X=3.49, 1.16$)”. Others are “Provision of the needed information to the employees by the top management ($X=3.38, 1.13$)” and “even though constructive criticism it is not always perceived in a positive sense by the management ($X=3.10, 1.09$)”. This suggests that superior not only confident in the employees but also tolerate and give fair hearing and make provision for needed information. This is corroborated by Awad and Alhashemi (2012) who affirmed that when organizations have employees with these qualities, it enhances performance and high commitment.

Diagonal Communication: - This is a communication pattern that crosses both levels of functions or departments where staff members of different departments, irrespective of their reporting relationship, interact within an organization. As seen in Table 3, diagonal communication had a grand mean of 2.99. This finding is further corroborated by respondents declaring that there is a reduction in the managers’ communication workload ($X=3.63, 1.01$) and a reduction in chances of misinterpretation ($X=3.37, 1.19$). They also submitted that diagonal communication uses diverse jargon across functional departments ($X=2.65, 0.94$) and the creation of egoistic issues ($X=2.02, 1.03$). This is supported by Justyna and Wasiolek (2020) who declared that diagonal communication reduces workers’ resistance to change, and develops a strong organizational culture based on accepted values thereby making employees committed to their organizations.

Table 3: Distribution of Respondents according to Pattern of Communication

Pattern of Communication	\bar{x}	S.D
Horizontal communication	3.87	
1.My colleagues offer me support when interacting	3.95	0.78
2.There’s a good atmosphere between colleagues for work-related communication/interaction	3.92	1.02
3.If I want I can discuss personal matters with my colleagues	3.88	0.88
4.I cannot but give honest feedback to my colleague	3.76	0.88
Upward communication	3.31	
5.My superior makes me feel that things I tell him/ her are really important	3.69	0.87
6.My superior notifies me in advance of changes that affect my job	3.68	0.94
7.I can communicate job frustrations to my superior	3.29	1.15
8.I feel my ideas are filtered as they travel up the hierarchy	3.28	1.10
9.I’m safe in communicating “bad news” to my superiors without fear of retaliation on his/ her part	3.20	1.09
10.I am afraid to speak to mind due to fear of reprisal	2.74	1.31
Downward communication	3.15	
11.My superior expresses his/her confidence in my ability to perform the job	3.49	0.99
12.My superior is willing to tolerate arguments and to give a fair hearing to all points of view	3.49	1.16
13.Top management is providing me with the kinds of information I want and need	3.38	1.13
14.Constructive criticism by the management is not always perceived in a positive sense	3.10	1.09
15.Managers are reluctant to hear the employees out, citing a lack of time	2.80	1.07
Diagonal communication	2.99	
<i>Communication in this organisation;</i>		

16. Reduces the manager's communication workload	3.63	1.01
17. Reduces the chances of misinterpretation	3.37	1.19
18. Use diverse jargon across functional depths	2.69	1.06
19. Sometimes leads to information overload	2.65	0.94
20. Creates ego issues such as ignoring feedback	2.62	1.03

Source: Field Surveys, (2021)

Constraints to Organizational Communication

Constraints to organizational communication refer to anything capable of preventing or disabling the communicator to deliver the right message to the right person at the right time (Richmond *et al.*, 2009). This study inquired the factors that breakdown the communication process system in the organization. As shown in Table 4, responses from respondents revealed that status difference had the mean of 3.53, 1.54, while others are poor listening skills (X= 3.48, 1.19), inadequate trust(X= 3.45, 1.62), and information overload (X= 3.41, 1.52). Inadequate upward communication by the junior executive (X= 3.34, 1.48), differences in perception and new point (X= 3.29, 1.47) and individual bias and selectivity (X =3.29, 1.39) were the major constraints. The least was the physical barrier (X= 2.87, 1.54). However, the criterion of greater than 3.50 suggests extreme severity and less than 3.50 less severity. The major constraint was the status difference (X= 3.53, 1.54). This suggests that position and status affect the interpretation of the information. For instance, individuals with low education may have low esteem to carry information to their superior or carry only messages that the superior appreciates.

Table 1: Table 4: Distribution of Constraints Affecting Organizational Communication

1. Status difference	3.53	1.54
2. Poor listening skills among some organisation employees of individual employees	3.48	1.19
3. Inadequate trust among the staff of the organization	3.45	1.62
4. Information overload	3.41	1.52
5. Inadequate upward directed communication by junior executives	3.34	1.48

6. Differences in perception and viewpoint	3.29	1.47
7. Individual bias and selectivity	3.29	1.39
8. Poor feedback on corporate issues	3.23	1.45
9. Inadequate supervision and attention by the superiors	3.19	1.64
10. In most departments, there tend to be one or two people that hoard important information about organisation's operations	3.16	1.45
11. Poor retention	3.10	1.52
12. Distraction	3.05	1.50
13. Inappropriate selection of communication channel	3.05	1.55
14. Poor use of communication channels	3.04	1.51
15. There are too many "gatekeepers" in this organisation that hinder the flow of important information	3.01	1.49
16. Emotional barriers and taboo	2.91	1.52
17. Language difference (discrimination)	2.87	1.56
18. Physical barriers to communication process	2.87	1.54

Source: Field Survey, (2021)

Note: The criterion for constraints to organizational communication score stipulates that if the Mean of the statement is greater than 3.50, then it is extremely severe. If the Mean score is less than 3.50, then it is slightly severe.

Employees' Commitment

Employees' commitment refers to individual participation or attachment to their organization. Table 5 presents the distribution of respondents according to their responses. The commitment profile was categorized into Normative (X= 3.43), Continuance (X= 3.21) and Affective (X= 3.19). Normative commitment (X= 3.43) was higher than the rest and was premised on attributes such as employees must be loyal to his/her organization (X= 4.22, 0.92), I feel a sense of moral obligation to remain in the organization (X= 4.03, 1.06) and that jumping around organizations is unethical (X= 3.50, 1.23). This suggests high commitment of employees due to moral obligation and a sense of loyalty. This is supported by the findings of Jaros *et al.* (2004) who reported that a feeling of obligation to a job enhances commitment. In continuance commitment which has a grand mean of 3.21, was mostly indicated by employees who noted that staying with an organization is a matter of necessity (X= 5.35, 1.03), it is costly to leave this organization (X= 3.37, 1.05) and there is no close alternative if

leave ($X= 3.22, 1.18$). With this finding, it is argued that respondents are committed to their jobs due to conditioned attached and scarcity of alternatives. This finding is in line with Meyer et al. (2002) who posited that sense of belonging in an organization enhances the commitment of the employees. In Affective commitment ($X= 3.19$), employees were happy to spend the rest of their carrier in the organization ($X= 3.42, 1.03$), enjoying discussing their organization with other outsiders ($X= 3.34, 1.29$) and feeling that the organization’s problem is their own ($3.30, 1.11$). This shows a high emotional attachment to the organization. The findings corroborate with Meyer et al. (2002) who report that sense of belonging in an organization enhances the commitment of employees.

Table 5: Distribution of Respondents according to their Commitment

Statements	\bar{x}	S.D
Normative Commitment	3.43	
1. I do believe that a person must always be loyal to his or her organization	4.22	0.92
2. One of the major reasons I continue to work for this organisation is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain	4.03	1.06
3. Jumping from organisation to organisation does seem unethical to me	3.70	1.20
4. I was taught to believe in the value of remaining loyal to one organization	3.50	1.23
5. Things were better in the days when people stayed with one organisation for most of their careers	2.95	1.20
6. I do not think that wanting to be a company man’ or company woman’ is sensible anymore	2.84	1.08
7. If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization	2.79	1.30
Continuance Commitment	3.21	
8. Right now, staying with my organisation is a matter of necessity as much as desire	3.53	1.03
9. It would be too costly for me to leave my organization	3.37	1.05
10. One of the few serious consequences of leaving this organisation would be the scarcity of available alternatives	3.22	1.18
11. It would be very hard for me to leave my organisation right now, even if I wanted to	3.20	1.31
12. I feel that I have too few options to consider leaving this organization	3.13	0.89
13. One of the major reasons I continue to work for this organisation is that	3.11	1.22

leaving would require considerable personal sacrifice (another organisation may not match the overall benefits I have here)

14. Too much in my life would be disrupted if I decided to leave this organisation now	2.92	1.26
Affective Commitment	3.19	
15. I feel a sense of belonging to my organization	3.75	0.94
16. I would be very happy to spend the rest of my career with this organization	3.42	1.03
17. I enjoy discussing my organisation with people outside	3.39	1.29
18. I feel as if this organisation's problems are my own	3.30	1.11
19. This organisation has a great deal of personal meaning to me	3.23	1.19
20. I do not feel emotionally attached to this organization	2.65	1.38
21. I feel like I am not part of the family at my organization	2.58	1.21

Source: Field Survey, (2021)

Testing of Study Hypotheses

Relationship between Respondents’ Socioeconomic Characteristics and Organizational Commitment

A significant relationship between some socioeconomic characteristics of the employees and their commitment to the organization was tested with PPMC. Results in Table 6 revealed that there is a negative and significant relationship between family size ($r = -0.20, p < 0.05$) and employees’ commitment to the organization. This suggests that the lower the family size, the higher their commitment to the organization. This finding corroborates the findings of Adepoju and Obayelu (2013) who declared that possession of high family commitment impedes job performance in Agricultural organizations.

Table 6: Test of the Relationship between Socio-Economic Characteristics of Respondents and Employees’ Job Commitment using PPMC(n=186)

Variables	R	p-Value	Decision
Age	-0.07	0.37	NS
Family size	-0.20	0.01	S
Monthly income	-0.08	0.28	NS
Work experience	0.04	0.55	NS

Source: Field Survey, (2021)

Note: p-Value is significant at 0.05 level (2-tailed)

NS: Not Significant

S: Significant

Relationship between Pattern of Organizational Communication and Employees’ Job Commitment

A test of relationship was sought between the pattern of organizational communication and employees’ commitment. As seen in Table 7. The result of PPMC revealed a significant relationship between the pattern of organizational communication and employees’ commitment ($P= 0.00p<0.5$) in the organization. This finding shows that the pattern of communication in the organization is an impetus to the commitment of employees. Further, on this, the result of multiple regression also revealed that horizontal ($r=0.01p<0.05$) downward ($r=0.00p<0.05$) and upward ($r=0.00p<0.005$) communication explain 63% of the employees’ job commitment. This implies that horizontal, downward, and upward communication influence employees’ job commitment positively in the selected institutes. This result is in support of Brunetto *et al.*, (2012), that fostering an adequate horizontal, downward and upward flow of communication in any organization would influence a high level of employees’ commitment and further comfort them in their workplace.

Table 7a: Test of Relationship between Pattern of Organizational Communication Process and Employees’ Job Commitment using PPMC

Variable	R	p-Value	Decision
Relationship between the pattern of organizational communication process and employees’ job commitment	0.74	0.00	S

Source: Field Survey, (2021)

Note: p-Value is significant at 0.05 level (2-tailed)

S: Significant

Table 7b: Summary of Regression Analysis Showing Relative Contribution of Upward,Downward, Horizontal and Diagonal Communication on Employees’ Job Commitment

Model	B	Std. Error	T	p-Value	Decision
(Constant)	14.357	3.68	3.91	0.00	
Upward communication	0.51	0.13	9.89***	0.00	S
Downward communication	0.35	0.19	6.29***	0.00	S
Horizontal communication	0.14	0.21	2.56***	0.01	S
Diagonal communication	0.03	0.14	0.53***	0.60	NS
R	0.79				
R ²	0.63				

Source: Field Survey, (2021)

Note: p-Value is significant at 0.05 level (2-tailed)

Test of Difference in Pattern of Organizational Communication Pattern across the Selected Agricultural Research Institutes

In the quest to establish the differences in the patterns of communication used across the selected research institutes, analysis of variance (ANOVA) was utilized. As revealed in Table 8, the value of F=0.65 and mean scores of 67.62 in NIHORT, 66.19 in FRIN and 65.99 in IAR&T respectively affirmed no significant difference in the pattern of communication across the selected institutes. This finding is in line with Papa et al., (2008), who submitted that irrespective of the pattern of communication used, it must be classical and scientific enough to control and coordinate the activities of the organization.

Table 8a: Test of Difference in Pattern of Organizational Communication Process Across the Selected Institutions

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	101.65	2	50.82	0.65	0.52	Not Significant
Within Groups	14220.48	183	77.71			
Total	14322.13	185				

Source: Field survey, (2021)

NS: Not Significant

Table 8b: Difference in Pattern of Organizational Communication Process in Terms of Rank

Institution	N	Mean	S.D	Standard error
NIHORT	65	67.62	7.35	0.91
FRIN	53	66.19	12.52	1.72
IAR&T	68	65.99	6.23	0.76
Total	186	66.61	8.80	0.65

Source: Field survey, (2021)

Conclusions

It is clear in this study that in this intensive age, ineffective communication can cause many problems that can affect the relationship, productivity, job satisfaction and morale in business organizations. However, to be successful in our organization, we need to be honest participants, active listeners, ensure effective and successful communication, and mutual satisfaction. In this study, the broad objective is to assess the implication of management communication on employees' commitment in the three selected agricultural research institutes in Southwestern Nigeria. The procedure involved was outlined in the study. It is clear that employees were more normatively committed followed by continuance and affective accordingly. The organization is recommended to improve on the diagonal pattern of communication which was the least embraced by the respondents. This will improve the task-related processes, periodic reports concerning departments, and individuals. Efforts should as well be geared towards the rectification of certain communication barriers such as status differences, causes of poor listening skill, inadequate trust and information overload among others.

REFERENCES

- Adeniji, G.A. (2010). Assessment of Organisational Conflicts in Agricultural Research Institutes in Oyo State, Nigeria [Unpublished master's thesis]. Federal University of Agriculture.
- Adepoju, A. O. &Obayelu, O. A. (2013).Livelihood diversification and welfare of rural households in Ondo State, Nigeria.*Journal of Development and Agricultural Economics*,5(12), 482-489)
- Agarwal B. &Swati G. (2012). Maximum success: Become an employer of choice,1(2).
- Akintayo, D. I. (2010). Work family role conflict and employee commitment among industrial workers Nigeria. *Journal of Psychology and Counselling*, 2, 1-8
- Allen, N. J., & Meyer,J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*,63(1),1–18.
- Amangala, T.A. (2013). The effects of demographic characteristics on organisational commitment: A study of salespersons in the soft drink industry in Nigeria. *European Journal of Business and Management*, 5, 109-118.
- Ayansina, S.O.; Obayelu, E. A. &Ayinde, A. F. O. (2020).Employees - employers' psychological cContract fulfillment and organisational performance in Lagos State Ministry of Agriculture, Nigeria. *Journal of African Interdisciplinary Studies*, 4(8), 4 – 20
- Banihashemi, S.A. (2011). The Role of communication to improve organizational process.*European Journal of Humanities and Social Sciences*, 1(1), 13-24
- Bouckenooghe, D., Devos, G & Broeck, H. V. (2009). Organisational change questionnaire – climate of change, processes and readiness: Development of a new instrument. *The Journal of Psychology*, 143(6), 559–599
- Brunetto, Y., Shacklock, K., Leggatd, G. S., Farr-Wharton, R., Stanton, P. &Casimir, G. (2012). Comparing the impact of leader–member exchange, psychological empowerment and affective commitment upon Australian public and private sector nurses: Implications for retention. *The International Journal of Human Resource Management*, 23(11), 2238–225

- Dennis, H. S. (2009). *A theoretical and empirical study of managerial communication climate in complex organizations*. [Unpublished doctoral dissertation]. Purdue University.
- Fapojuwu, O., Ajayi, M.T., Okubena, B., Adebayo, O.A. & Fapojuwu, T.O. (2021). Occupational hazards prevalence and agricultural workers' job performance of agricultural organisations in Oyo State, Nigeria. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, 2(1), 130-140
- Fraser, C. & Restropo-Estrada, S. (1998). *Communicating for development: Human change for survival*. Taurus
- Jaros, S., Jermier, J., Koehler, J., & Sincich, T. (2004). Effects of continuance, affective, and moral commitment on the withdrawal process: An evaluation of eight structural equations models. *The Academy of Management Journal*, 36(5), 951-995
- Julie, M. (2013). Women and the workplace. *Mediterranean Journal of Social Sciences*, 6(2), 118-125
- Khan, I., Khan, F., Khan, H., Nawaz, A., & Yar, N. B. (2013). Determining the demographic impacts on the organizational commitment of academicians in the HEIs of DCs like Pakistan. *European Journal of Sustainable Development*, 2(2), 117-130.
- Meyer, J. P. & Allen, N.J. (1991). A three component conceptualisation of organisational commitment. *Human Resource Management Review*, 61-89
- Meyer, J.P., Stanley, D.J., Herchcovitch, L. & Topolnytsky, L. (2002). Affective, continuance and normative commitment to the organisation. A meta-analysis of interactions and outcomes. *Journal of Vocational Behavior*, 61(1), 20-52.
- Ongori H. (2007). A review of the literature on employee turnover. *African Journal of Business Management, organisational Dynamics*, 17-23
- Papa, M.J., Daniels, T.D. & Spiker, B.K. (2008). *Organisational communication: Perspectives and trends*. Sage
- Richmond V. P. & McCroskey J. C. (2009). *Organisational communication for survival: Making work work* (4th ed). Allyn and Bacon.
- Robbins, S. P., Judge T. A., & Campbell, T. T. (2010). *Organisational behaviour*. Pearson
- Wasiolek, J. (2020). *Diagonal Communication*.

An Assessment of the Structural and Process Quality in Pre-Primary Education in Tanzania: The case of Rural Schools

Daphina Libent-Mabagala

daphina.mabagala@out.ac.tz

The Open University of Tanzania

ABSTRACT

In recent years, there has been an increase in the demand for early childhood education (ECE) in low and middle-income countries, including Tanzania. There is also growing awareness that unless ECE is of high quality, children may attend school but may not learn. This study sought to establish the quality of ECE programmes. It was, therefore, important that the researcher investigates whether the ECE programmes were meeting the expectations of the quality indicators and consequently the holistic needs of children in the early years. The study utilized a descriptive survey design. Data were collected through an observation schedule and questionnaires administered to 45 pre-primary education teachers in Dodoma, Morogoro and Mwanza regions, Tanzania. Data were analyzed descriptively using frequencies, percentages, means and standard deviations. Findings revealed that infrastructure, teachers' behaviours, school leadership and child-protection measures were generally fair. While teachers' qualifications, classroom characteristics, parents' participation in school activities, equipment and materials were found to be unsatisfactory. By way of conclusion, unsatisfactory structural and process quality of ECE in rural areas calls for regular in-service training for teachers, improving classroom characteristics, increasing parents' involvement in school activities, and increased budget allocations to pre-primary education (PPE). Addressing these areas can lead to better educational outcomes for children and contribute to their overall academic success.

Keywords: *Quality education, pre-primary education, structural, process, teachers' qualifications*

INTRODUCTION

Evaluating the quality of Early Childhood Education (ECE) service internationally is increasingly important. This is because the demand for ECE has grown constantly globally and in Tanzania. According to the Education for All (EFA) Global Monitoring Report (2015), enrolment in pre-primary education has increased by nearly two-thirds (to 180 million) over the past decade. In Sub-Saharan Africa, the percentage has risen from 24.7% in 2014 to 31.8% in 2019 (UNESCO, 2020). For instance, in Uganda, the enrolment has increased from 433,258 (29.4%) in 2014 to 563,913 (38.3%) in 2016 (Republic of Uganda, 2016). Kenya also has registered gains, with enrolment increasing from 2.71 million in 2012 to 3.2 million in 2016, representing an increase of 10.2% (Republic of Kenya, 2017). In Tanzania, the enrolment rate has risen by 48.8% from 925,465 in the year 2010 to 1,377,409 in the year 2020 (Ministry of Education and Vocational Training [MoEVT], 2010; United Republic of Tanzania [URT], 2020a). That increase in enrolment reflects the demand for a greater degree for pre-primary education. Several factors contribute most to the growing demand for pre-primary education. These include the increasing number of women pressed into the labour force like commercial activities and paid employment (Omar et al., 2009). Another factor for growing demand is the recognition of the importance of early childhood education (Libent, 2015).

Since the demand for pre-primary education is increasing, it is essential to understand the quality of education and services provided to children. Research in the areas of neuroscience, economics, and education has shown that high-quality early childhood education produces long-lasting benefits for children. Such benefits include stronger literacy, language and math skills, better attitudes towards school, better relationships with classmates, later academic success, employment and labour income (Barnett, 2008; Heckman, 2017; Mullis et al., 2012; Rao et al., 2017, Organization for Economic Co-operation and Development [OECD], 2017). Based on this evidence, the United Nations included early childhood development and education in the definition of the *Sustainable Development Goals* (SDGs). Specifically, Target 4.2 of the SDGs emphasizes equal access to quality early childhood development, care and pre-primary education for both boys and girls by 2030 (The United Nations, 2015). In order to achieve the SDG agenda, there is a need to scale evidence-based programmes to ensure that all children have access to quality ECE to achieve their full developmental potential. One key to achieving quality at scale in the

context of SDG Target 4.2 is the monitoring of the quality of early childhood development programmes (Maldonado-Carreno et al., 2022). Assessment of the quality of ECE programmes might help inform ongoing decision-making, progress in scaling and improving the quality of ECE such as workforce supports, and policies to increase the number of children with opportunities to reach their full developmental potential (Yoshikawa et al., 2018). In this study, the terms Early Childhood Education (ECE) and Pre-primary Education (PPE) are used interchangeably.

The government of Tanzania has increased investment and considered the value of ECE significantly over the last decade. For instance, the 2014 Education and Training Policy (ETP) directs that each primary school must have a Pre-Primary Education (PPE) class. Besides, the Ministry of Education, Science and Technology (MoEST) through the Tanzania Institute of Education (TIE) developed a PPE curriculum and syllabus in 2016. The one-year cycle PPE curriculum advocates for holistic development of a child, a child-centred approach, individualised instructions, play-based pedagogy and continuous assessment of pupils' progress (Libent-Mabagala & Shukia, 2019).

Since pre-primary education classes and Early Childhood Development (ECD) programmes exist in a variety of settings, it was imperative to assess the quality of services provided to children. The definition of quality may vary from one person to another and is a context-determined concept (Libent-Mabagala, 2021). Quality in ECE is an elusive concept. Postmodernism views quality in early childhood services as relative and based on values and beliefs, rather than universal reality (Dahlberg & Moss, 2008). However, grounded in socioecological and learning theories, current models of ECE define quality in terms of structural and process categories (Burchinal, 2018). Structural quality refers to aspects that may be regulated like the physical environment (buildings, space and materials), staff-to-child ratio, overall class size and teachers' qualifications. Structural components are largely controlled by forces outside ECE setting such as government financing, education and health policies which set requirements before an ECE site can commence. On the other hand, process quality includes children's interactions with adults, peers, and materials that children encounter in the classroom, daily routines, teachers' behaviour, nature of leadership and parents' involvement. Process components influence the everyday nature of ECE settings and they directly influence the quality of a child's day-to-day experience. Such components are

more constructive and require more in-depth observations than structural quality (Ishimine & Tayler, 2014). Ceglowski and Bacigalupa (2002) argue that there are four types of perspectives on the quality of early childhood education and care programmes derived from Katz's (1993) theory. These are (1) researcher and professional perspectives, (2) parent perspectives, (3) child perspectives and (4) staff perspectives. Researchers and professionals tend to focus on variables such as structural elements (e.g. teacher-to-child ratio, teacher qualifications, physical environment, including safety and health), and process elements (e.g. teacher-child interaction, parents' involvement) (Ishimine & Tayler, 2014). Although there are various perspectives on evaluation of quality in ECE programmes, this study focused on the perspectives of researchers and professionals. This choice was made because their expertise and experience in the field provide a unique and informed perspective. It is against this background that this study aimed at examining the quality of early childhood education programmes provided for children in selected regions in Tanzania. Specifically, the study intended to (i) explore the level of personnel qualification in PPE in Tanzania (ii) Identify the classroom characteristics (teacher-child ratio & class size) of PPE in Tanzania, and (iii) Examine the PPE learning environment in Tanzania.

The study was guided by Bronfenbrenner's ecological systems theory of 1979. The theory posits that people are embedded in multiple ecological settings and the individual (child) both affects and is affected by the environment. According to this theory, a child's development and learning are affected by multiple levels of the surrounding environment, from immediate settings of family and school to broad cultural values, laws and customs; hence, the need for wider parental and stakeholders' involvement in ECE programmes. Different elements of the ecological model are interlinked and are based on effective partnerships among all stakeholders. The central focus for all activities of this model is collaboration and relationships among stakeholders who constitute the ecology in the promotion of quality ECE programmes. Quality ECE programmes would be the result of programmes that were well managed and organised and had all the stakeholders' involvement. These include having qualified ECE teachers, adequate resources, well-designed facilities, clear and mandatory ECD policies, and availability of quality nutrition, health and safety in ECE. This framework, thus, influenced the researcher to look at the quality of ECE programmes based on teachers' qualifications, classroom characteristics, school leadership, infrastructure,

equipment, children's learning, teachers' behaviours, parent-school partnership, and child-protection measures.

Materials and Methods

A descriptive survey design informed this study. A multi-stage sampling technique was applied to recruit a sample of 45 pre-primary education classes in 19 wards in Dodoma, Morogoro and Mwanza regions. In the first stage, the selection of regions was carried out through a purposive random sampling method. Specifically, seven districts were purposively selected to participate in the current study. The second stage included the selection of wards in each selected district. The third and final stage of the multi-stage technique included the random selection of pre-primary education classes from each ward. Therefore, 45 Pre-primary teachers were selected to participate in the study. Data were collected through a self-administered questionnaire and an observational checklist designed by the researcher. The questionnaires generated information related to demographic, professional characteristics of pre-primary education teachers, school leadership, children's records, parents' involvement, and availability of child protection measures. Classroom observations were also conducted to understand the PPE learning context, which includes classroom characteristics, infrastructure, equipment, children's learning, and teachers' behaviours.

Scoring of Instrument

The quality of pre-primary education classes was assessed using seven key minimum standard indicators, namely; teachers' qualifications, classroom characteristics, school leadership, infrastructure, equipment, parent-school partnership, and child-protection measures. These indicators were selected based on a review of relevant literature and were modified to suit the study's specific context. Each item, on minimum standards, was scored based on the following 5-point Likert-type scale 0=*poor/not observed*, 1=*Unsatisfactory*, 2=*Fair*, 3=*Good* and 4=*Excellent*. Scores on the 5-point Likert-type response scale were added and averaged to provide an average score of the minimum standards for each school. Scores were grouped into five groups. The five levels of school quality ratings were operationally defined as 0 - 0.99 = poor/not observed, 1.00 - 1.99 = not satisfactory, 2.00 - 2.99 = fair, 3.00 - 3.99 = Good and 4 = Excellent. That is, if schools scored an average between 2.00 - 2.99 it meant fair minimum quality standards. Data for quality minimum standards were analysed using

descriptive statistics (frequencies, percentages, means, and standard deviations).

Ethical Concerns

Approval to conduct the study was obtained from seven District Executive Directors in Dodoma, Morogoro and Mwanza regions respectively. Ethical issues were observed by first, obtaining verbal consent for participation from every teacher prior to data collection. Second, teachers were informed of the purpose of the study, and that they had the right to refuse to participate. Furthermore, codes were used to ensure the anonymity of the respondents as well as of the participating schools.

Findings

Availability of Qualified Pre-Primary Education Teachers

The study sought to explore the level of personnel qualification in PPE in Tanzania. Teachers' qualifications were assessed based on educational level, teaching experiences, and pre and in-service training courses in early childhood education. Table 1 shows the demographic and qualifications of respondents.

Table 1: Demographic and Profession Characteristics of the Respondents (n=45)

Demographic and Profession Characteristics	No.	%
Gender		
Females	32	71.1
Males	13	28.9
Educational levels		
Secondary Education & Grade 'A' certificate	42	93.3
Diploma Certificate	03	6.7
Experience years in teaching		
<01	07	15.6
01 to 10	36	80
10+	02	4.4
Pre-service training courses in early childhood education		
Yes	08	17.8
No	37	82.2

In-service training courses in early childhood education		
Yes	28	62.2
No	17	37.8

Table 1 shows that more than half of the PPE teachers (71.1%) were females, holders of secondary education and Grade ‘A’ teacher education certificates. Their experiences ranged from 1 month to 9 years of teaching in PPE classrooms. Only 4.4 per cent of teachers had teaching experience of more than 10 years. 82.2% of the pre-primary teachers had never attended any pre-service training course in Early Childhood Education. About 62.2% reported they had attended capacity-building seminars organized by Non-Governmental Organisations (NGOs) and an orientation workshop on the new pre-primary curriculum conducted by the Tanzania Institute of Education (TIE). Those who had attended in-service training offered by NGOs reported being trained on the 3Rs, developing competencies and skills in human development and School Readiness Programme.

PPE Classroom Characteristics

The study intended to identify the classroom characteristics of PPE in Tanzania. These were assessed based on the teacher-child ratio and class sizes. Table 2 shows descriptive data for PPE quality minimum standards including classroom characteristics (teacher-child ratio & class size).

Table 2: Descriptive Data for Pre-Primary Education Classroom Characteristics

Teacher - child ratio	Class size	Frequency	%
Over 100 children	101+	24	53.3
70 - 90+ children per teacher	70-100	9	20
50 - 60+ children per teacher	50-69	4	8.9
Less than 50 children	Less than 50	8	17.8

Overall, Table 2 indicates that most of the pre-primary education classes visited had high teacher-child ratios and unsatisfactory class sizes. It was observed that more than half of the classes had over 100 children per teacher, which might affect the quality of education or care provided to children.

Learning Environment

The PPE learning environment was assessed through seven minimum

standards, namely: infrastructure, equipment and materials, children’s learning, teachers’ behaviours, school leadership, parent-school partnership, and availability of child-protection measures. The findings are presented in Table 3.

Table 3: Descriptive Data for PPE Quality Learning Environment

No.	Dimension and Items	Mean	SD
Learning environment		2.15	.92
Infrastructure		2.72	.48
1	Availability of a permanent building	2.88	1.92
2	Building is safe	2.70	1.17
3	Toilet safe and appropriate	2.60	0.88
Equipment and Materials		1.70	1.05
4	Learning materials available and accessible	1.76	.82
5	Learning materials enough and safe to use	1.63	.89
6	The learning areas are organized.	1.59	.64
7	Availability of outdoor play equipment	1.30	.65
8	Blackboard for children to use	2.00	.56
9	Minimal appropriate and safe desk	1.31	.47
10	Floor coverings	2.41	1.22
11	Hand-wash facilities	1.00	.00
Children’s Learning		1.98	.81
12	Children actively engaged in learning	2.42	1.30
13	Children interacting positively	2.26	1.04
14	Children interacting with materials	1.26	.56
Teachers’ Behaviours		2.39	.99
15	Responsive when children ask questions	2.22	1.00
16	Use positive discipline	2.39	.99
17	Use calm, encouraging and positive language	2.66	1.23
School leadership		2.52	.45
18	Availability of SMC	3.05	.22
19	Functional management committee including parents, that has been trained in ECE and received follow up support	1.57	.50
Parent-school partnership		1.74	.73
20	Active parent-school partnership	1.50	.68
21	Feeding programme	1.63	.95
Child-protection measures		2.00	1.22
22	Schools have minimum child protection measures in place	2.00	1.22

**4= Excellent, 3=Good, 2 =Fair, 1=Unsatisfactory, 0= Poor/not observed

As indicated in Table 3, the mean values for all dimensions and items for the learning environment ranged from 1.00 to 3.05. The overall mean score for the PPE learning environment was 2.15 ($SD = .92$). This implies that the quality of the learning environment in the study classes was fair. However, the standard deviation of .92 indicates that there was a high variation in the quality of the pre-primary education learning environment. Specifically, the findings indicated that the mean for infrastructure was 2.72 ($SD=.48$), whereby a fair number of the schools visited had permanent buildings for pre-primary children. However, 42 per cent had no permanent building designated as a classroom for pre-primary education children. It was noted that in some of the schools, PPE classes were conducted in early-grade classrooms by shift, under the trees, while in other schools, pre-primary education children were mixed with other grades. Besides, some schools employed other approaches to accommodate pre-primary education children. These approaches included using abandoned buildings, stores and other grades' classrooms. Of the available PPE buildings, 50% had inadequate space for the number of children. Moreover, the majority of schools (80%) had toilets separate for boys and girls. However, there were no toilets special for pre-primary children as they shared with primary school children.

As indicated in Table 3, equipment and materials had unsatisfactory quality in many classes ($M=1.70$, $SD=1.05$). It was found that 67% of classes had no learning area. Teaching-learning materials were largely lacking in almost all the classes visited. Commonly available materials in a few classes were alphabet and number charts displayed on classroom walls, letter and number cards, and some pictures of some objects such as bloom, bucket, knife, and brush but they were not labelled. Similarly, 86% of visited pre-primary classes had no outdoor play equipment. A few schools, which had these equipment were observed to be unsatisfactory because they were neither adequate for all pre-primary children to use nor age-appropriate. With regards to chalkboards for children, 70% of PPE classes had chalkboards, which were at the child level, but their conditions were unsatisfactory. Other classrooms' chalkboards were at a level that children could not reach easily. Moreover, 46% and 55% of PPE classes had inadequate and inappropriate desks sizes, tables and chairs respectively. Besides, in five per cent of these classes, desks were congested inhibiting easy movement of teachers and pupils. A great number of pre-

primary classes had rough floors and were dusty with no displays in the classroom. Based on the data collected, it appears that children's learning experiences, as measured by their interactions with peers and materials, were unsatisfactory ($M=1.98, SD =.81$). More specifically, the data suggests that children had limited interaction with learning material ($M=1.26, SD=.56$), which could potentially be attributed to limited availability of learning materials. However, it is worth noting that there was a fair quality of positive interaction with peers ($M=2.26, SD=1.04$), which suggests that socialising with their peers was a more prominent aspect of the learning experience. On issues of teachers' behaviours, it was found that the majority of teachers (57.5%) were responsive when children asked questions ($M=2.22, SD=1.00$). Also, teachers were observed to use positive discipline methods ($M=2.39, SD=.99$), such as redirecting undesired behaviour and reinforcing desirable behaviour. This approach encourages positive behaviour and can have long-term benefits for children's development. Moreover, most teachers were noted to use calm, encouraging and positive language ($M=2.66, SD=1.23$). This positive approach creates a welcoming and supportive classroom environment that promotes learning. However, it was observed that a few teachers raised their voices and used loud language when children misbehaved.

Findings further revealed that the majority of the schools visited have established school management committees ($M=3.05, SD= .22$), with member numbers varying from 7 to 12. However, it was reported that nearly all committee members had not received any training on pre-primary education-related matters ($M=1.57, SD= .50$). This lack of training could potentially hinder the committee's ability to effectively manage pre-primary education programmes. Further, findings revealed that parent-school partnership in the schools visited was limited ($M=1.74, SD=.73$). 61.5 per cent reported rare parent participation and 30.8% rated parent participation as ad-hoc or sometimes. It was revealed that there were neither parent-school meetings nor parents involved in classroom activities despite school management efforts to engage parents. In a few schools where there was parental engagement, such engagement could be described as unsatisfactory as they were rarely involved in school matters. In the case where they were engaged, it was about discussing feeding programmes, financial contribution and construction of buildings. With regard to the feeding programmes, 77.5% of schools visited neither had a feeding programme for pre-primary children nor for the entire school. However, 50 per cent of the schools reported to have made efforts to establish feeding programmes. It was observed that certain schools had

inconsistent feeding programmes where children were only provided with porridge during the harvest season; maize contributions from parents were requested during this period. On the other hand, other schools had a more structured feeding programme, where parents contributed to the provision of porridge throughout the year. However, it was revealed that most of the parents did not contribute as expected. As a result, their children were not provided with porridge. Furthermore, the study revealed that a significant majority (84%) of schools did not have any established child protection measures, handling complaints, positive discipline practices, sanctions for non-compliance; a first aid kit or committees to safeguard children against any form of abuse or harm. This lack of protection mechanisms puts children vulnerable and susceptible to abuse by perpetrators within or outside the school environment. Only 3 (6.66%) out of 45 schools had functional child protection committees and fairly well child protection measures in place to identify and prevent any potential harm to their children.

Discussion

The quality of early childhood education was found to be averagely fair. The results of this study are consistent with those of previous studies (UNICEF, 2017; Libent-Mabagala & Shukia, 2019; URT, 2020b) which revealed that pre-primary education teachers had a deficiency in training programmes on ECE. Consequently, this finding may suggest for more increasing investment in capacity building for PPE teachers. This can be through pre-service and in-service training. A well-trained teacher is better able to provide children with services that are suitable for their developmental needs, meets their needs more professionally (Burchinal, 2018) and has fewer difficulties in relating to family members in comparison to a teacher who has a lower level of education. Studies reveal that there is an affirmative linkage between teacher qualification and programme structure. Usually, the teachers' high level education is correlated to a high-quality learning environment in early childhood (Manning, et al., 2017). Similarly, a study by Pianta et al. (2016) demonstrated that teachers with educational experiences and preparations in early childhood education help to improve the quality of children's learning. In this study, the quality of pre-primary education classroom characteristics (class sizes and teacher-child ratio) were found to be unsatisfactory. These findings are consistent with URT (2020a) data, which indicate that in the year 2020, the qualified teacher-child ratio in government classes was 1:193, which is considered unfavourable, compared to the standard norm of 1:25. These results

suggest that the larger class sizes and unfavourable teacher-child ratio may impact children's school readiness and learning outcomes. This aligns with Bronfenbrenner's ecological systems theory, which explains how different factors in a child's environment interact to influence their development. In this case, the classroom characteristics can be viewed as microsystems, and factors such as class size and teacher-child ratio can affect a child's learning experience and overall development. Therefore, efforts to improve the structural quality components of classroom characteristics should target most of the PPE classes. Studies (Canbeldek&Isikoglu,2017; Connolly & Haeck, 2020) demonstrate that classsize is one of the components of a quality ECE programme that produces positive outcomes for young children. Research on childcare classrooms (Skalicka, et al., 2015; Hu, et al., 2016) indicates that when groups are smaller and staff-child ratios are lower, teachers provide more stimulating, responsive, warm, and supportive interactions.

They also provide more individualized attention, engage in more dialogues with children, and spend less time managing children and more time in educational activities. With regard to the learning environment, generally, the findings suggest that the quality of the learning environment in the study classes was fair, but there were variations across different dimensions. Four quality dimensions, including infrastructures, teachers' behaviours, school leadership, and availability of child-protection measures were found to be fair. However, the dimensions of equipment and materials, children's learning, and parent-school partnership were observed to be unsatisfactory. These findings can be linked to Bronfenbrenner's ecological systems theory, which emphasises the importance of considering multiple factors in a child's environment that interact to influence their development. In this case, the quality of the learning environment can be viewed as a combination of various micro and meso-systems factors, including infrastructures, teachers' behaviours, school leadership, availability of child-protection measures, equipment and materials, children's learning, and parent-school partnership. The study findings highlight the need for collective efforts to improve the quality of the learning environment in early childhood education (ECE) as it can significantly influence young children's performance (Tsiakara & Digelidis, 2015). This aligns with previous research, which has shown that a high-quality learning environment positively impacts children's cognitive, social, and emotional development (Burchinal et al., 2011).

Conclusions and Recommendations

Considering the findings of this study, the following conclusions were drawn. Firstly, regarding the level of PPE staff qualification in Tanzania, it was found that teachers who are teaching in PPE classes are qualified as primary school teachers. However, the majority lacked early childhood education-related training. Similarly, school leadership, including the school management committee, also lacked training on PPE. Therefore, there is a need for more training and professional development opportunities for PPE teachers and school management committees. Secondly, concerning the PPE classroom characteristics, it was found that the teacher-to-child ratio is unfavourable, and classes are suffering from a lack of age-appropriate teaching-learning materials and resources. This indicates that the PPE classroom teaching-learning conditions are largely unsatisfactory, which threatens the quality delivery of PPE. Finally, concerning the PPE learning environment, it was found that community engagement with PPE is largely lacking parent-school partnerships and food programmes.

Therefore, there is a need for increased community involvement and support to improve the overall quality of PPE in Tanzania. In conclusion, the study found that the quality of pre-primary education in rural areas is averagely fair, but there are significant challenges that need to be addressed. Drawing on conclusions, this paper makes practice and policy recommendations. Since early childhood has a positive influence on the educational development of children in later life, it is therefore imperative that it should be based on sound foundations to yield high returns. Therefore, there is a need to organize regular in-service training to teachers so as to improve teachers' qualities. Furthermore, the involvement of committed different stakeholders is an important aspect in providing access to high-quality pre-primary education. That is, parents and the community as a whole should be given opportunities to participate in some of the school's special programmes. Policies can be developed to promote parental engagement, such as offering parent-teacher meetings, parent-teacher associations, and volunteer opportunities. Moreover, there is a need to expand funding for early childhood education this can help improve the quality of infrastructure, equipment, and materials in schools. This is because a completely-prepared learning environment gives young children a feeling of belonging, promotes meaningful learning experiences, encourages higher levels of performance, and motivates the practice of critical thinking skills.

Limitations

Even though this research identified many important findings and implications, it has limitations. Primarily, this study reached a limited number of selected schools from three regions, and it cannot generalise findings across Tanzania. Future research needs to be conducted with a larger sample size across several regions of Tanzania.

REFERENCES

- Barnett, S. (2008). Preschool education and its lasting effects: Research and policy implications. [https://greatlakescenter.org/docs/ Policy Briefs/ BarnettEarlyEd.pdf](https://greatlakescenter.org/docs/Policy%20Briefs/BarnettEarlyEd.pdf)
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Burchinal, M. (2018). Measuring early care and education quality. *Child Development Perspectives*, 12, 3–9. <https://doi.org/10.1111/cdep.12260>
- Burchinal, M., Howes, C., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2011). Predicting child outcomes at the end of kindergarten from the quality of pre-kindergartenteacher–child interactions and instruction. *Applied Developmental Science*, 15(4), 170-187.
- Canbeldek, M., &Isikoglu, N. (2017). The effects of early childhood classroom size and duration on development. *Eurasian Journal of Educational Research (EJER)*, 17(68), 257-271
- Ceglowski, D., & Bacigalupa, C. (2002). Four perspectives on child care quality. *Early Childhood Education Journal*, 30 (2), 87-92.
- Connolly, M., & Haeck, C. (2020). Nonlinear class size effects on cognitive and noncognitive development of young children. *Research Group on Human Capital - Working Paper Series*, 18(01), Université du Québec à Montréal
- EFA Global Monitoring Report Team. (2015). *EFA global monitoring report 2015. Education for all 2000–2015: Achievements and challenges*. UNESCO
- Heckman, J. (2017). There’s more to gain by taking a comprehensive approach to early childhood development. [https://heckmanequation.org /assets/2017/01/F_Heckman_CBAOnePager_120516.pdf](https://heckmanequation.org/assets/2017/01/F_Heckman_CBAOnePager_120516.pdf)
- Hu, B.Y., Miranda, C. K.M., Neitzel., J., Li, K., & Fan, X. (2016). Predictors of Chinese early childhood program quality: Implications for policies. *Children and Youth Services Review*, 70, 152-162.
- Ishimine, K., & Tayler, C. (2014). Assessing quality in early childhood education and care. *European Journal of Education*, 49 (2), 272–290.
- Maldonado-Carreno, C., Yoshikawa, H., Escallon, E., Ponguta, L. A., Nieto, A. M., Kagan, S. L., Rey-Guerra, C., Cristancho, J. C., Mateus, A., Caro, L. A., Aragon, C. A., Rodriguez, A. M., & Motta, A. (2022). Measuring the quality of early childhood education: Associations with children’s development from a national study with the IMCEIC tool in Colombia. *Child Development*, 93, 254–268. <https://doi.org/10.1111/cdev.13665>.
- Manning, M., Garvis, S., Fleming, C. & Wong, G. (2017). *The relationship between teacher qualification and the quality of early childhood care and learning environment*. Campbell Systematic Reviews.

- Mullis, I. V. S., Martin, M. O., Foy, P., & Drucker, K. T. (2012). *PIRLS 2011 international results in reading*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
- OECD. (2017). *Starting strong 2017: Key OECD indicators on early childhood education and care: Organization for economic co-operation and development*. https://read.oecd-ilibrary.org/education/starting-strong-2017_9789264276116-en#page5
- Pianta, R., Downer, J., & Hamre, B. (2016). Quality in early education classrooms: Definitions, gaps, and systems. *The Future of Children*, 26(2), 119-137.
- Rao, N. Sun, J., Chen, E. E., & Ip, P. (2017). Effectiveness of early childhood interventions in promoting cognitive development in developing countries: A systematic review and meta-analysis. *Hong Kong Journal of Paediatrics*, 22, 14-25
- Republic of Kenya. (2017). *National pre-primary education policy*. Ministry of Education, State Department of Basic Education.
- Republic of Uganda. (2016). *Education abstract 2016*. Ministry of Education and Sports.
- Skalicka, V., Belsky, J., Stenseng, F., & Wichstrøm, L. (2015). Reciprocal relations between student–teacher relationship and children’s behavioral problems: Moderation by child-care group size. *Child Development*, 8(5), 1557-1570.
- The United Nations. (2015). *The millennium development goals report*. The United Nations
- Tsiakara, A., & Digelidis, N. (2015). Learning environment and type of goals: How it affects preschool children's performance and their perceptions of their performance? *Early Child Development and Care*, 185 (3), 464-474.
- UNESCO. (2020). *School enrollment pre-primary (%gross) – Sub-Saharan Africa*. UNESCO Institute for Statistics.
- URT. (2010). *Basic education statistics in Tanzania (BEST) 2006-2010 National Data*. Ministry of Education and Vocational Training.
- URT. (2014). *Sera ya elimu na mafunzo*. Wizara ya Elimu na Mafunzo ya Ufundi.
- URT. (2020a). *Pre-primary, primary, secondary, adult and non-formal education statistics: Regional data*. President's Office - Regional Administration and Local Government
- URT. (2020b). *Mwongozo wa kitaifa wa uendeshaji na viwango vya utoaji wa elimu ya awali Tanzania*. Wizara ya Elimu, Sayansi na Teknolojia
- Yoshikawa, H., Wuermli, A. J., Raikes, A., Kim, S., & Kabay, S. B. (2018). Toward high-quality early childhood development programs and policies at national scale: Directions for research in global contexts. *Social Policy Report*, 31, 1–36. <https://doi.org/10.1002/j.2379-3988.2018.tb00091.x>.

ICT-Based Assistive Technology for Empowering Persons with Visual Impairment

Cosmas Boniface Mnyanyi
cosmas.mnyanyi@out.ac.tz
The Open University of Tanzania

ABSTRACT

The study employed comprehensive assistive technology (CAT) model to investigate use of ICT-based assistive technology (ICT-Based AT) for empowering persons with visual impairment. The objectives of the study was to explore the strategies employed by people with visual impairments to learn ICT skills and the impact of using ICT-based AT for VIPs. Twenty-five (25) people with visual impairment graduate from the ICT skills training sessions at the Open University of Tanzania were interviewed using semi-structured interview guide. Findings indicated that ICT-Based AT training strategies for people with visual impairment require developing competences on keyboard and the use of screen reader. Furthermore, the use of ICT-Based AT has a significant positive impact on individuals with visual impairment in terms of enhancing their chances in accessing online learning, sense of empowerment and social inclusion. The present study makes a theoretical contribution to the field by enhancing the existing literature on the activity attributes of the CAT model. The study also calls for the government and stakeholders to enhance the use of ICT-Based AT for empowering persons with disabilities.

Keywords *Assistive technology, visual impairment, Open University of Tanzania, NVDA, ICT-Based AT.*

INTRODUCTION

According to the World Health Organization's (WHO) global report on vision, at least 2.2 billion individuals worldwide have some form of visual impairment; at least 1 billion have a condition that might have been avoided or is still unaddressed (WHO, 2017). According to Ackland et al. (2017), 89% of visually impaired people reside in low and middle-income nations. According to WHO (2017) and Fernandes et al. (2019), people with blindness and moderate to visual impairment is on increase, calling for intervention strategies to improve the living standards of people with blindness, including the use of ICT-based assistive technology. With the ageing population projected to grow significantly over the next few decades, the number of people with visual impairment is expected to rise (Fernandes et al., 2019). According to Bhowmick and Hazarika (2017), ICT can be used to improve the daily functioning of people with visual impairment by improving their performance in many activities. In the context of increased use of smartphones, there is an increase in access to information through the application of information and communication technologies (ICTs), which poses challenges to people with visual impairment. Assistive technology (ATs) can help people with visual impairments overcome limitations, improve their work skills, and achieve social inclusion (Ackland et al., 2017; Li & Xiong, 2017; Hersh & Johnson, 2010).

According to Park et al. (2019), ICT can be used by social workers, healthcare experts, and community members to promote the growth of social and health needs in the community. This study aims at exploring the views of persons with visual impairment on the use of ICT-based assistive technology for empowering persons with visual impairment. ICT is crucial for many aspects of life, and it is especially important for amusement and fun (Islam et al., 2020). Many individuals now use ICT as a source of enjoyment and as a regular part of their lives in the form of mobile and computer games. Mobile games not only give entertainment but also aid in reducing tension and frustration (Tollefsen & Lunde, 2004). This is especially true for disabled people. According to Garcia et al. (2009), gaming has a therapeutic effect on the body and mind. Thus, participation in ICT-based entertainment is crucial for those who are blind or visually impaired. However, because the majority of ICT-based entertainment tools are designed for normal people, blind individuals are denied this option. Making ICT accessible to everyone, including those with disabilities, is necessary to improve the quality of life.

This study addressed the following questions:

- (1) What are the strategies employed by people with visual impairments to learn ICT skills?
- (2) What are the impacts of using ICT-based AT for VIPs?

People with Visual Impairment in Tanzania

According to WHO (2011), disability refers to the adverse effects of the interaction between an individual (with a health condition) and that individual contextual factor (environmental and personal factors). Disability includes impairments, activity limitations, and participation restrictions. It is estimated that 7.8% of people in Tanzania are disabled (Mnyanyi, 2014; United Republic of Tanzania, 2008). According to the 2008 Disability Survey conducted in Tanzania, the prevalence of vision impairment was 3.1% (Mnyanyi, 2014). About half of the people with disabilities (PWDs) (47.6%) were illiterate, compared to 25.3% of people without disabilities. Almost 35% of PWDs aged 15 and older reported having trouble finding information in an accessible format; and 2% of children with disabilities used assistive devices. Such data suggests that it can be difficult for people with disabilities to receive social services, including schooling.

Access to services in the areas of health care (including rehabilitation), education, transportation, and employment is significantly hampered for people with disabilities (WHO, 2011). Due to pervasive barriers, people with disabilities are seen as belonging to a lower social class. This is because they have fewer employment opportunities, a very low income, and are unable to participate in daily activities, which increases their dependence (Sunsern et al., 2012; Wanaratwichit et al., 2008). It is argued here that, since disability in Tanzania like other countries will continue, there is a need to start developing means to support persons with special needs and disabilities so that they can adapt to the environment. Integrating ICT in teaching has become the practice in both developed and developing countries (Mnyanyi et al., 2012; Bingimlas, 2009; Dawes, 2001; Schiffman et al., 2007; Hosie et al., 2005; Kim & Bonk, 2006). Mnyanyi et al. (2012) found that ICT has the potential to create the learning opportunities for all, including persons with visual impairment. Though ICT has the potential to open up the opportunity for persons with special needs and disabilities, there are some challenges that limit its achievement. According to Mnyanyi et al. (2010), such ICT challenges are related to infrastructure, affordability, accessibility, adaptability, ICT trainers (human resources), economic scales and possible ICT

training opportunities for persons with special needs and disabilities. By 2016, only the Open University of Tanzania had provisions for ICT training for visually impaired and hearing-impaired persons in Tanzania. As such there are few people trained to teach ICT to persons with special needs and disabilities (Mnyanyi et al., 2012).

ICT-Based Assistive Technology

People who are visually impaired (VIP) encounter a variety of mobility challenges in cities. The rapid development of innovation and technical research advancements has offered the blind hope for developing ways to navigate smart cities and improve their quality of life (Ramadhan, 2018). Stevie Wonder, the visually-impaired pop singer, once said that "there's nothing on the iPhone or iPad that you can do that I can't do." (Huang et al, 2022). Consumer technologies like cell phones have given the blind and visually impaired additional opportunities to experience activities that are accessible to the general public. Assistive technology tools are made to help people with disabilities navigate around their challenges (Rose et al., 2005). Accessibility, as defined by the World Wide Web Consortium [W3C] (2016), is the capability of a website to be utilized without difficulty by people with disabilities. Assistive technology for those with visual impairments includes screen magnifiers, screen readers, and mouse scanners. The term "universal design" refers to a similar but broader idea that is used to create goods and services that are useable and accessible to everyone, regardless of their skills, colour, gender, culture, or other differences (Ostroff, 2011). In order to achieve inclusive education, the universal design concept is implemented in education through the use of the Universal Design for Learning (UDL) (Wilson, 2017).

Khan and Khusro (2021) looked into the problems, potential, and uses of smartphone-based assistive technologies for the blind and visually impaired. The study concentrated on the difficulties that people with visual impairment face when performing daily tasks. The findings indicated that people with visual impairment face several challenges including reading product labels, recognizing currency notes and navigating unfamiliar environments. People with visual impairment face challenges related to determining the appearance of a subject of interest, interacting with digital artefacts, using a smartphone's user interface, and selecting non-visual items on a screen. Findings showed that the development of smartphone-based assistive technology encouraged freedom, the convenience of use, and usability leading to an enhanced quality of life yet presents various

challenges. Findings also showed that in order to fully realize the promising potential of ICT-based treatment options for blind individuals, technology improvements, an accessibility-inclusive interface paradigm, and collaboration between medical professionals, computer professionals, usability experts, and domain users are required. Douglas et al. (2007) used an interview schedule with 1007 interviewees to examine the role of the WHO ICF as a framework to interpret barriers and to inclusion for people with visual impairment. Findings showed that the ICF provided a vocabulary to help visually impaired participants describe their lives in terms of participation and potential barriers to social inclusion. They also showed a clear relationship between age and computer use, with older visually impaired people being much less likely to use computers. The results also showed that despite the fact that technology offers many advantages, such as access to information and a path to employment, many blind and visually impaired people do not see the relevance of ICT. The study indicated ICT challenges related to individual barriers to using ICT (such as their visual impairment), and perceive social barriers to using ICT (such as the cost, availability, and accessibility of technology, as well as issues related to training).

To make mobile entertainment available to everyone in Bangladesh, Islam et al. (2020) looked at the design, implementation, and evaluation of a mobile game (BrickBlaster) for blind individuals. The study had 24 blind participants. The game was created with voice-over instructions, haptic feedback, vibro-tactile signals, and five stages in mind. The results showed that blind persons could use and play the game. The evaluation study's results indicate that each level's completion had a reasonable amount of difficulty in terms of time and attempts. The difficulty rose as the players advanced to the following level, as was to be expected. Analysis of the effect of the players' demographics (such as gender and whether they were in high school or college) on the game's playability in terms of success rate, attempts, level completion time, and player attitude metrics revealed no significant differences. Additionally, the game was highly rated for its usability, simplicity of learning, enjoyment, degree of involvement, and excitement. Finally, research revealed that participants were quite likely to play the game again and to tell others about it.

ICT Skills Training at the Open University of Tanzania

The Open University of Tanzania (OUT) is a public University that delivers learning through Open and Distance Learning mode. The University was established through the Act No. 17 of 1992 and became fully operational in 1994(Mnyanyiet al., 2010; Bisanda, 2009). The university started enrolling persons

with special needs and disabilities, especially, the visually impaired (the blind) in 1997 with support from David Anderson African Trust (DAAT). The programme had a component of using audiobooks recorded in audio cassettes. The visually impaired students were given a radio cassette and the audiobooks. During examinations, these students used a typewriter. Since 2004, the University started planning to use ICT in delivering teaching and learning. The question then was how to support the visually impaired students in the transition. By 2010, the university had established over 13 ICT laboratories for ICT training to the community. But none was catering for the needs of visually impaired students. In 2009, the University started looking for partners to support the establishment of ICT skills training for students with special needs and disabilities. It is until 2011 that OUT and partners including the Tanzania League of the Blind (TLB), Sightsavers, Tanzania Education Authority, and the Ministry of Education managed to launch ICT training for the visually impaired at The Open University of Tanzania. In the training, a total of 15 persons attended the training of whom two were hired by OUT as trainer of trainers(Makoye, 2017).

Theoretical Framework

This study employed a comprehensive assistive technology model (CAT) (Wang & Wu, 2021; Hersh & Johnson, 2008a, 2008b). The CAT model was created as a result of Cook and Hussey's (2002) Human Activity Assistive Technology (HAAT) Model, which is used to match assistive technology to a specific end-user (Hersh & Johnson, 2010). In a hierarchical tree structure with a number of categories at each level, the CAT Model covers a wide range of attribute components, including context attribute, person attribute, activities attribute, and AT attribute. This model offers a tabular checklist for the analysis and synthesis of AT as well as a systematic vocabulary and description for all aspects of AT applications. Through actual case in-depth interviews, this study supports three activities attributes in the CAT Model (Figure 1) combining sociological, psychological, communication, and cross-cutting disciplines in academic theory.

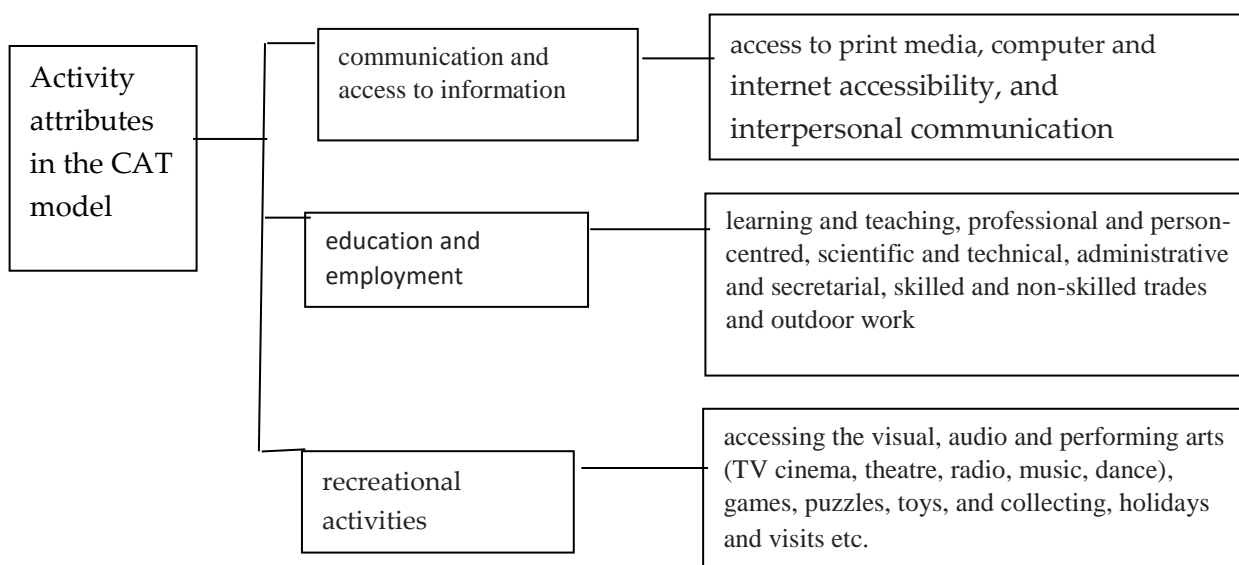


Figure 1: Activity attributes in the Comprehensive Assistive Technology (CAT) model modified from Hersh and Johnson (2010) and Wang and Wu (2021).

Method

By employing the CAT model, this qualitative study conducted in-depth interview sessions to persons with visual impairment graduates of ICT skills training. Twenty-five (25) people with visual impairments who attended ICT skills training classes at the Open University of Tanzania were interviewed using semi-structured interview guide (Table 1).

Table 1: The Study Respondents

Age	Male	Female	Total
15- 25	5	6	11
26-45	7	3	10
Above 46	3	1	4
Total	15	10	25

The interviews took place between March 22, 2022, and April 22, 2022. The same interview guide was used to all the participants. Along with participant observations and focus group discussions, the interviews were directed to the research. The in-person interviews about people with visual impairment use of screen readers were broken down into two sections. Section one was on the strategies used for facilitating ICT skill training for people with visual impairment and the second session was on the impact of ICT-based AT. In the case of impact of

ICT-based AT included issues related to physical limitations, empowerment, social participation and how use of ICT-based AT affects their social inclusion.

Results

Strategies Employed by People with Visual Impairment to learn ICT Skills

Amponsah and Bekele (2022) state that despite the potential benefits associated with increased access to and the calibre of education, including visually impaired students in online learning has remained a challenge. The UN's SDG 4 goal, which aims to ensure inclusive, equal, and equitable lifelong education for all by the year 2030, has given online learning increased significance in higher education institutions around the world. The majority of research shows the existence of regulatory frameworks and some types of digital technology, but accessibility and usability continue to be an issue for people with visual impairment. There are specialized sections for people with visual impairment in institutions, but online learning help is still difficult to come by. Universities must create flexible and adaptable policies using inclusive and participatory methods. In this study, graduates of the ICT skills training for people with visual impairment explained strategies they used to learn ICT. The strategies include learning the computer parts, learning the keyboard skills, windows navigation skills, and the use of screen readers before start learning the application software like MS Word and the internet. As one of the people with visual impairment (VIP) stated:

Learning ICT was interesting. The ICT facilitator was a blind person. That gave me confidence. Learning ICT skills started by touching different parts of the computer. Later I learnt keyboard skills. I also learnt listening skills to the screen reader like NVDA, and Windows navigation skills using the keyboard functions before learning the common computer skills like application software and the internet (VIP 5, Female, 26 years old).

People with visual impairment need to learn the keyboard functions as they cannot use the mouse. Thus, they have to master Windows navigation using the keyboard functions (Mnyanyi et al., 2022). Persons with visual impairment used several strategies to master ICT skills including having some skills in keyboard, and some knowledge of English language as the synthesiser used was in English. However, later on, it was understood that one has to learn listening skills, so that they could follow the English language of the screen reader (synthesiser). For a visually impaired person to use a computer one must learn the keyboard because all commands are in the keyboard.

When I started learning ICT, I thought it was so difficult and that I cannot learn. I decided to attend all the sessions. On the first day, the teacher taught parts of the computer and mentioned a keyboard. Then because I regularly go to church, I thought there are things I know, like a keyboard. But when the teacher started teaching us, I became aware that the keyboard in the church is different from the one used in computers. Since I had some skills in the typewriter, it was easy for me to learn the keyboard skills (VIP 13, Male, 36 years old)

Despite its positive effects on expanding educational access, ICT has its drawbacks. UNESCO (2011) lists several obstacles to using ICT. Such obstacles include the inadequate ICT resources and the ineffective use of available resources. Others are teachers' awareness of the advantages of using ICTs; teachers' attitudes toward using ICTs in the classroom; students' and parents' awareness and attitudes toward using ICTs. Other obstacles are the lack of flexibility in the current curriculum, teaching methods, and assessment methods; and the difficulties in meeting the needs of all students. When it comes to the ICT teaching and learning process, various persons with special needs and disabilities employ different tactics. The blind utilizes a synthesizer that is set to their preferred language, in this example Kiswahili in Tanzania.

The Impacts of using ICT-based AT for people with Visual Impairment

The positive impacts of ICT-based AT usage toward VIP include: creating access to education, access to employment, creating networking, improving performance in work and general life, improving access to skills development, creating independence, and breaking barriers to communication. A 53 years old male indicated the importance of ICT as supporting a person with visual impairment to online life dependence like the non-disabled. The old man was an engineer and lost sight at the age of 50. This person was one of the first graduates of ICT skills training at OUT. He Commented:

I was a Chemical Engineer and became visually impaired at the age of 50; I thought this was the end of life. But later I decided in myself that I have to do something. I joined braille skills training course and later decided to look for a job. I secured one at OUT and got ICT skills training course. After ICT training, I am now working as ICT facilitator for visually impaired persons. Above all, I have joined courses in social work and now I am doing my Master in Social Work degree. I do participate in online course and do perform well. I am determined. My self-determination led to receiving the Commonwealth Award in 2016 in Kuala Lumpur, Malaysia (VIP 2, Male 53 years).

The other visually impaired person said, ICT led to secure a new job that enabled people with visual impairment to earn a living and improve the quality of life.

I had no job. After ICT training, I decided to search online some mobile applications and then started learning how to become a mobile phone repair. Now I am happy as ICT Skills training has created a self-employment job for me. I can repair mobile phone using software where I need to join some parts I ask support from the sighted peers but myself can put music in mobile phones and troubleshoot a mobile phone with easy. I also established training sessions through appointment (VIP 22, Male, 30 years old).

With the assistance of ICT-based AT, most VIP can use daily life apps, such as social media like WhatsApp, telegram, mobile payment apps, and online shopping apps. Use of application software make life easier for people with visual impairment. With the use of online services, people with visual impairment find it easy to participate in online learning.

I was trained as a lawyer but never had a job. After attending ICT training at OUT I was employed as ICT facilitator for the visually impaired persons. Above all, initially, I was limited to friends who can come across to me. With ICT, have created more friends through networking. Through ICT, I was able to find new employment opportunity and further studies. I can decide to go online and study different books, online news and make online applications. ICT have changed completely my profession, from a lawyer to IT expert (VIP 23, Male, 35 years old).

The modern economy requires everyone to have some minimum level of technology in order to participate fully in the modern economic, social, political and technological requirements (Haddad & Draxler, 2002). Further, ICT can enhance inclusion, as one of the ICT skills graduate narrated:

After my graduation on ICT skills training at OUT, I started teaching ICT at the college where all students are sighted. I feel proud as we all know sighted persons to believe that a visually impaired person can teach ICT is not easy, but I am doing it. I can prepare my slides independently and only support I need is when choosing image to include in my slides and on adjustment of my projector in class. I can also use track change and actually can do all things in Microsoft Office without problems. I can also use html and php programmes to create websites in my own (VIP 17, Male, 42 years old).

The negative impact of ICT-based AT was noted by VIP 7, a 42 years old female participant who lost vision due illness at the age of 40. During her sighted life, she was a photographer in events and she was so happy with the skill. When she

became blind, she could use all the apps in a mobile phone, the only limitation she has is taking a photo as he narrates:

During my sighted life, I liked taking photo and changing the way I want sung apps. Now I can use many of the apps in my phone. The only challenge I face is how to take a photo. It is difficult, I have to ask someone to take a photo for me. With increasing discovery, may be one day I will be able to use my skills of taking a photo (VIP 7, Female 42 years old).

People with visual impairment are empowered by ICT-based AT because it increases their access to knowledge and education. People with vision impairments can join in social events when participants convene in an online space or group for VIP through the use of ICT-based AT, which improves their social experience. They can create communities where they share knowledge, gain knowledge, discuss issues, and unwind. Their informational and social requirements are centred on issues related to finding employment, educational possibilities, monetary support, emotional support, and other forms of social support (Wang & Yu, 2017). Without AT, they are unable to manage everything, pursue online employment, online education opportunities, and VIP pleasure. A 32-year-old female with visual impairment had the following to say:

I have to say that the amount of information received is relatively more. If you don't read the screen, you won't be able to receive a lot of information, including news events job placement, online learning opportunities, leisure and business. If you don't have a screen reader, you can't participate at all. (VIP1, Female 32 years old).

The challenges faced by persons with visual impairment is related to financial capacity that limits from buying software and thus depend on free software that has many disadvantages including pop-up messages and creating risks to information security. ICT has generally shown to support people with special needs and disabilities in supporting personal access to information and knowledge as a tool for improving a learner's access to information and knowledge in formal and non-formal learning situations. It supports learning and teaching situations for pedagogical, didactic uses, assisting in personal, learning development, and shaping new skills. ICT is also a tool for teachers to support learning, development of new skills, and in supporting the personal learning development of individuals with special needs and disabilities.

Conclusion

This study suggests that the utilization of ICT-Based Assistive Technology, specifically screen readers, has resulted in improved communication and information accessibility, as well as enhanced opportunities for education, employment, and leisure activities among individuals with visual impairment. Individuals who experience visual impairment have the ability to utilize Information and Communication Technology (ICT)-based Assistive Technology (AT) via screen readers on mobile phones and computers to access commonly used smartphone applications and internet services. This enables them to seek online employment opportunities, access educational resources, engage in online shopping or ordering services, and ultimately enhance their overall efficiency and engage in lifelong learning opportunities. The present study makes a theoretical contribution to the field by enhancing the existing literature on the Activities Attribute of the CAT model, from the aforementioned perspectives.

Technological empowerment expands individuals' self-awareness and decreases their reliance on others. It is argued that the existence of a "digital divide attribute" may result in inequity or destruction of relationships, such as limited access to ICT skills training that could reduce dependence and vulnerability to exploitation in pursuit of productivity enhancement. It should be noted that there exist certain limitations inherent to the assistive technologies themselves, including interface designs that may not be user-friendly for visually impaired persons, as well as restricted capabilities for recognizing visual media such as pictures and videos. Enhancing volunteer participation and advancing human civilization can potentially contribute towards addressing the issue and providing more sustainable resolutions. This study suggests that the use of ICT-Based Assistive Technology empowers persons with visual impairment. The adoption of Information and Communication Technology (ICT)-based Assistive Technology (AT) such as smartphones and screen-reading software among individuals with visual impairment represents a seamless progression towards an enhanced standard of living. One limitation of this research pertains to the decontextualization of interviews.

REFERENCES

- Ackland, P., Resnikoff, S., & Bourne, R. (2017). World blindness and visual impairment: Despite many successes, the problem is growing. *Community eye health*, 30(100), 71.
- Amponsah, S., & Bekele, T. A. (2022). Exploring strategies for including visually impaired students in online learning. *Education and Information Technologies*, 1-23.
- Bhowmick, A., & Hazarika, S. M. (2017). An insight into assistive technology for the visually impaired and blind people: State-of-the-art and future trends. *Journal on Multimodal User Interfaces*, 11, 149-172.
- Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5(3), 235-245.
- Bisanda , E. T. (2009). Opportunities for knowledge transfer through open and distance learning in Sub-Saharan Africa. Proceedings of the 2nd ACDE conference and general assembly hosted by the National Open University of Nigeria, and held at Eko Hotels, Lagos 8 – 11th July 2008.
- Dawes, L. (2001). What stops teachers using new technology? In M. Leask (Ed), *Issues in teaching using ICT*.Routledge.
- Douglas, G., Corcoran, C., &Pavey, S. (2007). The role of the WHO ICF as a framework to interpret barriers and to inclusion: Visually impaired people’s views and experiences of personal computers. *British Journal of Visual Impairment*, 25(1), 32-50.
- Fernandes, H., Costa, P., Filipe, V., Paredes, H., & Barroso, J. (2019). A review of assistive spatial orientation and navigation technologies for the visually impaired. *Universal Access in the Information Society*, 18, 155-168.
- Garrido, Y., Marco, Á., Segura, J., Blanco, T., & Casas, R. (2009). Accessible gaming through mainstreaming kinetic controller. In *Intelligent Technologies for Interactive Entertainment: Third International Conference, INTETAIN 2009, Amsterdam, The Netherlands, June 22-24, 2009. Proceedings 3* (pp. 68-77). Springer Berlin Heidelberg.
- Haddad, W. A. &Draxler, A. (2002). *Technologies for education: Potential, parameters and prospects*.UNESCO.
- Hersh, M. & Johnson, M. (2008a). On modelling assistive technology systems part I: Modelling framework. *Technology and Disability*, 20(3),193-215.
- Hersh, M. & Johnson, M. (2008b).. On modelling assistive technology systems part II: Applications of the comprehensive assistive technology model. *Technology and Disability*, 20(4),251-270.
- Hosie, P., Schibeci, R., & Backhaus, A. (2005). A framework and checklists for evaluating online learning in higher education. *Assessment & Evaluation in Higher Education*, 30(5), 539–553.

- Huang, C. Y., Wu, C. K., & Liu, P. Y. (2022). Assistive technology in smart cities: A case of street crossing for the visually-impaired. *Technology in Society, 68*, 101805.
- Islam, M. N., Inan, T. T., Promi, N. T., Diya, S. Z., & Islam, A. K. M. N. (2020). Design, implementation, and evaluation of a mobile game for blind people: Toward making mobile fun accessible to everyone. *Information and communication technologies for humanitarian services, 291-310*.
- Khan, A., & Khusro, S. (2021). An insight into smartphone-based assistive solutions for visually impaired and blind people: Issues, challenges and opportunities. *Universal Access in the Information Society, 20*, 265-298.
- Kim, K-J., & Bonk, C. J. (2006). The future of online teaching and learning in higher education. *EDUCAUSE Quarterly, 29(4)*, 22-30.
- Li, D., & Xiong, M. (2017). After "accessibility": Research and reflection on accessible communication of new media. *Zhejiang Journal, 6*, 199–206.
- Makoye, C. (2017). An investigation of challenges facing students with visual impairment in accessing e-learning: A case study of Taboragirls secondary school. [Master Thesis, The Open University of Tanzania].
- Mnyanyi, C., Bakari, J. & Mbwette, T. (2012). Technologically-enhanced Open and Distance Learning for all in developing countries. *International Journal of Excellence in Education 4(3)*, 1-15.
- Mnyanyi, C., Bakari, J., & Mbwette, T. S. A. (2010). Implementing e-learning in higher Open and Distance Learning institutions in developing countries: The experience of the Open University of Tanzania. Paper presented at the fifth international conference of learning international networks consortium (LINC), Massachusetts Institute of Technology, Cambridge, MA.
- Mnyanyi, C. (2014). *Changing teachers' practices in regular schools enrolling children with visual impairment*. [PhD thesis, Abo Akademi].
- Mnyanyi, C., Elayedath, R., & Joseph, B. (2022). *Training manual on information and communication technology for persons with visual impairment*. IIP.
- Ostroff, E. (2011). Universal design: An evolving paradigm. In F. Wolfgang, E. Preiser & S. H. Korydon (Eds.), *Universal design handbook* (2nd ed. Pp 1.3–1.11). McGraw Hill.
- Park, M., Choi, E. J., Jeong, M., Lee, N., Kwak, M., Lee, M., & Lee, W. (2019). ICT-based comprehensive health and social-needs assessment system for supporting person-centered community care. *Healthcare Informatics Research, 25(4)*, 338-343.
- Ramadhan, A. J. (2018). Wearable smart system for visually impaired people. *Sensors, 13(3)*, 834.
- Rose, D. H., Hasselbring, T. S., Stahl, S., & Zabala, J. (2005). Assistive technology and universal design for learning: Two sides of the same coin. In

- Edyburn, D. L., Higgins, K., & Boone, R(Eds.),*Handbook of Special Education Technology Research and Practice*(pp. 507–518). Knowledge by Design.
- Schiffman, S., Vignare, K., & Geith, B. (2007). Why do higher-education institutions pursue online education? *Journal of Asynchronous Learning Networks*, 11(2), 61-71.
- Shetty S, Sunita S, Shetty I. (2021). Empowering the visually impaired by customized braille prescription and thus reducing medication errors. *Indian J Ophthalmol*,69,1388-90.
- Sunsern, R., Pothong, J., Rukkaumsook, S.(2012). Exploring Thai community support for disabled people. *Intern J Integrative Care*, 12,1-2.
- Tollefsen, M., & Lunde, M. (2004). Entertaining software for young persons with disabilities. In *Computers Helping People with Special Needs: 9th International Conference, ICCHP 2004, Paris, France, July 7-9, 2004. Proceedings 9* (pp. 240-247). Springer Berlin Heidelberg.
- UNESCO (2011). *Consultative expert meeting report on accessible ICTs and personalized learning for students with disabilities: A dialogue among educators, Industry, Government and Civil Society*. UNESCO.
- UNESCO IITE. (2011). *ICTs in education for persons with disabilities: Review of innovative practice*. UNESCO.
- United Republic of Tanzania [URT].(2008). *Tanzania Disability Survey*. National Bureau of Statistics.
- Wanaratwichit, C., Sirasoonthorn, P., Pannarunothai, S., Noosorn, N.(2008). Access to services and complications experienced by disabled people in Thailand. *Asia Pac J Public Health*, 20(Suppl),251-256.
- Wang, M., & Wu, D. (2021). ICT-based assistive technology as the extension of human eyes: Technological empowerment and social inclusion of visually impaired people in China. *Asian Journal of Communication*, 31(6), 470-484.
- Wilson, J. D. (2017). Reimagining disability and inclusive education through universal design for learning. *Disability Studies Quarterly* 37(2).
- World Health Organization. (2007). *The international classification of functioning, disability and health, children and youth version*. WHO.
- World Health Organization (WHO). (2017). *Vision impairment and blindness: Fact sheet*. WHO.
- World Health Organization (2001). *The international classification of functioning, disability and health (ICF)*. WHO.
- World Health Organization. (2011). *World report on disability: Summary, 2011*. WHO.
- World Wide Web Consortium (W3C).(2016). Accessibility, usability, and inclusion. <https://www.w3.org/WAI/intro/usable>.
- World Wide Web Consortium (W3C). (2018). Web content accessibility guidelines (WCAG) 2.1. <https://www.w3.org/TR/2018/REC-WCAG21-20180605/>.

Conflicts and Conflict Management Styles in Secondary Schools in Tanzania: Perceptions of Employees

Winfrida Saimon Malingumu
winifrida.malingumu@out.ac.tz
The Open University of Tanzania

ABSTRACT

This study investigated conflict management styles in Tanzanian secondary schools. Three issues are addressed by this study. These are the types of conflicts that exist in secondary schools; the conflict management styles adopted, as well as the relationship between conflict management styles and secondary schools' performance. The study involved 161 respondents (36 heads of schools and 125 Teachers). The study adopted a mixed-methods research approach with a cross-sectional design. The data were collected through questionnaires and interviews. The quantitative data were analysed using Statistical Package for Social Sciences (SPSS) software whereas qualitative data were analysed using content analysis. The research findings revealed that the schools face two types of conflicts which are process and task conflicts. Of the two, task conflicts are dominant as compared to process conflicts. The research findings show that conflicts in schools arise due to failure to fulfil one's responsibility, favouritism and professional inadequacy of personnel. Also, school authorities use the disciplinary committee as well as guidance and counselling as preliminary actions toward conflict management. When things get tough, professional conflict management styles are applied. The most applied styles are compromising, collaboration, and sometimes accommodating. These provide reasonable positive effects on performance. Finally, the study findings show that management styles used have impacts on the performance of secondary schools. Poorly managed conflicts negatively affect performance, but effective management of conflicts enhances performance. It is recommended, therefore, that schools should view conflicts as necessary to their operational life. However, they need to be aware of their origins (causes and types) so that a relevant management style is adopted for the best results. Also, the study recommends training for heads of schools and teachers so that their ability to deal with conflicts is optimized

Keywords: Conflicts, conflicts type, conflict management, conflict management styles

INTRODUCTION

Recently, organizations are striving to achieve high performance to stay competitive in the market. In the process of meeting their customers' needs and preset goals, schools and many other business organizations, face many challenges including teacher turnover, lack of technology and conflicts (Farooq *et al.*, 2015). Longe (2015) noted that for a healthy and vibrant organization, conflicts cannot be avoided. The conflicts arise in these organizations due to several reasons including scarcity of freedom, position and resources. Rum *et al.* (2013) argued that employees in organizations have different agendas, values, perspectives and objectives. As such, this brings tension, as there is no way that their interests will be compatible. Such a condition calls for effective mechanisms to manage conflicts if raised. The reason behind this is that conflicts, if not well managed, become time-consuming and limit the effectiveness of any institution, including secondary schools (Ojo & Abolade, 2008). Additionally, conflicts may result in a stressful, unhappy, distressing, depressing, annoying, and frustrating state of affairs, hence can affect an organization's performance. Thus, it is argued here that conflicts need to be carefully managed using proper conflict management styles. Conflict can occur when group or team members have either strong differences in values, beliefs, or goals; have high levels of task or lateral interdependence; are competing for scarce resources or rewards; or are under high levels of stress (Hughes *et al.* 2006).

This results in role ambiguity and role conflict, as well as a lack of communication between parties (Hughes *et al.* 2006; Luthans, 2005). These may result in negative impacts at the workplace, including distortion of organization goals and poor realization of achievements, misallocation of organizations which may be diverted to war face at the expense of development and peace. Sub-optimization of part of the system could occur when disputants push their positions to the extreme but neither with any positive result, only destruction and emotional stress often arise and many results in the mental health of some combatants (Sagimo, 2002). Inspired by the negativity of conflicts at working places, Hotepo *et al.*; (2010) reveal that organizational conflicts are inevitable; most organizations need more constructive conflicts. The presence of conflicts in any organization shows that the organization is vibrant, altering and permits views from different people to avail and it is a sign of growth, diversity and self-actualization (Pondy, 1992). Luthans (2005) argued that conflicts have positive effects on the organization; they increase efforts and a better understanding of others. Conflicts may result in better decision-making as key issues may surface and critical thinking stimulated. These positive aspects of conflicts are the key to the performance of the organization when conflicts are well

managed at the working place. Conflict management is a process that turns a conflict into a production means (Bateman & Snell 2007). Indeed, conflicts are a critical issue in organizations' performance. They are to be carefully and efficiently managed to reduce the negative effects. The role of the management team in any organization is to turn a conflict into productive and not into a limitation. Rahim and Magner (1995) present five conflict management styles widely used by educational practitioners. Such styles are integrating, obliging, dominating, avoidance and compromising. Jeremiah (2013) argued that conflicts in schools are caused by misunderstandings, not taking instruction, poor communication, lack of commitment, poor management and differences. Another study carried out in Kinondoni District reveals that heads of schools had little knowledge and skills on how to manage conflicts (Ignace, 2014). All of the mentioned causes suggest the presence of conflicts in schools. The current study ascertains the causes of conflicts, types of conflicts in schools and the effectiveness of conflict management styles adopted by schools. The presence of conflicts in schools limits the effectiveness of a particular school in attaining its goal and performance (Ojo & Abolade, 2008). This suggests the necessity of investigating the cause and appropriate solution to a specific conflict in a school. According to Rum et al. (2013), organizations have employees who have different agendas, values, perspectives and objectives. Arguably, this applies to schools in Morogoro district as teachers, students and other employees have different backgrounds, perspectives and interests.

Therefore, conflicts reduce the performance of any organization. Thus, it is assumed that the poor performance of some schools in Morogoro district was probably led by the existence of conflicts. There has been notable evidence that shows poor performance of schools despite the strategic implementation of various programmes such as SEDP which is intended to enhance performance (Mkumbo, 2010). Kisinga (2012) suggests that there is a need to carefully find out the actual causes of conflicts and the strategies to mitigate them so as to enhance performance. This signifies the need for a critical study on conflict management styles and their roles on schools' performance in secondary schools. Based on the observation made, this study examined conflicts and conflict management styles in Tanzanian secondary schools. Past empirical studies tried to espouse issues of conflict management styles in secondary schools. However, most of them did not associate conflict management styles (avoiding, integrating, obliging, dominating and compromising) with performance in secondary schools, especially in

Tanzania. The current study addresses this knowledge gap. Particularly, the current study examined the common types of conflicts in schools and prominent conflict management styles. The specific objectives were to identify the types of conflicts experienced in Secondary Schools; to identify the conflict management styles adopted to address conflicts in schools, and to determine the relationship between conflict management styles and Secondary School performance.

Conflicts Types

Jehn (1995), John (1997) and Jehn and Mannix (2001) classified conflict into three types. These are relational, task and process conflicts. Jehn (1995) argued that relationship conflict exists when there are interpersonal incompatibilities among group members, including personality clashes, tension, animosity and annoyance. Murmnham and Conlon (1991) stated that relationship conflicts result in negative individual emotions such as anxiety, mistrust, resentment, frustration, tension and fear of being rejected by other team members. Task conflicts arise due to disagreements about the content of tasks and work goals such as the distribution of resources, procedures, and interpretation of facts (Jehn, *et al.*, 1999). Task conflicts result in differing viewpoints, ideas and opinions, and may coincide with animated discussions and personal excitement. The advantages of task conflict include improving the use of debate within a team which results in quality ideas and innovation, hence raising the organization's performance (Tjosvold *et al.*, 1992). However, task conflicts can cause negative impacts such as job dissatisfaction, lack of teamwork and increased anxiety (Kabanoff, 1991). According to Jehn and Mannix (2001), process conflicts refer to disagreement about how a task should be accomplished, individuals' responsibilities and delegation. Employees may disagree about whose responsibility it is to complete a specific duty. In this aspect, employees find themselves in a situation where they are not motivated to do their responsibilities at their maximum capacity, hence resulting in decreased productivity and poor team performance (Jehn, 1999). This study, therefore, adopts Jehn and colleagues' approaches to classifying conflicts.

Conflicts and Conflicts Management Styles

Conflict, although perceived negatively, needs to be effectively managed rather than eliminated (Brahnam *et al.*, 2005). Managers should never think of eliminating all conflict but rather should try to keep conflict at a moderate and functional level to promote change efforts that are profitable to the organization (Jones & George,

2006). This can successfully be done when the types and sources of conflicts are well known and particular strategies for each type and source are devised for effective management that maximizes the goal attainment of the organization. Bateman and Snell (2007) believe that conflict management tries to make the conflict to be as productive as possible. This can be achieved when different parties in a particular conflict believe that they have benefited, rather than lost from the conflict. For the disputants to believe that they have benefited from the conflict, two things are to be realized; these are; a new solution should be implemented, the problem solved and the likelihood to re-happen is not felt, and work relationships should be strengthened and employees believe they can work together productively in the future (Jones & George, 2006). Various styles have been devised to manage conflicts in organizations. Ford (2007) argued that conflict management will be effective if the integrated approach is applied. This is a four-way process that includes assessment and inquiry, design, implementation and evaluation aiming at achieving efficacious and objective conflicting decisions in the workplace. The integrated approach creates better results and higher commitment in individuals; it broadens the understanding of the conflict problem and increases resolution (Vigil & King, 2000).

Rue and Byers (2003) provide five general styles to be used to resolve interpersonal conflicts. First, withdrawals of one or more conflict participants; the manager assumes no conflict exists. The second approach is compromising. In this aspect, disputants agree to forego some of what they want so as to reach an agreement. Third, forcing the conflict to a conclusion. Fourth is mediating, which is achieved through a third-party intervention; a manager gets in between disputants and forces for resolution. The fifth one is confrontation. In a confrontation, the parties confront each other about what is really bothering them and eventually reach a consensus. This is considered effective to others while the third-party intervention is considered least effective. Hughes *et al.* (2006) give two independent dimensions for which conflict management strategies can be differentiated. These are cooperativeness versus uncooperativeness and assertiveness versus unassertiveness. This follows the concern that parties in conflict do vary in their commitment to satisfying the other's concern, but they also vary in the extent to which they assertively stand up for their concerns. Thus, conflict management can be understood in terms of how cooperative or uncooperative the parties are and how assertive or unassertive they are.

The Role of Conflict Management Styles on Schools' Performance

Conflict management styles may have different effects depending on the situation. For example, a compromising style is a conflict strategy aimed at finding a solution that can be accepted by the conflicting parties (Liston & Garrison, 2004). The solution obtained seeks the middle ground thereby foregoing some of one's concerns and committing to others concerns. Kinicki and Kretner (2008) argued that the compromising style is moderately assertive and moderately cooperative. Thus, it is used on issues of moderate importance when both parties are equally powerful and equally committed to opposing views. This style produces temporary solutions and is appropriate when time is a concern; it is a backup for the competing and collaborating styles when they are unsuccessful in resolving the situation (Burrell, 2001). According to Ahmed and Ahmed (2015), a compromising style enhances job satisfaction and organizational commitment among employees and hence can lead to improved work performance. The collaborative style is the strategy used to solve conflicts whereby people work together to find a solution that addresses the problem at hand to satisfy all the parties' concerns (Magoulianitis, 2011).

The style is used when the relationship among the parties is not important, then it may not be worth the time and energy to create a win-win solution. Collaboration fosters respect, trust, and builds relationships; thus dealing with conflict directly and in a way that expresses willingness for all parties desirable (Chen *et al.*, 2019). The collaborating style is highly assertive and highly cooperative and aims at finding a solution which enhances the "win-win" atmosphere (Kinicki & Kretner, 2008). It includes integrating solutions, learning, merging perspectives, gaining commitment, and improving relationships. The adoption of an accommodating style can support open discussion of issues, task proficiency, equal distribution of work amongst the team members, better brainstorming and development of creative problem solving, hence raising the performance of the organization (Burrell, 2001). The accommodating style is used when one conflicting party is enthusiastic to sacrifice a slight with the hope of achieving the maximum from the other party (Farooq *et al.*, 2016). It is appropriate when one party deals with a weak position wishing to attain a reasonable and caring relationship with the other party (Rahim, 2002). In an accommodating style, one sets aside his/her personal needs as a means to please others to keep the peace. According to Ozkalpet *al.* (2009), a compromising style can result in a false solution to a problem and can create

feelings in a person that range from anger to pleasure. The management style is unassertive and cooperative and may play the role of a martyr, complainer, or saboteur (Kinick&Krtetner, 2008). However, accommodation is useful as it produces concord and organizational magnetism and can be useful when one is wrong or when one party wants to minimize losses as it preserves relationships (Ozkalpet *al.*, 2009). Rahim (2002) believes that an accommodating style may not produce the maximum results, especially when one party believes itself to be correct and the other party is faulty and corrupt. The dominating conflict management style refers to the style in which one conflicting party takes aggressive behaviour and regards his/her interest to gaining maximum goals and disregards the will or concerns of the other party (Farooqet *al.*, 2016). Kinick and Kretner (2008) argued that in dominating style, one party attempts to gain power and pressure to change at the other person's expense.

The style can be appropriate in situations whereby one needs to fight for his/her own rights/opinion, resisting pressure or aggression (Karanikolaet *al.*, 2018). The main disadvantage of using this style is that relationships can be harmed beyond repair and may encourage other parties to use covert methods to get their needs (Muhindi, 2016). Dominating style is highly assertive with minimal cooperativeness as it aims at winning the battle (Burrell, 2001). The use of this style may cause hostility, unrest or even death in the school. People who consistently use a competitive style become aggressive, autocratic, and confrontational and develop intimidating behaviour which in turn affects the performance of the organization. Avoidance conflict management style is the strategy used when a person does not succeed and hence avoids addressing a conflict, instead postponing, withdrawing or sidesteps (Laoulakou, 2017). The party, in most cases, avoids conflicts due to fear of getting involved in disputes or a lack of confidence in management skills. The administrators use this style when they do not want to help anyone to achieve his goals or impose his behaviour. The administrators who use an avoiding style neither satisfy themselves nor the other party (Farooqet *al.*, 2013). Moreover, Rahim (2002) adds that it is inappropriate to make hasty decisions through this style. This style is suitable in case of impossible victory. The administrator uses this style when s/he feels that someone else is in a good position to solve the problem. This study sought to find styles that are commonly used and suitable for managing conflicts in schools.

Contingency Theory

This study builds its empirical understanding of conflict management systems on the Contingency theory (Sagimo, 2002). The Contingency theory states that there is no single best conflict management style for all circumstances. Each situation, on its own, needs to be approached differently. In support of this, Galabawa (2001) stressed that the central idea of Contingency theory is that management practices should keep the course of action based on the nature of the task performed by an individual, the external environment and the compatible needs of the employee. Thus, the management function should be dynamic and challenging. Management should neither be static nor prescriptive but rather participative, democratic and liberal in style to cater to a wide range of situations to be managed (Sagimo, 2002). The manager, therefore, needs to be visionary, flexible, adaptable, creative, innovative, competitive and aggressive when addressing various issues in the organization (Galabawa, 2001). Kreitner and Kinicki (2004) argued that three realities dictate how organizational conflict should be managed: they are triggered by a wide variety of antecedents; too little conflict may be as counterproductive as too much. However, there is no single best way of managing conflicts. Thus, antecedents of conflict and the actual conflict need to be carefully analysed so that the proper management style is applied (Hughes *et al.*, 2006). The Contingency theory, therefore, is relevant to this study as it gives the framework for which the conflict in secondary schools should be managed. In this study, various types of conflicts have been identified, their management practices analyzed and their effects on academic performance determined.

Methodology

Participants, Sample and Sampling Procedures

This mixed-methods study was conducted in Morogoro district. The area was chosen due to the presence of a good number of public secondary schools and has been one of the SEDP implementation areas since its introduction. The study employed a cross-sectional design to examine the effects of conflict management styles on secondary schools' performance. The study employed purposive and stratified random sampling. Data were collected through questionnaires and interviews. The study involved 161 respondents from 36 schools (out of 79 schools). All 79 schools in the District were listed and picked one school after the interval of three schools to obtain the required total of 36 schools, whose teachers were involved in the study. Out of 161 respondents, 125 were teachers and 36 were heads of schools. Out of 125 teachers, 40 (32.0%) were females and 85 (68.0%) were

males. Out of 36 heads of schools, only 05(13.9%) were female heads and 31 (86.1%) were male heads of schools. Among 125 teachers, 16 (12.8%) were aged between 20 and 30 years, 41 (32.8%) were aged between 31 and 40 years, while 33(26.4%) were aged between 41-50 years and 35 (28.0%) were above 50 years. In the case of heads of schools, 24 (66.7%) were aged between 41 and 50 years and 12 (33.3%) were above 50 years. This shows that heads of schools are adults who are aware of the concept of conflicts and probably their management. For the case of educational background and work experience, findings indicate that 48 (38.4%) teachers had diplomas, 60 (48.0%) teachers had Bachelor's degrees and 17 (13.6%) of them held Master's degrees. In the case of heads of schools, 32 (88.9%) of them had Bachelor's degrees, while 04 (11.1%) of heads of schools held master's degrees. The majority of teachers – 40(32.0%) – had work experience ranging between 0 to 5 years, 33(26.4%) of them had work experience between 6 and 10 years, 18(14.4%) teachers had work experience of 11-15 years and 34(27.2%) had work experience above 15 years. Arguably, 85(68.0%) of all teachers had worked in Schools for six years and above.

For the case of the interviews, the researcher trained three research assistants, who were Bachelor's degree holders, to interview the heads of schools. The interviews were administered by research assistants by first placing an appointment; thereafter, they visited the respective participants. The interviews continued till data saturation was reached. The maximum time for each interview session was about half an hour. For the case of quantitative data, the questionnaires were distributed to teachers through academic teachers who also assisted the research assistants to collect them. The quantitative data were categorized, coded and analysed according to the research-specific objectives and research questions so that the frequencies and percentages could be tabulated and calculated using the Statistical Package for Social Sciences (SPSS) version 21 software for easy interpretation. For the case of qualitative data, thematic analysis was used to analyse the data. First, the researcher transcribed the data from verbatim to text. Second, the researcher read through the document to identify major themes and subthemes. Third, the themes were grouped and recategorized to remove and merge some of the themes. The more recurring ideas were taken as major themes. The weak themes were merged with the most recurring themes which had a similar meaning. Finally, the researcher gave the analyzed themes and subthemes

to the second independent coder to evaluate the themes and subthemes. After the final agreement of the analysis, the writing started.

Results and Discussion

This study examined conflicts and conflict management styles in secondary schools in Tanzania. The study had three specific objectives.

Types of Conflict in Secondary Schools

The first objective of this study was to identify the types of conflict existing in secondary schools in Tanzania. The findings from teachers indicate that, in all visited schools, task conflicts exist, and are more prominent. Of 125 teacher-respondents, 92 (73.6%) agreed that the most prominent conflict type is task conflict, whereas 33 (26.4%) teachers indicated that process conflict also exists. The same question was asked to heads of schools during the interview. The responses from heads of schools were not far from the findings from teachers; the majority of them (almost 24 heads of schools) mentioned task conflicts as the most prominent conflicts in schools. Other good portion of heads of schools (almost 12 heads of schools) process conflicts as the common conflicts in secondary schools.

For instance, one head of the school commented:

In my opinion, many conflicts occur in my schools. However, the most prominent are task and process conflicts. Particularly, when they don't agree on how to accomplish a certain task. For example, there was a time when a few teachers had a stiff argument on how teaching extra subjects in evening hours could be done. (Head of school, B)

Another head of the school commented:

In my school, process conflicts are common. Normally, teachers prefer to use the scheduled time to teach. It happened that in one of the weeks, they discussed and failed to come to terms with who should teach in the morning and who should teach in the evening. As we had the double sessions, some wanted to come in the morning only, and not in the afternoon. (Head of school, F)

On the same line, another head of the school commented:

In my school, I once had a meeting with two teachers. It was a time when one of them was supposed to go for training. The other teacher was supposed to bring the file of her fellow to my office, but she didn't bring it to me for almost a month. Consequently, the teacher who asked for permission left the office for training, and I thought she didn't follow the procedure. I decided to call her and asked why she

left without my knowledge. To my surprise, she said that she left the letter and the file in X's office. It was really hard for me to make them come to terms; the other teacher was so angry and furious. (Head of school, K)

It is argued here that the comment from the head of the school "K" is an indication of the existence of process conflict. In the same objective, the researcher wanted to know the group of people who were engaged in conflicts in schools. The data suggest that 27% of teachers mentioned conflicts involved heads of schools versus teachers; 24% of teachers mentioned the conflicts among teachers themselves; and 30% of them indicated that it was between teachers and students. These three groups of conflicts were highly ranked compared to other groups involved in conflicts. Other groups of people were mentioned to engage in conflicts but to a small extent. These include student versus student, department versus department as well as management versus teachers. It has been observed that task-oriented conflicts may appear when teachers do not fulfil their duties and responsibilities; it is possible to enter into conflict with heads of schools over responsibilities. Also, when heads of schools do not discharge their responsibilities fairly, they may end up entering into conflicts with employees.

Teachers against each other may enter into conflicts if there is a conflict of interest in some aspects such as how should examinations be set and administered (process conflict) and who should be considered in teaching special academic programmes for candidate classes (task conflicts). The findings show that teachers who teach the same subject are likely to enter into conflict if one of them is seen to master a subject and is mostly liked by students; hence, becomes a threat to the other. In some cases, teaching examination classes like Form II, IV and Form VI is accompanied by special academic programmes which allow a teacher to get extra pay, thus everyone would like to get such an opportunity. On this aspect, one of the heads of schools said:

There is a case when two teachers in Mathematics fall into conflict simply because one of the teachers was more expert than the other. Students mostly liked to be taught by him. Consequently, the other teacher felt inferior; hence a conflict rose between them. (Head of School, A)

Another teacher suggested that sometimes conflicts do not occur among teachers only; they sometimes involve students and teachers. He had this to say:

Conflicts between students and teachers occur because the teacher interacts with students frequently for various reasons such as in academics and administrative affairs. As a result, less disciplined students are more likely to enter into conflict

with teachers at a time when they fail to obey and be submissive to teachers.(Head of School, C)

Accordingly, the findings show that favouritism is one of the reasons that cause conflicts to escalate in schools. When responding to the question which required knowing the extent to which one agrees that favouritism is one of the reasons for conflict in schools, 24 (19.2%) teachers strongly agreed, 57 (45.6%) of them just agreed while 18 (14.4%) teachers were not sure. Also, 19 (15.2%) teachers disagreed whereas only 7 (5.6%) strongly disagreed. In sum, findings indicate that three types of conflicts are prevalent in schools. This is in connection with Dreu and Weingart(2003) and Jehn (1995, 1997) who found the three types of conflicts. However, in this study, task and process conflicts are more prominent than relationship conflicts. Failure to conform to school responsibilities and favouritism were found to be the causes of conflicts in schools. Arguably, the identified conflicts may be connected to negative effects on school performance (De Dreu & Weingart, 2003; Jehn, 1995; 1997). It is clear in this study that failure to fulfil one's responsibilities in schools is among the causes of conflicts. For example, teachers who do not submit academic documents such as schemes of work and lesson plans are likely to enter into conflict with their Heads of Schools. This finding is in connection with Namwila (2016). Again, as suggested by other scholars (Ayoma, 2015; Omboko, 2010), this study has also found that favouritism usually leads to conflicts between heads of schools and teachers.

Conflict Management Styles in Secondary Schools

The second objective of this study assessed the conflict Management styles used in the studied secondary schools. The findings revealed that different management styles and systems were adopted in secondary schools to bring the conflicts at bay. However, it was found that when conflicts arise in schools they are considered first and foremost as human resources challenges - teachers consider conflict as a discipline issue. Thus, the use of disciplinary committees was identified as the first step employed by their schools to deal with it, before management of a particular conflict takes place; hence falls under the indiscipline case. This requires disciplinary actions to take place through a disciplinary committee. The research findings show that both teachers and heads of schools opined on the use of disciplinary committees to address human resources challenges. In this study, the majority of heads of schools (almost 11 heads of schools) advocated the use of the

disciplinary committee. It was also noted that the majority of heads of schools, before applying any conflict management style, preferred to use guidance and counselling in addressing indiscipline matters. The other measure mentioned to deal with conflicts in schools is expulsion. This was mentioned by a few heads of schools. Although heads of schools mentioned guidance and counselling as one of the measures taken to address conflicts and other employees' challenges, findings from Table 4 indicate that teachers did not emphasize this measure. Only 4 (3.20%) of them mentioned it as a measure taken by schools to respond to conflicts. Other mentioned measures by teachers include use of expert 5 (4%), expulsion 42 (33.6%), disciplinary committee 30 (24%) and suspension 22 (17.6%), and corporal punishment 22 (17.6%).

Table 4: Measures Taken to Disputants

Measures taken	Teachers	
	<i>n</i>	%
Suspension	22	17.6%
Expulsion or sack	42	33.6%
Guidance and Counselling	4	3.20%
Disciplinary committee used	30	24%
Use expert	5	4%
Use corporal punishment	22	17.6%
Total	125	100

The researcher also sought information on whether teachers who were involved in conflicts were involved in the conflict management process or not. The study found that the majority of teachers involved in conflicts were not involved in the conflict management process. The data indicate that 92 (73.6%) teachers noted that they were not involved in the conflict management process; 33 (26.4%) teachers noted that they were involved. Moreover, teachers were asked about their opinion on the effective conflict management style. Findings show that thirty-nine teachers (31%) mentioned compromising and 35 (28%) indicated collaborative conflict management styles; 18 (14.4%) mentioned accommodating, while 17 (13.6%) teachers mentioned avoidance and 16 (13%) mentioned forcing style. Findings suggest that compromising and collaborating, for the majority are the most effective in managing conflicts.

Table 5: Conflict Management Style

Strategies	School teachers	
	N	%
Compromising	39	31
Accommodating	18	14.4
Avoiding	17	13.6
Dominating	16	13
Collaborating	35	28
Total	125	100

During the interviews, the same question was asked to heads of schools. The findings indicate that heads of schools had relatively similar opinions to those of teachers. The majority of heads of schools mentioned compromising and collaboration as strategies they prefer best when dealing with conflicts. They did not prefer sacking or transferring employees whose attitudes, values and backgrounds differed from other teachers. Only a few heads of schools noted that sometimes they sacked or transferred some teachers. One would argue that heads of schools who transferred employees based on conflict management lacked the knowledge to address such cases.

In the same line, heads of schools emphasized that conflict management styles were used depending on the conflict type and knowledge at hand on how to solve conflicts. One of them had this to say:

As a head of school, I might say that I used different styles in managing conflict according to what I see as a source of that particular conflict, or where we can group the conflicts. For example the issue of disciplinary conflict, definitely we must use the disciplinary committee to manage the conflict. (Head of School J)

Another head of school added that:

Apart from treating cases differently, I also noted that sometimes compromising and collaborating styles are the common conflict management styles which work better for me. However, I would not like to get involved in the conflict. Thus, I usually stay away from conflicts, especially when they are stiff. (Head of School G)

He further noted that:

In my school, I rarely use dominating style. The reason is that sometimes you find a minor issue but people just waste time when the issue needs urgent attention. So, I force them to take on board my decision. Here I

decide to let it go in that way to save time and resources. (Head of school, G)

In sum, findings indicate that several measures are used in schools to manage conflicts. These include disciplinary actions such as the use of school committees, guidance and counselling and to a lesser extent expulsion. These are used depending on the conflict type, particularly when it is not a task, process or relationship conflict. Some of the conflicts do not require the five mentioned conflict management styles (compromising, accommodating, avoiding, forcing, and collaborating), but call for a different strategy to be addressed. In this study, it was observed that compromising and collaboration are the most commonly used, though in some cases, forcing is used. The results concur with Hostepo et al. (2015) who found negotiation, collaboration and compromise as the most used conflict management styles. The findings of this study contradict with Wall and Callister (1992) who found that forcing or dominating conflict management style, in which autocratic principles are applied, is commonly used. The style is applied without giving disputants a chance to defend themselves. If expulsion at schools is decided without disputants given a chance to defend themselves, it is typically forcing behaviour.

It is recommended that an effective conflict management style must take into consideration factors such as the causes as well as origins of the conflict, and the nature of the conflict itself. This is expected to help minimization of the occurrence or completely eliminate the conflict (if possible) so that the same cannot be repeated in the future (Farooq et al., 2015). The causes and origins of the particular conflict can be easily found if disputants are given a chance to give their views. If the decision to manage a particular conflict ignores the disputants, it may not be effective as the parties involved may end up unsatisfied with the measures taken against them. The current study also concurs with Makaye's (2012) study which argues that compromising is one of the styles used by secondary schools when managing conflicts. This style is applied when disputants are ready to face each other peacefully. It involves intercession bargaining, negotiation, mediation, attribution, and application of the integrative decision.

The Relationship between Conflict Management Styles and Schools' Performance

Objective three determined the relationship between conflict management styles and secondary schools' performance. It was found that conflict management styles

have effects on performance depending on how a particular style was applied. The findings, further, show that three conflict management styles namely compromising, collaborating and accommodating are the proper conflict management styles to be adopted by schools. In this, 61(48.8%) teachers stated that schools that adopted compromising conflict management styles realized a low rate of labour turnover for both students and staff; it enhances employees' job satisfaction, hence raising academic performance. Other 42(33.6%) teachers stated that schools that employ a collaborative conflict management style enhance performance in all schools' activities and attain a reasonable pass in National Examinations. A total of 22(17.6%) teachers opined that schools that practice accommodating conflict management style stand a chance to perform above average in academic activities; it may enhance the good relationship among employees. Heads of schools had similar opinions as that of their teachers. The majority of heads of schools opined that schools which do not experience employee conflict and those that conflict are effectively managed tend to perform well in all school activities. Effective conflict management styles improve teachers' engagement in academic activities, improve time management among teachers, work extra hours, improve willingness to assist each other and hence improved performance. One head of school noted:

In my place, I bargain a lot with my teachers. This has become the most beneficial approach at my school, especially when we want to work as a team to accomplish a given goal together. This enables employees to perform better their tasks and hence improves performance at the school. (Head of school, K)

Another head of school added:

Normally, I combine compromising and accommodating others' views, especially when I feel like we can't reach an agreement. I just accept one's idea without wasting time. As a result, we agree on some of the things and others I just take their suggestions. This had improved their performance as they feel that they are valued (Head of school, H).

The findings of this study concur with Nwabueze and Bernard (2017) who revealed that conflict management styles have impacts on academic institutions' performance. It is argued here that when conflict is effectively managed, it will positively influence performance; when it is poorly managed, it negatively affects performance. Thus, school heads should strive hard to use an effective conflict management style which, in the end, will unite people in the organization. This will help teachers to put their hands together, have a shared vision of the

organization's goals and hence, as one team, strive to achieve the intended goal. Additionally, Makaye's (2012) study has shown that managing conflicts also have positive results, especially when disputants are ready to face each other peacefully. That is intercession, bargaining, negotiation, mediation, attribution, and application of the integrative decision. This in turn improves performance.

Conclusion

This study investigated conflict management styles in Tanzanian secondary schools. Specifically, the study focused on the types of conflicts, the conflict management styles adopted, as well as the relationship between conflict management styles and secondary schools' performance. It is concluded here that the most prominent conflicts in the selected schools are process and task conflicts. Of the two, task conflicts are dominant as compared to process conflicts. It was also noted that the most applied conflict management styles are compromising, collaboration, and sometimes accommodating. These conflict management styles provide reasonable positive effects on performance. Thus, it is argued that if conflicts are effectively managed in schools it enhances performance.

Recommendations

Recommendations are made to address conflicts so that secondary schools' performance and other related organizations can be improved. It is recommended here that secondary school authorities should always view conflicts as part and parcel of their organizational life. Thus, there is a need to constantly keep on learning the causes of conflicts in their schools and if possible immediately deal with the causes. This in turn may lead to minimal conflicts. This can be achieved through the enhancement of communication channels so that employees can be able to speak out in an open discussion on various issues. Heads of schools need to encourage teamwork among teachers in their respective departments by allowing regular meetings. There are many conflict management styles available. They include compromising, avoiding, dominating, accommodating, and collaborating. Each of these methods addresses a specific conflict situation. It is, therefore, recommended that the heads of schools take time to study the conflicts and apply relevant styles so that the expected outcomes are obtained. It is recommended that the Ministry of Education and Vocational Training, in collaboration with local authorities conduct on-the-job training for the heads of schools and teachers so that the concept of conflicts and their management is well understood. Also, the Ministry should make sure that all teachers have a course on the same so as to equip student teachers with knowledge before getting into the teaching profession.

Recommendations for Further Research

The study examined conflicts and conflict management styles in secondary schools in Tanzania. The study suggests a relationship between conflict management styles and secondary schools' performance in all aspects. The current study was conducted in Morogoro district using heads of schools and teachers. It is recommended that a similar study be conducted in other districts of Morogoro region and other regions to include students and school managers in their sample so that their views are taken into account. A study of the role of schools' environment in conflict management and schools' performance is proposed to be carried out. Also, a similar study can be conducted by using regression methods to find more details for policy formulation. This will be better if some other variables such as empowerment, trust and empathy are added.

REFERENCES

- Ahmed, K. & Ahmed, G. (2015). The relationships between conflict management styles, job satisfaction and organizational commitment among workers in public and private sectors. *Universal Journal of Psychology*, 3(2): 41-50
- Albert, I. O. (2001). *Introduction to third party intervention in community conflicts*. John Arches Publishers.
- Al-shourah, A.A.S. (2015). The impact of conflict management on organizational effectiveness; A case study: Ministry of Higher Education of Jordan; *European Journal of Business and Management*, 7(36), 75-85.
- Anastasiou, S., & Papakonstantinou, G. (2015). Greek high school teachers' views on principals' duties, activities and skills of effective school principals supporting and improving education. *International Journal of Education Management*, 9, 340-358.
- Babbie, E.R. (2004). *The practice of social research*. Homson/Waldsworth
- Best, J. & Kahn, J. (1998). *Research in education*, 8th ed. Allyn and Bacon.
- Chen G., Liu, C. & Tjosvold, D. (2005). Conflict management for effective top management teams and innovation in China. *Journal of Management Studies*, 42(2), 277-300.
- De Dreu, C. K. W. & Weingart R. L. (2003). "Task versus relationship conflict, teacher performance, and team member satisfaction: A Meta-analysis". *Journal of Applied Psychology*, 88(4), 741-749.
- Fajana, S., & Shadare, O. (2012). Workplace relations, social dialogue and political milieu in Nigeria. *International Journal of Business Administration*, 3(1), 75 - 83.
- Farooqi, M.T.K., Akhtar, M.M.S., Islam, M.U., & Iqbal, A., (2013). Conflict management styles implemented by the administrators in the public sector universities of Punjab, Pakistan. *Scottish Journal of Arts, Social Sciences and Scientific Studies*, 10(2), 28-41.
- Farooqi, M. T. K., Arshad, F., & Khan, H.M.A. (2015). Farooqi organizational conflict inventory (FOCI). The paper sent to Putaj University of Peshawer.
- Galabawa, J. C. (2001). *Development issues regarding universal primary education in Tanzania*. Paper presented at Adea Binnel meeting in Arusha.
- Galabawa, J.C.J. (2001). *Perspectives in educational management and administration*, Revised Edition, KAD Associates.
- Hotepo, O.M., Asokere, A.S.S., Abdul-Azeez, I.A. & Ajemunigbohun, S.S.A. (2010). Empirical study of the effect of conflict on organizational performance in Nigeria. *Business and Economics Journal*, 1(15), 1 - 9.
- Hughes, R.L., Ginnet, R. C. & Curphy, G. J. (2006). *Leadership: Enhancing the leasos of experience*, 5th Edition. Mcgraw- Hill.

- Ignace, A. (2014). Assessment of heads of schools' strategies in managing conflict in secondary schools: A case of Kinondoni Municipality [Master's Dissertation, OUT].
- Iloimo, O. & Chawanga, K.J.P. (2015). Influence of home environment on students' academic performance in selected secondary schools in Arusha Municipality. *Journal of Novel Applied Sciences*, 4(10), 1049 – 1054.
- Iravo, M.A. (2011). *Effect of conflict management in performance of public secondary schools in Machakos country in Kenya*. Jomo Kenyatta University of Agriculture and Technology.
- Jehn, K. A. (1995). *A multi method examination of benefits and determinants of intragroup conflict*. Pearson .
- Jehn, K. & Mannix, E.A. (2001). The dynamic nature of conflict: A longitudinal study of intra-group conflict and group performance. *Academy of Management Journal*, 44(2), 238-251.
- Jones, G.R., & George, J.M. (2006). *Contemporary management*, 4th Ed. McGraw – Hill.
- Justino, P. (2010). How does violent conflict impact individual education outcomes? The evidence so far. Institute of development studies, university of Sussex.
- Karanikola, Z., Nikos, K., & Panagiotopoulos, G. (2018). The contribution of educational training to crisis management among teachers: A case study of the prefecture of Ilia. *Journal of Education*, 6, 15–23
- Kipyego, L.B. (2013). *Conflict management methods used by secondary schools head teachers: A case of Nandi Central District, Nandi County in Kenya* [Master's Dissertation, Kenyatta University].
- Kothari, C.R. (2004). *Research methodology: Methods and techniques*, 2nd Ed. New Age International Publishers.
- Khan, R.M.A. (2015). The influence of parents educational level on secondary school students academic performance in district Rajampur. *Journal of Education and Practice*, 6(16), 76 – 79.
- Kreitner, R. & Kinicki, A. (2004). *Organizational Behaviour*, 6th Ed, McGraw. Hill Companies: New Delhi.
- Laoulakou, A. (2017). *Principles' management style in school units of primary education and the correlation between this and the conflict management style. Exploring the views of primary education teachers*. Hellenic Open University.
- Longe, O. (2015). Impact of workplace conflict management on organizational performance: A case of Nigerian manufacturing firm. *Journal of Management and Strategy*, 6(2), 83- 92.
- Luthans, F. (2005). *Organizational behaviour*. McGraw Hill.
- Luthans, F. (1989). *Organisational behaviour*, 2nd Ed. McGraw Hill.
- Magoulianitis, G. (2011). *Leadership types and vision in Greek police*. University of Patras.

- Makaye, J. & Ndofirepi A. P. (2012). Conflict resolution between head and teachers: The case of four schools in Masvingo Zimbabwe. *Green Journal*, 2(4), 56-66.
- Marshall, C. & Rossman, G.B. (1989). *Designing qualitative research*. Sage.
- Mlowosa, T.P., Kalimangasi, N. & Mathias, B.D. (2014). The impacts of truancy in academic performance among secondary school students: A case study of Kigamboni ward in Temeke municipality. *International Journal of Scientific and Research Publications*, 4(11), 56-78.
- Morgan, G. (1986). *Images of organizations*. 2nd Ed. Mecedonia County Publishers.
- Munda, S. W. & Odebero, S. (2014). The influence of education costs on students' academic performance in Kenya: An empirical study of Bungoma county secondary schools. *Asian Journal of Educational Research*, 2(1), 23-34.
- Murnighan, J. K. & Conlon, D. E. (1991). The dynamics of intense workgroups: A study of British string quartets. *Administrative Science Quarterly*, 36, 165-186.
- Naoum, S.G. (1998). *Dissertation research and writing for construction students*. Reed Educational and Professional Publishing
- Neuman, W. L. (2000). *Social research methods: Qualitative and quantitative*, 4th Ed. Allyn and Bacon
- Ojo, O. & Abolade, D.A. (2008). *Impact of conflict management on employees performance in public sector organization in Nigeria*. Osum state University, Faculty of Management Sciences.
- Ogumbameru, O. (2006). *Organizational dynamics*. Spectrum Book Publishers.
- Özkalp, E., Sungur, Z., & Ayşe Özdemir, A. (2009). Conflict management styles of Turkish managers. *Journal of European Industrial Training*, 33(5), 419-438.
- Pondy, L.R. (1992). A system theory of organizational conflict. *Academy of Management Journal*, 9, 246 – 253.
- Rahim, M. A., Magner, N.R. D. & Rahman, S. (2001). Do justice relationships with organization-directed reactions differ across U.S. and Bangladesh employees? *The International Journal of Conflict Management*, 12(4), 333-349.
- Rahim, M. A. (2002). Toward a theory of managing organizational conflict. *The International Journal of Conflict Management*, 13(3), 206-235.
- Robbins, S. P. (1974). *Managing organizational conflict*. Prentice-Hall.
- Rue, L.W. & Byars, L. L. (2003). *Management skills and applications*, 10th Ed. McGraw – Hill
- Rum, J. Troena, E.A. & Surachman, H. D. (2013). Role of conflict towards employee performance: Studies in government budgeting team at Kendari. *International Journal of Business & Management Invention*, 12 (16), 39- 51.
- Sagimo. P. O. (2002). *Management dynamics: Towards efficiency, effectiveness, competence and productivity*, 1st Ed. East African Education Publishers.
- Simmon, T. L. & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intra group trust. *Journal of Applied Psychology*, 1, 85-99.

- Saiti, A. (2015). Conflicts in schools, conflict management styles and the role of the school leader: A study of Greek primary school educators. *Education Management Administration Leadership*, 43, 582–609.
- Sompa, M. (2015). *Management strategies of interpersonal conflicts between teachers and head teachers in selected secondary schools of Lusaka province Zambia*. University of Zambia
- Taher, M. A. & Gomes, K. (2018). Exploring the relationship between conflict management style and organizational performance: An empirical study in the organizations of Bangladesh. *Global Journal of Management and Business Research: Administration and Management*, 18(4), 87-111.
- Tjosvold, D., Hui, C. & Sun, H. (2000). Social face and open-mindedness: Constructive conflict in Asia. In: Lau C. M, Law K. S, Tse K. D and Wong C. S (eds), *Asian management matters: Regional relevance and global impact* (pp.3-16). Imperial College Press.
- Wall, J. & Callister, R. (1995). Conflict and its management. *Journal of Management*, 21(3), 551-558.
- Wilson, J. & Komba, S.C. (2012). The Link between English language proficiency and academic performance: A pedagogical perspective in Tanzania secondary schools. *World Journal of English Language*, 2(4), 1 – 10
- Wu, G.; Zhao, X., & Zuo, J. E. (2017). Acts of inter-organizational conflicts on construction project added value in China. *International Journal of Conflict Management*, 28, 695–723.

Misspellings of Swahilized English Loan Words Committed in Kiswahili Functional Writing by Form Four Learners in Public Secondary Schools in Nyamira County, Kenya

Charles Nyandoro Moochi,
cmoochi@kisiuniversity.ac.ke
Kisii University

ABSTRACT

This study investigated types of misspellings of Swahilized English loanwords made by form learners in Kiswahili functional writing in public secondary schools in Nyamira County, Kenya. This study was guided by Corder's Error Analysis Theory (1967). A total of 326 participants of equal gender proportion sampled from 8 public secondary schools in Nyamira County were involved in the study. All 326 participants wrote a Kiswahili functional essay that provided data for the study. Descriptive research design was used in carrying out this study. The descriptive statistics (frequencies and percentages) were used in conformity with five stages of error analysis as put forward by Corder (1967). The study found that learners committed five categories of Swahilized English loanwords in their Kiswahili functional essays. The misspellings were: preservation (33.3%), addition (30.3%), substitution (27.1%), omission (6.2%) and split (3.1%). The study recommends the following: a) special attention be paid to the teaching of preservation, deletion, insertion and substitution misspellings as they relate to the phonologization of English loanwords adapted into Kiswahili b) teachers of Kiswahili language need to employ instructional methods and media which enrich learners' understanding of the process of adapting English loanwords into Kiswahili c) pronunciation and spelling of loanwords be taught concurrently for they are symbiotic and reinforce each other d) an English –Kiswahili borrowings adaptation model be designed by Kiswahili and English phonologists, semanticists and teachers of Kiswahili to enhance learners' understanding of how the process is carried out in relation to the three phonological processes; deletion, insertion and substitution.

Keywords: *addition, loanwords, preservation, substitution and Swahilized*

INTRODUCTION

One of the language skills that learners are expected to master and internalize during their schooldays and as adults is writing skill. Its instruction in school, formative and summative evaluation and occasional and often use after school points to the significance attached to it. The writing skill is an invaluable means of communication. It is noteworthy that it is a learner's proficiency in it, as a second language, that makes it functional and pragmatic in written communication. The second language learner is expected to be acquainted with all its mechanical strands to ensure efficient and effective communication. It is both the learner's linguistic accuracy and linguistic appropriateness in the second language (i.e., Kiswahili) that make it play its communication transactional role. Moqimipour and Shahrokhi (2015, p.122) have averred that "writing is most often nominated as the most complex and complicated skill among the skills that every second language learner is expected to master." This implies that being adept at this skill requires a learner to be ready to pay rapt attention to the instruction and do adequate practice to gain satisfactory experience. Andrew and Smith (2011, p.6) have underlined and highlighted the complexities of the writing skill contending that "writing is the most difficult, if not the most complex, of the four language skills, requiring solitary, creative, thoughtful accurate and focused compositional energy, plus a higher degree of reflective thinking and (usually) personal engagement."

To be a competent speller in functional writing, the learner is expected to be not only familiar with the key ingredients of the writing skill but also be able to apply them appropriately in both functional and creative writing. It follows that the writing instructional processes should focus on what causes the complexities and complications intending to simplify and make them straightforward. The writing skill has strands (subsystems), without which it cannot be regarded as a complete system. These strands have been referred to as mechanical skills of writing implying that they are complex to be mastered by learners. Christie, Enz, and Vukelich (2007) have identified them as spelling grammar, capitalization and punctuation, and handwriting. It is argued here that a learner must be proficient in them to be a good writer and subsequently an accomplished functional writer. Stephen and Mary (1997) viewed spelling, punctuation and handwriting as obstacles to writing. Spelling has remained the most troublesome aspect whenever learners are required to write compositions. A spelling researcher, Nassaji (2015, P.78) contends that "learning to spell words accurately is the most complex developmental skill." It is from this perspective, it is argued here that spelling is one of the dimensions considered and rated in the process of rating both

functional and creative writing essays. Its importance is attached to the choice of words (register) and how this can either enhance or hinder written communication. This suggests that for one to be a competent writer and communicator, the foundation is being an accomplished speller and subsequently a skilful (Kiswahili) functional writer. As a result, writing and spelling instructional processes should be geared towards demystifying the spelling complexities to allow learners become skillful spellers and accomplished functional writers. On underscoring the critical role spelling literacy adds to quality writing, the defunct Kenya Institute of Education (2006, p.78.) (K.I.E.), presently called (K.I.E, Kenya Institute of Curriculum Development (K.I.C.D) asserts that “learners should pay close attention to spelling since incorrect spelling hinders effective communication and sometimes may change the meaning of the text. This is detrimental, particularly in examinations.” Changing meaning implies that the learner is likely to water down the intended meaning as a result of being unable to correctly spell a word. Any attempt to engage in what Corder (1984) referred to as resource expansion or message adjustment interferes with the intended semantical clarity of the message as initially intended for the reader. For instance, the former allows the learner to engage in circumlocution. This results in employing more words than necessary in written communication. Verbosity is unacceptable in functional writing since the economy of words is one of its key characteristics.

Oxford Writing Tutor (Horn,2020) has underlined the importance of being able to write different types of texts such as emails, letters, reports articles, and essays inter alia saying it requires one to ‘use correct style, register and tone’. What continues to be stressed is the importance of proficiency in spelling in the target language. Crystal clear written communication demands that learners use straightforward vocabulary (register) and spelt it correctly. Clarity of the information makes the language serve its functions and be pragmatic. Murphy and Cadman (2014, p.11) have highlighted the effect of misspelling words contending that “it defeats the purpose of words, which is to communicate meaning.” This means that misspellings threaten communication for the misspeller fails to communicate as expected via written communication. This misspeller, who is viewed as lacking spelling literacy, is regarded as an incompetent functional writer and communicator. According to Smedley (1983, p.7), “a person who is prone to error may be regarded as uneducated or ignorant.” Gathumbi and Masembe (2005, p.62) have echoed Smedley’s stance saying “many people equate deviant spelling with ignorance or lack of intelligence.” As a result, the teaching of the writing skill should be geared towards eradicating spelling difficulties to make learners competent spellers and hence considered educated.

An examination of the Kenya National Examination Council reports (KNEC 2015; KNEC, 2018 & KNEC, 2020) for the Kenya Certificate of Secondary Education, Kiswahili 102/1 *Insha* has demonstrated that the candidates' performance is wanting. This paper has two sections, one, which is, functional writing and two, which is creative writing. Question one is mandatory and the candidate is expected to choose any (one) question from the remaining questions. This worrisome performance in the two compositions which are marked out of 40% has compelled the KNEC to advise teachers to give learners adequate exercises and particularly in functional writing. KNEC's instructional direction to teachers to pay more attention to functional writing makes it crystal clear that this type of writing and its varieties is the cause of poor performance in Kiswahili 102/1 *Insha*. All learners are expected to be adequately equipped with all the basic techniques of function in all varieties so as to meet performance expectations in Kiswahili compositions in general and particular Kiswahili functional writing as a mandatory question exit secondary school level. Making question one a functional writing question underlines the significance attached to it, both in school and the learners' lives as adults for they will be using its varieties in their daily lives. In other words, learners are expected to be competent Kiswahili functional writers before they complete their secondary education. This implies that learners will be expected to use their functional writing skills at home, workplaces, and religious functions inter alia.

Each of the varieties of Kiswahili functional writing has its unique format and register to be adhered to as learners embark on writing to target audiences. Register specifics are critical to ensuring that the intended information is flawless and clear to the target audience. Murphy and Cadman (2014, p.99) have underlined the significance of using the right words saying, "words are our basic tools. We use them for effect; the effect they make depends on our selecting the right ones for the particular occasion." This implies that the learner has to use appropriate terms and adhere to the writing system of the L2 (Kiswahili). English language and Kiswahili language have different writing systems and words adapted into the latter from the former have to follow its spelling conventions. One way to improve the instruction of the spelling faculty of learners is to be aware of the nature and origins of the misspellings as unearthed by spelling errors analysis studies. In turn, this can contribute to good performance for learners who will be proficient spellers, able to use appropriate registers with correct spellings and not derailed from presenting their content logically. Spelling proficiency empowers learners to package their content properly, present it logically and perform as expected in Kiswahili functional writing. Moochi's (2012) study on the

comparative analysis of spelling errors committed by boys and girls in Kiswahili functional writing identified Swahilized English borrowings as one of the sources of misspellings in Kiswahili functional composition essays. An in-depth error analysis of misspellings originating from Swahilized English loanwords is a remedy to systematic instruction of spelling of English loanwords adapted and adopted into the Kiswahili language. This is expected to contribute to demystifying spelling literacy, improve the learners' spelling faculty and make them competent writers and subsequently skilful Kiswahili functional writers. Athman (2017), Asma Al-Qudat (2107) and Fitria (2020), whose studies delved into the types of spelling errors made in L2 (English), have indicated that there are four major categories of misspellings made in both functional and creative writing. Their spelling error classifications were guided by Cook's (1999) categorization system. The spelling error categories were omission, substitution insertion and transposition, abbreviated as OSIT. Their studies were confined to spelling errors originating from English as the second language or as a foreign language whereas the present study focused on misspellings emanating from or associated with English as the donor language. Consequently, the present study aimed at identifying misspellings of Swahilized English loanwords and classifying them to aid their systematic instruction to make learners proficient in spelling them and in turn skilful Kiswahili functional writers.

Literature Review

The instruction of writing skill from primary school level to university level underlines the place it occupies in adults' daily lives. It is the role it plays in everyday life which makes it a capstone of human communication. Andrews and Smith (2011, p.114) have stressed its importance averring that "writing, as one of the principal and most enduring means of communication is powerful, conceptual, and beautiful mode to work." This implies that all learners are expected to be equipped with all crucial mechanics of this skill as they climb the last rung of the secondary school cycle. KIE (2002) has indicated that writing is an advanced language skill and that learners should be assisted to acquire this skill for effective communication. Not only should learners be equipped with the essential mechanics of the writing skill, but also be firmly grounded in all types of writing in general and functional writing in particular. In many countries, functional writing is one of the genres of writing taught in languages from primary school level to university level. Shorofat (2007) explains functional writing as the kind of writing which aims at conveying a specific, direct and clear message to a specific audience. It is highly priced both in school and outside school. Functional writing varieties include formal letters, reports, speeches,

minutes, memos, advertisements, notes, invitations, programmes etc. These functional varieties are needed by adults in their daily lives at home, workplaces, and religious events among others. They mirror real-life everyday writings needed by them as they perform various activities in their lives. It is from this perspective, it is argued here that functional writing is a need-driven category of writing and that its instruction is inevitable for without it human communication will be hampered for a lack of effective functional writing skills. Thus, functional writing is all about applying this productive skill to real-life situations whereby learners are expected to produce realistic and meaningful documents mirroring their future as adults. Its life practicality demands have made it important to be taught in primary schools, secondary schools, and universities. It is taught in languages from primary and secondary schools and at the university level, it is taught in *Communication Skills*; one of the core courses at the university level. For instance, at Moi University- School of Arts and Social Sciences, this course is called *Mbinuzamawasiliano* (in Kiswahili) and is taught to all students majoring in Kiswahili language and Kiswahili Literature.

The teaching of functional writing requires learners to master and internalize its key characteristics for them to be adept at it. Functional writing is demanding for the learner to be proficient in all its principal mechanics which are well explained in the contexts of linguistic accuracy and linguistic appropriateness. It is through strict adherence to these two critical dimensions and their correct application that it can be said that the learner has been empowered to be a skilful functional writer. Linguistic accuracy plays a critical role in functional writing. It ensures that there are no errors in vocabulary, spelling, punctuation or grammar. The learner is expected to stick to linguistic accuracy for there to be effective communication. Linguistic accuracy zeroes in on the use of appropriate vocabulary (register) to ensure that the target audience can extract the intended meaning from the written communication. This suggests that the learner has to employ appropriate and accurately spelt vocabulary (register). Appropriate vocabulary and accurate spelling makes the message crystal clear to the target reader. According to Costa and Arias (2021, p.2), "mastery of spelling conventions facilitates understanding between the readers and writers." Based on their argument, it is perfectly plausible that poor mastery of the spelling conventions of the target L2 hinders communication between the writers and readers. Accurate spelling is an essential and dispensable component of all types of compositions and functional writing in particular. It is against this background, K.I.E (2002, P.6) rightly states that "learners should be helped to acquire skills that will enable them to express their ideas clearly and effectively in writing". Christie, Enz, and Vukelich (2007) have

identified spelling, grammar, capitalization, punctuation, and handwriting as mechanics of the writing skill. The spelling mechanic is superior to the other four mechanics because of its two-fold nature; the use of appropriate vocabulary (register) and its accurate spelling without which there is no clear communication between the writer and reader. The use of correct spelling is a key ingredient of functional writing for it determines the quality of the written task and its functional communication role. Stephen and Mary (1997, p. 188) have averred that, "If students worry about how to spell a word or how to make a capital G, they may be distracted from and possibly forget their topic ideas interfering with the rich expression of ideas and clear meaning." This implies that misspellers have difficulties emanating from writing appropriate content which may distract readers from focusing on meaningful and logical ideas/thoughts. Their spelling ineptness results in poorly written communication with no well-thought-out ideas. The importance of functional writing is evidenced by its being made a compulsory question in Kenya Certificate of Secondary Education (KCSE) in Kiswahili 102/1 *Insha*. The performance of candidates in this paper has remained worrisome and this questions their prowess in it as they exit the secondary school education cycle.

The Kenya National Examinations (2016, 2018, & 2020) Kiswahili 102/1 *Insha* reports do indicate that from the year 2012 to 2019, the performance was below the average of 20/40 except for the years 2014 and 2015 when the averages were 20.17 and 20.86 respectively. The 2018 KNEC report for Kiswahili 102/1 *Insha* has provided an explication whereby it is reported that the challenges in functional question are varied such as inappropriate format, linguistic challenges, inadequate and undeveloped themes as well as incoherent ideas. The KNEC (2016) report directs that learners be given many composition writing exercises, particularly functional writing. Stephen and Mary (1997) have indicated that spelling, punctuation, and handwriting are obstacles to writing. They argued that a learner who has spelling difficulties is derailed from the writing process, resulting in forgetting the topic and being unable to clearly express ideas to make the intended meaning. It is on the strength of its communicative role that Costa and Arias (2021, p.7) have contended that "spelling is an important component of effective communication since it eliminates semantical ambiguities, lexical and syntactic". This suggests that spelling inability contributes to poor performance in functional writing and jeopardizes the candidate's overall performance in Kiswahili 102/2 (Language use) and 103/3 *Fasihi*; it is the average of the three papers that is used as the final score. Lack of spelling proficiency is a threat to quality functional writing. Therefore, ensuring that learners are skilled spellers is

the key to making them skilled functional writers in schools, universities, at home, workplaces etc. As a result, the inability to accurately spell words is a salient issue that needs to be addressed to enable instructors to ensure that all learners are competent spellers in functional writing for spelling is a fundamental literacy skill in writing. Spelling error analysis of all categories is necessary if the spelling inability of learners has to be addressed. A study carried out by Waitutu (1995), on the learners' ability in writing a letter of application for a job (Functional writing in Kiswahili language), indicated that spelling inability contributes to poor performance. His ranking of the learners' ability in the five dimensions marked by KNEC Kiswahili 102/ *Insha* examiners, based on their gravity, revealed that spelling is worse as grammar remains the worst performed. This indicates that learners make many spelling errors in functional writing and this impinges upon their communication ability. In turn, poor communication results to poor performance in Kiswahili functional writing.

Moochi's (1999) study on comparative analysis of boys' and girls' performance in Kiswahili creative writing revealed a similar trend whereby spelling remains a threat to effective communication and impacted negatively on the learners' performance. Computation of the learners' performance in each of the five facets rated by KNEC Kiswahili 102/1 *Insha* revealed that learners had difficulties spelling words of their choice as compared to functional writing, where they are confined to registers of the functional writing varieties. This study indicated that the learners' performance in the spelling dimension was worse as it followed grammar which was the worst performed. Committing many misspellings hindered learners' communication. This is detrimental to their overall performance, both in functional writing and creative writing (Kiswahili 102/1 *Insha*). Moochi's (2012) study on comparative analysis of spelling errors committed by boys and girls in Kiswahili functional writing, has typified the errors committed by learners and indicated that they are seventeen in total. His categorization has shown that learners make misspellings of Swahilized English loanwords. The study provided a list of misspelt English loanwords. This categorization needs in-depth analysis to unearth the types of misspellings of Swahilized English loanwords committed by learners in Kiswahili functional writing. Another study by Moochi (2018) examined phonemic interchange spelling errors made by boys and girls in Kiswahili functional writing. The study focused on spelling errors of phonemic interchange in Kiswahili functional writing among EkeGusii secondary school learners. The study revealed that there was an interchange of correct phonemes with wrong ones: consonants with consonants, consonants with digraphs,

digraphs with consonants, digraphs with digraphs and vowels with consonants. This study dealt with misspellings traceable to EkeGusii as L1 that interferes with spelling ability in Kiswahili functional writing. In the same vein, there is a need to investigate the types of Swahilized English loanwords misspellings to make instructors aware of them to enable them address them in Kiswahili language writing and spelling instructional processes. Studies that have been conducted in the English language revealed that four major types of misspellings are committed in English compositions. The classification of spelling errors is guided by Cook's (1999) approach. The four types are omission, substitution, insertion and transposition, abbreviated as OSIT. Al-Qudat's (2017) study and Othman's (2017) revealed that learners committed these four types of misspellings in English compositions. However, substitution errors was key. Nketsiah's (2022) study on the Ghanaian language (Mfantse), revealed that learners committed six types of misspelling which he classified as sound-based substitution, writing rules-based, omission, addition, transposition and multiple. His study indicated that the highest proportion of spelling errors were sound-based substitution errors. To date, no known study has delved into misspellings of Swahilized English loanwords made by learners in Kiswahili functional writing. Thus, the current study investigated types of misspellings of Swahilized English loanwords made by learners in one of the Kiswahili functional writing varieties. The variety was a letter to the newspaper editor. The findings of this study are critical as form the basis in stating appropriate interventions to ensure that learners do not make global misspellings of Swahilized English loanwords may be taken.

Theoretical Framework

This study was guided by Corder's (1974) Error Analysis Theory (EAT) which replaced the Contrastive Analysis Theory in 1970. This theory recognizes error analysis as a basic aspect of second language learning. It replaced the Contrastive Analysis theory that focused on tracing errors made by learners in second language learning to the first language. Proponents of EAT criticized the Contrastive Analysis Theory (CAT) for zeroing in on the difference between L1 and L2 whereby factors that may affect the second language learners' performance – their learning and communication strategies, training procedures, overgeneralization etc. – are ignored (Khansir, 2012). Khansir (2012, p.1028) contends that, "not all errors are the result of interference. Psychological and pedagogical as well as other extra-linguistic factors contribute to the formation of errors". This suggests that the EAT goes beyond the interference as the key cause

of learner's errors in L2 and embraces other factors. It is critical to focus on those other causes so as to eradicate them and enable learners to avoid them in their writings. In other words, this theory provides room for the consideration, analysis and inclusion of other linguistic errors in the target language. EAT enables the researcher to acquire data from which the linguistic errors (misspellings of Swahilized English loanwords) are identified. It focuses on errors made as they emanate from the language corpus the researcher gathers from the target L2 learners. The identified, delineated and analyzed errors point to difficulties learners face in the linguistic aspect such as misspellings of Swahilized English loanwords. According to Khansir (2012, p.1029), "it consists of a comparison between the errors made in the target language and that target language itself". This study confined itself to the misspellings of Swahilized English loanwords without attributing their occurrences to the English language as the main cause.

The origins of the misspellings are varied, hence it is wrong to assume that all the causes are English language-related. It is on this strength that Khansir (p.1029) avers, "sometimes ignorance of the correct pattern, bad teaching or inadequate practice or a combination of the two yield samples of errors". Moreover, clinging to the CAT may mislead and make teachers of Kiswahili believe that the English language is the origin and that the misspellings are 'permanent'. This necessitated employing this theory in carrying out this study based on its steps that are appropriate to linguistic error analysis (misspellings of Swahilized English loan words). The EAT is used to unearth errors learners make in the process of learning second language such as Kiswahili language. Consequently, it was relevant to carrying out a study on misspellings of Swahilized English loanwords. It is relevant and useful because all its steps were relevant and useful to the objectives of this study, except for stage four. Ellis (2015) puts forward five steps which must be followed in the specific order. Error analysis researchers have to adhere to the stages; they are guided by their research objectives. The stages remained germane to analyzing misspellings of Swahilized English loanwords made by learners in Kiswahili functional writing. The first stage is the collection of a sample of the learner's language. This stage necessitated the collecting of a corpus of the target language whereby the corpus for this study was a Kiswahili functional writing task that was to be administered to 326 participants. The second stage of the EAT is the identification of errors in the corpus. This stage is important because it allows the error analyst or researcher to

identify the errors. The researcher identified the misspellings of Swahilized English loanwords made in Kiswahili functional writing to indicate error types made by learners in writing processes. This required the researcher to use a specific identification approach whereby all the errors were underlined and error types indicated using abbreviations 'O-omission, S-substitution, I-insertion etc. Underlining each of the errors was to facilitate tabulating their frequencies hence allowing him to order their gravity. The third stage of error analysis is the classification of the errors. On underlining the importance of the EAT, Al-Kresheh (2016, p.50) says it "indicates to teachers and curriculum developers which part of the target language (TL) students have most difficulty producing correctly and which error types detract most from learner's ability to communicate". Instructors are interested in being acquainted with the types of misspellings of Swahilized English loanwords made in Kiswahili functional writing. As a result, this stage of EAT is significant to pedagogical processes as well as curriculum design/review and therefore an indispensable stage for making informed pedagogical decisions and content for instruction.

The fourth stage of the EAT- an explanation of the errors - was not used in this study considering that the researcher was not interested in identifying the causes of the misspellings of Swahilized English loanwords. The objectives of the study were to identify misspellings of Swahilized English loanwords in Kiswahili functional writing and classify them. This made the researcher proceed to the last stage of EAT which is provided for pedagogical implications and curriculum design/review. The last stage is the evaluation of the errors made by learners. This stage allows the researcher to evaluate the errors made by the learner in the two language productive skills (speaking and writing). This final stage of EAT allowed the researcher to make a judgment about the learner's misspellings of Swahilized English loanwords made in Kiswahili functional writing. The evaluation of misspellings of Swahilized English loanwords was guided by their frequencies and subsequently order of gravity.

Methods

Research Design

This study employed descriptive design. This design enabled the researcher, together with his two researcher assistants, to identify and categorize misspellings of Swahilized English loanwords committed by learners in Kiswahili functional writing. This allowed the researcher and his research assistants to examine the misspellings of Swahilized English loanwords, categorize and describe them.

Participants

This study used 326 participants of equal gender proportion sampled from 8 public secondary schools (10% of the 80 public secondary schools in Nyamira County). Mustafa and Robillos (2020, p.442) recommended that “the cutoff point is at the sample of 52 with the range between 46 and 59”. Therefore, 326 participants were between the minimum brackets for the target population of 3,600 form three learners. Four categories of public secondary schools - public single-sex secondary schools (either boys or girls), mixed-day secondary schools and mixed boarding and day secondary schools – were involved. Form three students who were preparing to join Form Four in the following year were involved. Purposive and simple random sampling techniques were used to select the schools and 326 participants from the 8 public secondary schools. A simple random sampling technique (lottery method) was used to select two boys’ and two girls’ secondary schools to participate in the study - six single-sex secondary schools for each sex (3 girls’ schools and 3 boys’ schools). The simple random sampling technique was also used to select one boarding mixed-secondary school and one day mixed-secondary school. The technique was further used to select 27 participants from each of the two boys’ secondary schools and 27 participants from each of the two girls’ secondary schools, whereby, in total 54 participants were selected for each sex; totalling 108 participants for the single-sex category of schools. The same number of participants was selected for each sex from the mixed day schools (totalling 108) and 55 participants from the two day-schools for each sex (totalled 110 participants). This makes a total of 326 participants. The table below summarises the sample size.

Table 1: School Type and Number of Participants

School type /sex	boys	girls
Two single-sex secondary schools	54	54
Two mixed secondary schools	54	54
Two mixed day secondary schools	55	55
Grand Total		326

Instrumentation and Data Collection

The data were collected using a Kiswahili functional writing task. A topic was given to all students; they were required to write a letter to an editor of an imaginary paper called *YamaiziLeo*. They were expected to discuss the causes responsible for the increase in rape cases and suggest measures to be put in place

to eradicate it. The duration for completing the task was two hours. They were to write the first draft and the final draft which was the corpus for this study. They were supervised to ensure that there was no use of the Kiswahili dictionaries for accurate spellings of Swahilized English loanwords. This instrument allowed the identification of the misspellings of Swahilized English loanwords and their coding which finally provided data for this study.

Data Analysis

Data analysis followed the first two error analysis stages – identification of the misspellings of Swahilized English loanwords followed by their classifications – suggested by Corder (1974). The classification was guided by Cook's (1999) approach which typified errors as omission, substitution, insertion and transposition. Frequencies and percentages were used to analyze the misspellings of the Swahilized English loanwords. Frequencies and percentages were useful since they allowed the researcher and his two assistants to summarize each type of misspelling made by learners in their functional writing task. The use of these two descriptive statistics allowed the misspellings to be classified and ordered in gravity as they are made by learners in their Kiswahili functional writing.

Results

In total, 96 misspellings of Swahilized English loanwords were discerned in the learners' Kiswahili functional essays. These were then categorized into five: preservation of English sounds (33.3%), the addition of vowels and consonants (30.3%), the substitution of vowels, consonants and digraphs (27.1%), omission of sounds (6.1%) and splitting of compound words (3.1%). Table 2 below shows categories of misspellings of Swahilized English borrowings made by learners in Kiswahili functional writing. The categories are tabulated based on their gravity. The categories have been subdivided further, where applicable, to show vowel-related and consonant-related categories for each of the two - addition (insertion) and substitution. It is important to mention that the misspellings of Swahilized English loanwords had only three categories of Cook's (1999) error classification approach. The other two categories included in this classification are "new" (unique) and they are evident in Kiswahili functional writing. The 'new' categories are the preservation of English sounds/phonemes and the splitting of compound words.

Table 2: Categories of Misspellings of Swahilized English Loanwords in Kiswahili Functional Writing

Misspelling category	frequency	percentage
1. Preservation of English sounds /phonemes	33	33.3
2. Addition (vowels and consonants)/insertion	29	30.3
3. Substitution (vowels, consonants and digraphs)	27	27.1
4. Omission of sounds	6	6.2
5. Splitting of compound words	3	3.1
Grand total	96	100

It is evident, from Table 2 above, that most (n=32; 33.3%) of the misspellings of Swahilized English loanwords originated from the preservation of English writing system sounds/letters. Retaining the English sounds/letters (consonants and digraphs) resulted in misspelling the Swahilized borrowings adapted into the Kiswahili language. These were the most prevalent misspellings of Swahilized English loanwords that were made by learners in their Kiswahili functional essays. The following examples show the misspellings:

Misspelling	correct spelling	gloss
1. <i>bhang</i>	<i>bangi</i>	bhang
2. <i>bulausi</i>	<i>blauzi</i>	blouse
3. <i>technologija</i>	<i>teknolojia</i>	technology
4. <i>televiseni</i>	<i>televisheni</i>	television
5. <i>skarti</i>	<i>sketi</i>	skirt
6. <i>disco</i>	<i>disko</i>	disco
7. <i>tobacco</i>	<i>tumbaku</i>	tobacco
8. <i>radio</i>	<i>redio</i>	radio

Examples 1-5 above, evidence retaining of English writing system sound/letters (five boldened letters/sounds); 5-8 (woboldened words) denote non-nativization of the loanwords. Examples 6-8 do indicate that the words were never naturalized to conform to the Kiswahili orthography. This implies that there were two types of preservation of the English writing system; partial and full, 1-5 and 6-8 respectively. The second category based on gravity was an addition (n=29; 30.3%). There were two types of addition (insertion) misspellings; vowels (n=16; 16.7%) and consonants (n=13; 13.6%). The following examples show these two types of misspellings belonging to the additional category.

Misspelling	correct spelling	gloss
1. <i>bulausi</i>	<i>blauzi</i>	blouse
2. <i>hosipitali</i>	<i>hospitali</i>	hospital
3. <i>ponogorofi</i>	<i>ponografia</i>	pornography
4. <i>siketi</i>	<i>sketi</i>	skirt
5. <i>tekinologia</i>	<i>teknolojia</i>	technology
6. bayol o gia	<i>biolojia</i>	biology
7. sany a nsi	<i>sayansi</i>	science
8. lens e nsi	<i>leseni</i>	license

Examples 1-5 above indicate the addition of vowels (boldened) to English loanwords whereas 6-8 show the addition of consonants (boldened) to the English loanwords. The addition of vowels and consonants to English loan words resulted in their misspellings. The third category of misspellings of English loanwords made by learners in their Kiswahili functional essays was substitution (n=26; 27.1%). Learners substituted correct vowels, consonants and digraphs with wrong ones. This incorrect replacement of vowels, consonants and digraphs culminated in the misspelling of the English loanwords in Kiswahili functional essays. A close examination of the incorrect substitution indicates that it involved substituting the correct vowel consonants and digraphs with the English writing system sounds, as a result, misspelt English loanwords were adapted into Kiswahili. The following examples show misspellings of vowels, consonants and digraphs. The presentation of the examples begins with vowels, followed by consonants and ends with digraphs. The examples are:

Misspelling	correct spelling	gloss
1. <i>filimu</i>	<i>filamu</i>	film
2. <i>gezeti</i>	<i>gazeti</i>	gazette
3. <i>televisoni</i>	<i>televisheni</i>	television
4. <i>vaini</i>	<i>faini</i>	fine
5. <i>blausi</i>	<i>blauzi</i>	blouse
6. <i>aitha</i>	<i>aidha</i>	either
7. <i>kambuni</i>	<i>kampuni</i>	company

The above examples, 1-7 indicate that there was incorrect substitution of vowels, consonants and digraphs with the correct ones (all boldened). This resulted in the misspelling of the Swahilized English borrowings. Examples 1-3 denote the

replacement of correct vowels with wrong ones, resulting in the misspelling of some Swahilized English borrowings. Examples 4-5 show the substitution of correct consonants with the wrong ones. Finally, examples 6-7 point to the substitution of correct digraphs with incorrect ones. It, therefore, argued that this category of misspellings made by learners in Kiswahili functional essays contributed to the total number of misspellings of Swahilized English loanwords. The fourth category of misspellings of Swahilized English borrowings was the omission of sounds (n=6; 6.1%). This omission resulted in the misspelling of Swahilized English borrowings in their Kiswahili functional essays. The following misspelt English Swahilized loanwords show the omission of letters culminated in their misspellings.

Misspelling	Correct Spelling	Gloss
1. <i>ko-ti</i>	<i>korti</i>	court
2. <i>s-ikolojia</i>	<i>saikolojia</i>	psychology

The omission of sounds in examples 1-2 above are indicated by a dash (-). Coat and court are homonyms and there nativized as *koti* and *korti* respectively. There was an omission of /a/ in the English Swahilized word *saikolojia* (psychology). The last category of misspellings of Swahilized English borrowings was the splitting of compound words (n=3; 3.1 %). A compound word is formed by combining two different words with two different meanings to make one word with one meaning. Splitting of compound words results in writing two different words, each with its meaning; this causes semantic confusion. This confusion impedes communication. The writer fails to communicate the intended meaning to the targeted audience because of the two meanings originating from the two different words, following the splitting of the compound word. As a result, the intended message is not communicated. The following example demonstrates that learners split compound words in their Kiswahili functional essays. This split contributed to the misspelling of the Swahilized English borrowings in the learners' Kiswahili functional essays.

Misspelling	correct spelling	gloss
1. <i>mini sketi</i>	<i>minisketi</i>	miniskirt

The above example indicates that some learners did not accurately spell compound words in their Kiswahili functional writing essays. They split

compound words. This shows that some learners are not familiar with the rules followed when spelling compound words. From the foregoing, categories of misspellings of Swahilized English borrowings detected in Kiswahili functional essays written by the 326 participants, it is clear that learners make five categories of misspellings that are preservation, addition, substitution, omission and split. The five categories can be abbreviated as PASOS in this study.

Discussion

This study has revealed that learners make misspellings of Swahilized English borrowings in their Kiswahili functional writing essays. The misspellings of Swahilized English loanwords made by learners in their functional essays suggest their limited understanding of the nativization tenets of the Kiswahili orthography. Corder's (1974) Error Analysis Theory, step three (classification of errors), permitted the researcher to categorize the misspellings of Swahilized English borrowings into five: preservation, addition, substitution, omission and split (PASOS). Although this study confirms previous findings (Qudat, 2017; Nketsiah, 2022; Othman, 2017; Subhi & Yasin, 2015) on categories of misspellings learners make in English language compositions as a second/foreign language, only three categories of Cook's (1999) approach were confirmed. Cook's approach to the classification of spelling errors has four categories: omission, substitution, insertion and transposition (OSIT). The current study confirmed three categories - insertion (addition), omission and substitution. The study disconfirmed transposition. There was no jumbling up of letters/words to result in misspellings. This study unearthed two new categories of misspellings of English borrowings which are not included in Cook's approach to the classification of misspellings. The two new categories of misspellings are preservation and split. The preservation category of misspellings was the most prevalent ($n=33; 33.3\%$) of the five categories of misspellings of Swahilized English borrowings. It refers to the wrong retention of some sounds/letters of the Swahilized English borrowings, hence culminating in the misspelling of the loanwords. Learners presupposed that the wrongly retained sounds/letters belong to the Swahilized English borrowings. Split was another new category of misspellings of Swahilized English loanwords. This category focused on the splitting compound words; these misspellings were rare as compared to the widespread category (preservation misspellings). The finding of these two new categories of misspellings threatens the use of Cook's (1999) approach to the classification/analysis of spelling errors

and calls for an all-inclusive approach to classifying/analyzing spelling errors. It is important to underline the fact that the current study zeroed in on Swahilized English borrowings adapted and adopted into Kiswahili whereas the previous studies were interested in identifying, analyzing and classifying spelling errors of English words and Mfantse words. The said studies focused on spelling errors made by learners in their English language and Mfantse language composition essays. The present study was interested in investigating, analyzing and categorizing misspellings of English borrowings adapted and adopted into Kiswahili. The English loanwords had already been nativized and recognized as Kiswahili vocabulary whereas the misspellings in English and Ghanian language Mfantse were not analyzed and classified in the context of loanwords. Accurate spelling of the English language and Mfantse language required adherence to the orthographies of the two languages whereas accurate spelling of Swahilized English loanwords expected learners to stick to Kiswahili orthography conventions.

The five categories of misspellings of Swahilized English loanwords made by learners in their Kiswahili functional essays suggest that learners complete their secondary school cycle without mastering and internalizing the basic tenets of adapting English words into the Kiswahili language. Arguably, learners have communication challenges considering that functional writing requires learners to employ appropriate and accurately spelt registers in a variety of functional writing. K.I.E (2006) has instructed teachers of Kiswahili to ensure that learners do not make misspellings of foreign languages (i.e., English) adapted into Kiswahili as they write both creative and functional writings. This direction is based on the indispensable role correct spelling plays in functional writing. Lodhi's (2015, p.1) emphasized that "most of the recent loanwords in Swahili are from English, especially in the fields of modern education, science, and technology sports and modern entertainment." Thus, adapting and adopting English words into Kiswahili is inevitable and an indispensable strand of any growing language such as Kiswahili. Petzell's (2005) study on newly adapted words in the field of information and communication technology into Kiswahili language, confirms Lodhi's (2015) averment concerning Kiswahili language's reliance on English loanwords. Based on the findings of the current study, one would argue that the five categories of misspellings of Swahilized English loanwords necessitate teaching learners the entire process of adapting English vocabulary into Kiswahili language. All the categories, except for splitting compound words, do underline

the urgent need to ensure that all learners are acquainted with phonological processes to remember and be ready to correctly rephonologize the English loanwords which do not conform to the Kiswahili writing system. These phonological processes are deletion, insertion and substitution. A firm grasp of these phonological processes enables the learner to correctly spell English loanwords adapted into the Kiswahili language.

Conclusion

This study has revealed that misspellings of Swahilized English loanwords are made by learners in their Kiswahili functional writing essays. The misspellings have been categorized into five: preservation (n=33;33.3%), addition(insertion) (n=29;30.3%), substitution (n=27;27.1%, omission (n=6;6.2%) and split (n=3;3.1 %). In this study, the five categories are abbreviated as PASOS. All the misspellings of Swahilized English loanwords, except for the split, reflect learners' limited knowledge of the phonological processes involved in the adaptation of English language borrowings into Kiswahili language. Indeed, it is this limitation of the phonological processes that made them have difficulties with vowels, consonants and digraphs as they spelt English borrowings adapted and adopted into Kiswahili language. The last category, which is the splitting of compound words, points to learners' limited knowledge of word formation processes. In a nutshell, the phonological processes are deletion, insertion and substitution

Pedagogical Implications

The five categories of misspellings of Swahilized English loanwords unearthed by this study need urgent instructional attention to eradicate them. It is crucial to eliminate them considering that spelling is a key component of the writing process that is indirectly related to content and directly related to word choice (register) and effective communication in Kiswahili functional writing. It has been demonstrated that learners had difficulties related to the use of vowels, consonants and digraphs which resulted in the four categories of misspellings (preservation, addition, substitution and omission). Learners need to be competent spellers of the English loanwords adapted into Kiswahili; being poor spellers makes them poor Kiswahili functional writers. Consequently, there is a need for teachers of Kiswahili language to pay special attention to the teaching of the adaptation process of English loanwords into Kiswahili language to acquaint learners with the phonological processes involved in the entire process. The teachers should zero in on eliminating the wrong preservation (deletion) of Swahilized English sounds/letters, addition of sounds/letters (insertion), omission and substitution phonological processes as they relate to the entire

process of rephonologizing English loanwords adapted or to be adapted into Kiswahili. The instructional processes should be carried out using 'life' problematic examples of misspellings of Swahilized English loanwords derived from Kiswahili functional varieties of learners. The teaching of the three phonological processes should be attached to Kiswahili functional writing in relation to content, vocabulary (conventional language/register), economy (no use of flowery/excessive words) and spelling. The instructional methods and media to be used in instructional processes should be based on their contribution to the understanding of the three phonological processes (deletion, insertion and substitution) as they relate to vowels, consonants and digraphs. Instructional methods such as demonstration, explanation, discussion etc. should be employed with relevant media such as Kiswahili newspaper (*Taifa Leo*) cuttings, collection of samples of Swahilized English loanwords which are already entries in the dictionaries to enrich the teaching of spelling of the English loanwords.

The teaching of pronunciation (evidenced by ready) and spellings of the English loanwords adapted into Kiswahili should be taught concurrently for they reinforce each other. It is noteworthy that the two have a symbiotic relationship for the way a word is pronounced, it is the same way it is spelt. This means a mispronouncer is a misspeller and vice versa. The teaching of Swahilized English words can allow the use of information and communication technology gadgets, which, if used intelligently, can make learners fluent, hence competent spellers of the English loanwords adapted into Kiswahili. The last implication for teachers of the Kiswahili language is designing a model for teaching the adaptation process. There is a need to design an English-Kiswahili model for teaching how the adaptation process ought to be carried out. The model should zero in on the English language sound system and writing system as well as the Kiswahili language system sound and its writing system. The model will orient teachers towards systematic steps for teaching adaptation of English vocabulary into Kiswahili.

Suggestions for Further Research

Research should be carried out to:

1. find out why preservation misspellings are the most prevalent type of misspelling of Swahilized loanwords.
2. find out the preparedness of the teachers of the Kiswahili language to teach the adaptation of English vocabulary into Kiswahili language;

3. find challenges teachers of Kiswahili language encounter as they teach adaptation of English loanwords into Kiswahili.

REFERENCES

- Andrews, R. & Smith, A. (2011). *Developing Writers Teaching and Learning in the Digital Age*. Oxford University Press.
- Christie, F. J, Enz, B.J. & Vukelich, C. (2007). *Teaching language and literacy through brainstorming strategy on developing ninth grade students' writing skills in Arabic language* [PhD Thesis]. The University of Jordan.
- Cook, V. J. (1999). *Teaching spelling*. <http://privatewww.essex.au.uk/~vcooks/OB/htm>.
- Corder, S. P. (1973). *Introducing applied linguistics*. Penguin.
- Corder, S. P. (1981). *Error analysis and interlanguage*. Oxford.
- Costa, P.T.D. & Arias, F.R. (2021). *A case study on the use the spelling as a determinant factor in teaching English grammar in Dominican schools*. ERIC
- Dhazene-Quarshie, J. (2012). English loans in Swahili newspapers. *Ghana Journal of Linguistics*, 1, 35-56.
- Ellis, R. (2015). *Understanding second language acquisition* (2nd Edition). Oxford.
- Fitria, T.N. (2020). Spelling errors analysis in students' writing English composition. *Getsempena English Educational Journal*, 7(2)
- Gathumbi, A.W. & Masembe, S.C. (2005). *Principles and techniques in language teaching. A text or teacher educators and pre-service teachers*. Jomo Kenyatta Foundations.
- Hornby, A.S. (2020). *Oxford advanced learner's dictionary* (10th Ed). Oxford.
- Isaacson, S. & Gleason, M.M. (1997). *Mechanical obstacles to writing: What can teachers do to help students with learning problems?* LD Online.
- Jika, Y.M. (2017). *Morphophonological analysis of nouns borrowed by Kiswahili and Hausa from Arabic* [Unpublished M.A. thesis]. Kenyatta University.
- Khansir, A.A. (2012). Error analysis and second language acquisition. *Theory and Practice in Language Studies*, 2(5), 1027-1032.
- K.I.E. (2002). *Secondary school education syllabus volume 1*. Kenya Institute of Education.
- K.I.E. (2006). *Secondary school English teachers' handbook*. Kenya Literature Bureau.
- Kishe, A.J.M. (2003). English influence on Kiswahili. The view of language purists. *Journal of Linguistics and Language in Education*, 5, 1-21.
- K.N.E.C. (2002). *Kiswahili 102/1 a marking guide*. Kenya National Examinations Council.
- K.N.E.C. (2006). *Kiswahili composition marking guidelines*. Kenya National Examinations Council.
- K.N.E.C. (2015). *Kenya Certificate of Secondary Education Examinations Report*. Kenyan National Examinations Council.
- K.N.E.C. (2018). *Kenya Certificate of Secondary Education Examinations Report*. Kenya National Examinations Council.
- K.N.E.C. (2018). *102/1 Kiswahili insha*. Kenya National Examinations Council.

- K.N.E.C (2020). *The year 2019 KCSE examinations report*. Kenya National examinations council.
- Lodhi, A. (2015). *Oriental loanwords in Swahili*. Oxford.
- Moochi, C.N. (1999). *Sex differences in Kiswahili creative writing: A comparative study of performance of boys and girls in selected secondary schools in Nyamira District, Kenya*[Unpublished M.Phil. Thesis].Moi University.
- Moochi, C. N. (2012). *A Comparative analysis of boys' and girls' spelling errors in Kiswahili functional writing in secondary schools in Kenya*[Unpublished PhD thesis].Moi University.
- Moochi, C.N. (2018). Examination of boys' and girls' spelling errors of phonemic interchange in Kiswahili functional writing among EkeGusiisecondary learners.*Africology: The Journal of Pan African Studies*, 12(4).
- Moqimipour, K. &Shahroki, M. (2015). The impact of text genre on Iranian intermediate EFL students' writing errors: An error analysis perspective. *International Education Studies*, 8(3), 122-137.
- Murphy, M.E.& Snell, S. (1992). *Effective writing: Plain English at work*. Pitman.
- Murphy, M.E.& Cadman, H. (2014).*Effective writing: Plain English at work* (2nd Ed). Paperback.
- Mustafa, F.&Robillos, R.J. (2020). Proper sample size for English language testing. A sample statistical analysis, *Humanities and Social Sciences Review*,8(4), 442-452.
- Nassaji, H. (2012). The development of spelling and orthographic knowledge in English as an L2: A longitudinal study. *The Canadian Journal of Applied Linguistics*,10(1),77-98.
- Nketsiah, J. (2022). Spelling errors analysis of Ghanianlanguage college of education students' essay.*International Journal of Literature, Language and Linguistics*, 5(2).
- Othman, A.A. (2017). An investigation of the most common spelling errors committed by English major male students at the University of Tabuk.*Journal of Education and Practice*, 8(38).
- Petzell. (2005). Expanding the Swahili vocabulary.*Africa and Asia*,5,85-107.
- Qudat, A.A. (2017). Spelling errors in English writing committed by English major students at BAU.*Journal of Literature, Language and Linguistics*, 32.
- Shorofat, A. (2007). *The effect of using the brainstorming strategy on developing ninth grade students' writing skills in Arabic language*[PhD Thesis].The University of Jordan.
- Smedley, D. (1983). *Teaching of the basic skills, spelling and punctuation in secondary school English*. Methuen.
- Subhi, S.N. &Yasin, M.S.M. (2015). Investigating study on English spelling errors: A sample of Iraq students in Malaysia.*International Journal of Education and Research*,3(6).

TaasisiyaElimuya Kenya. (2006). *Kiswahili sekondari: Mwongozowamwalimu*. Taasisi ya Elimuya Kenya.

TrasK, R.L. (1995). *A dictionary of phonetics and phonology*.Routledge.

The Influence of Learning Environment in the Mastering of 3rs in Public Primary Schools in Nyang'hwale District – Tanzania

Nyaswe Stanslaus¹ ; Mohamed Msoroka²

mohamed.msoroka@out.ac.tz¹

Nyanghwale District Council¹ The Open University of Tanzania²

ABSTRACT

This study investigated the influence of the learning environment in the mastering 3Rs in public primary schools in Nyang'hwale District, Tanzania. The study was guided by three objectives namely: factors that lead to pupils' failure to master 3Rs from standard one up to standard three in public primary schools in Nyang'hwale District, Tanzania, how school environment supports pupils to master 3Rs in public primary schools in Nyang'hwale District. The other objective was to find out the solutions on how we can improve the mastering of the 3Rs to secondary school pupils in Nyang'hwale District. The study used a mixed research approach where both qualitative and quantitative approaches approach were applied. The sample size of the study was 106 respondents, who were obtained through percentages. The participants were selected using simple random sampling stratified sampling and purposive sampling while data of the study were collected through questionnaires and interview guides. Quantitative data were coded through Statistical Package for Social Sciences (SPSS) 20 edition and were analysed by thematic analysis technique. On their part, qualitative data were analysed through content after being grouped. The analysed data were presented in charts, graphs, Tables and explanations. The findings of the study show that there was poor mastery of the 3Rs among primary school pupils in Nyang'hwale District. Most of the primary school pupils in Nyang'hwale District were found to have the problem of poor mastering of the 3Rs. In addition, the findings indicate that the teaching and learning environment had a great influence on the mastering of the 3Rs to primary school pupils in Nyang'hwale District. The study recommends that Teachers should implement strategic teaching methodologies and apply current teaching and learning materials.

Keywords: Learning, Learning Environment, 3Rs, Public schools

INTRODUCTION

Since 1961, the Tanzanian government has shown a strong desire to provide primary education. The efforts helped the country to achieve a high level of literacy among its citizens in the 1970s to mid-1980s (Kitta, 2004). However, this achievement did not last long; it dropped from 90% in 1986 to 84% in 1992 (Mushi, 2010, Msoroka, 2018). Currently, the literacy rate in Tanzania is about 78.1% (Msoroka, 2018; The United Republic of Tanzania, 2014). The current literature suggests that at the primary school level, learners' mastery of the 3Rs is a burning issue in Tanzania. Evidence suggests that a good number of pupils complete primary education level without mastery of reading, writing and arithmetic (TWAWEZA, 2015). Failure to master the 3Rs is said to affect their academic performance at the other academic levels and their lives generally (TWAWEZA, 2015). Recently, Uwezo (2017) indicated that there were significant regional differences in children's learning outcomes in Tanzania, especially in literacy among children aged 9-13. The region with the highest literacy achievement in the country had a 64% literacy rate and the lowest had 23%.

Uwezo's (2017) study suggested that 28% of the standard seven pupils who were reached by the study could not read the standard two Kiswahili textbook. Only 35% of standard three pupils were able to read the standard two Kiswahili textbook; 56% of standard three pupils were able to read and solve multiplication problems at standard two level. This is contrary to the objective set by the Tanzania Education and Training Policy of 1995, which expected standard three pupils to have achieved basic literacy skills – reading, writing and solving simple arithmetic problems (The United Republic of Tanzania, 1995). Several factors have been reported to affect students' mastery of the 3Rs. For instance, TWAWEZA (2015) discovered that a poor teaching environment, a shortage of classrooms, and a huge number of students in classrooms were among the challenges which hindered students in developing these core basic skills. Consequently, some pupils have been reported to complete primary education without appropriate mastery of the 3Rs. Similarly, Andrea (2014) discovered that factors such as gender, age, family background, social status, time and environmental factors, which vary from national, regional and global levels, affect students' mastery of the 3Rs. In addition to the environmental factor, Andrea identified gender, age, family background, social status and time as factors also affecting the learning process of the students. Strand (2007) argues that the basic skills for reading, writing and arithmetic have morphed into the hard skills of basic mathematics,

problem-solving and reading in higher primary education (class 1-4) and upper primary education (class 5 – 7). With this trend, one can find a larger number of children completing primary education without adequate basic literacy skills that would lay the foundation for a child to listen, speak, read and write in the target language throughout the academic journey. Strand believes that pupils fail to master the basic 3Rs due to their family backgrounds such as family income, parent's educational background, and parenting style. This study notes that the mastery of the 3Rs is fundamental; it builds up a foundation for further studies. However, as noted earlier, illiteracy seems to be rampant among primary school leavers in Tanzania. As seen in this section, several studies have been conducted on the mastery of the 3Rs. However, the contribution of the learning environment to the mastery of these 3Rs has been understudied. For this reason, the current study intended to fill that gap; the purpose of this study was to investigate the influence of the learning environment in the mastering of 3Rs in public primary schools in Nyang'hwale District, Tanzania. Specifically, this study intended to address the following three objectives:

- i. To find out the status of the 3Rs among students in Nyang'hwale District
- ii. To assess whether the school environment influences pupils to master the 3Rs in public primary schools in Nyang'hwale District
- iii. To find out the appropriate measures to improve the mastery of the 3Rs among the pupils in the public primary schools in Nyang'hwale District

Methodology

This study used a mixed-methods research approach. Usually, mixed-methods research makes use of both quantitative and qualitative forms of data in a single study to study the phenomena from multiple perspectives (Gray, Mills, & Airasian, 2012; Ivankova, 2015; Lawrent, 2018). In this study, the two forms of data were used for triangulation purposes. With the help of a case study research design, scholars of this study were able to conduct an intensive investigation and fully analysed the limited number of variables that were investigated. This helped the researchers to acquire an in-depth understanding of the influence of the learning environment on learners' acquisition of 3RS, as case studies allow for a thorough analysis of data from multiple fieldwork sources (Creswell, 2007; Yin, 2014). This study involved 106 participants. They included students, teachers, Head Teachers and District Educational Officers. The participants were selected

through simple random, purposive, and stratified sampling techniques. In this study, simple random sampling was used to select students. A list of students' names for standards five to seven was developed in each of the selected schools; numbers were assigned to each of the students' names. Then, small pieces of paper were made (equivalent to the number of students) and numbers were assigned to each of the pieces of paper. The pieces of paper were then put in the box. Thereafter, the pieces of paper were randomly picked without replacement, until the sample size was reached. In this study, data were collected through questionnaires and interviews. Quantitative data were coded and entered into Statistical Package for Social Sciences (SPSS) 20 edition software for analysis. Qualitative data were analysed through thematic analysis. The analysed data were then presented in charts, graphs, tables and explanations. To adhere to research ethics, no real names of participants and institutions have been mentioned in this paper; only pseudonyms have consistently been used.

Findings

Status of the 3Rs

This section discusses the findings on the status of the 3Rs in public primary schools in Nyang'hwale District. Sub-sections below summarise the findings on pupils' ability to read, write and numeracy.

Reading Ability

Figure 1 below summarises the respondents' opinions on the pupils' reading ability in Nyang'hwale District.

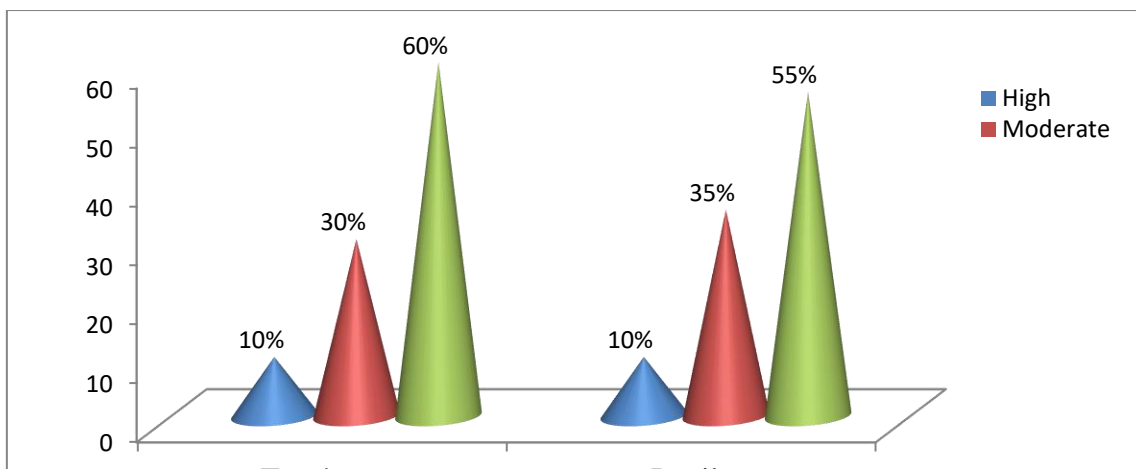


Figure 1: Participants' Responses on the Pupils' Ability to Read

Source: Field Data

As seen in Figure 1 above, teachers and pupils had a relatively similar opinion. The majority of the respondents involved in this study (60% of teachers and 55% of pupils) believed that a good number of pupils in Nyang’hwale district had low reading ability. As observed from the data, even the pupils did not believe in themselves; they rated themselves as having a low reading ability. Based on the findings above, one would argue that the ability of pupils to read in Nyang’hwale District primary schools was low. This was also noted through observation. During data collection, the researcher observed that most pupils in standards one, two, three, four, five, six and seven were not able to read. The same was observed in the documentary analysis. The data obtained from one of the district’s offices indicated that 20% of the primary school pupils in Nyang’hwale District could not read.

Writing Ability

Figure 2 below summarizes respondents’ opinions about pupils’ ability to write.

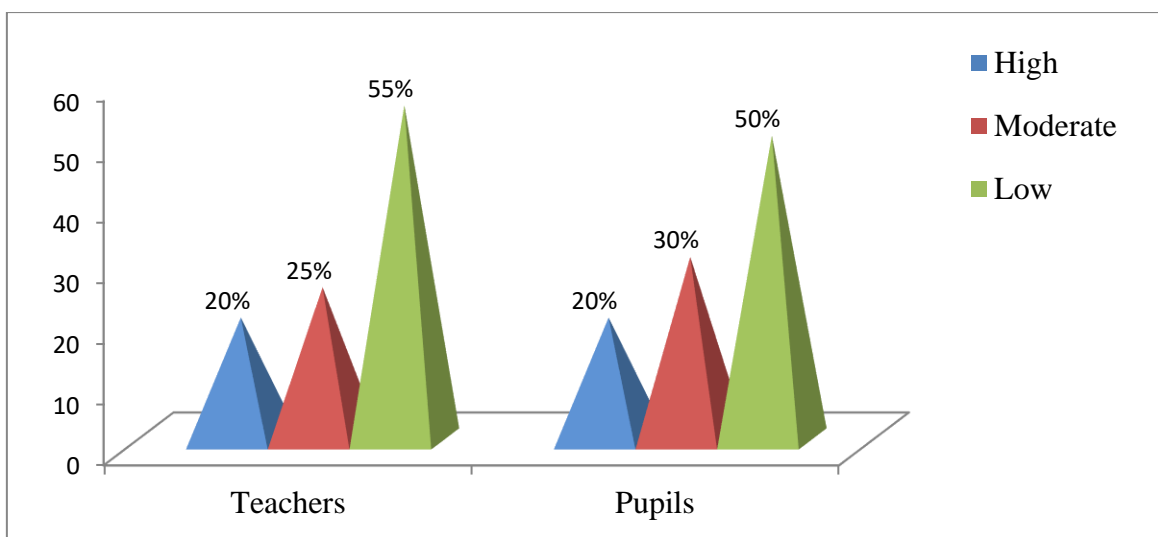


Figure 2: Ability of Pupils to Write

Source: Field Data

The data in Figure 2 indicate some similarities in the findings between learners’ ability to read (Figure 1) and learners’ ability to write (Figure 2). The findings indicate that teachers and pupils had relatively similar opinions on pupils’ ability to write. Most of the teachers (55%) and pupils (50%) involved in this study believed that most pupils in Nyang’hwale District primary schools had low ability in writing.

However, one of the interviewees had a different view on this aspect. He claimed that the current situation in primary schools was not as bad as suggested by other participants. He argued that:

Previously, primary school pupils completed standard seven without knowing how to write, but now I can say that we have improved. Most of our pupils from standard three up to seven can write. Therefore, it is not true that the majority of primary school pupils are not able to write. It can happen in one or two schools to have pupils completing standard seven without knowing how to write, but not all schools. (Kyombo)

Having students who complete the primary school cycle without writing skills is not a new phenomenon. Other studies such as Ngussa and Mjema (2017) came up with similar findings. They found some students who finished primary education without the knowledge of the 3Rs. Ngussa and Mjema are of the view that schools' administrative support, teaching methodologies and teachers' and learner-related factors significantly influence pupils' mastery of the 3Rs.

Numeracy Skill

Since numeracy skill is part of the 3Rs, the researcher wanted to know the ability of pupils to do arithmetic in the selected primary schools. Through questionnaires, teachers and pupils were asked to rank the ability of the pupils to do arithmetic in the selected primary schools. Their responses were presented in Figure 3.

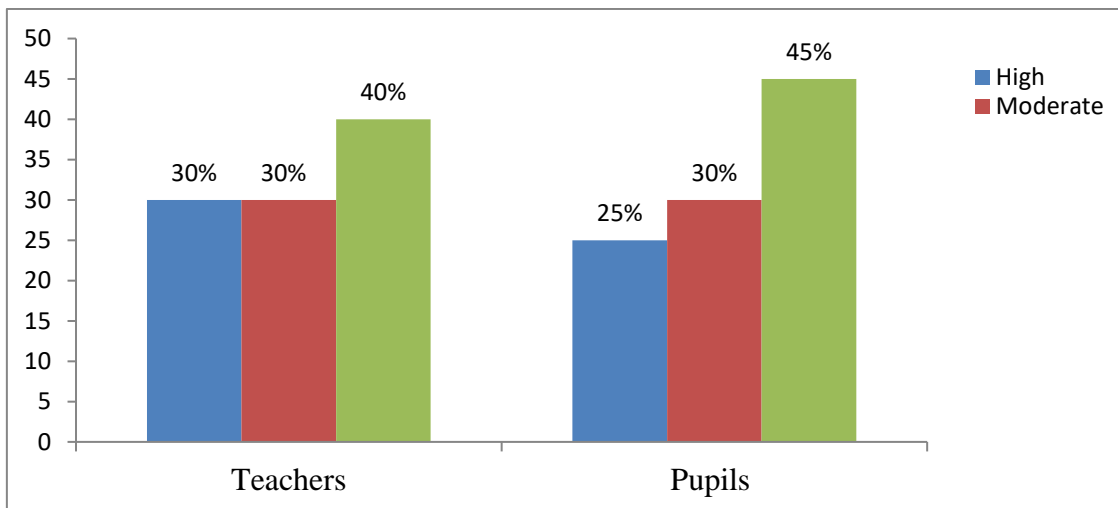


Figure 3: Ability of Pupils to Do Arithmetic

Source: Field Data

As observed in Figure 3, the majority of the respondents (40% of teachers and 45% of pupils) believed that a good number of pupils had low ability to do arithmetic. This finding from the questionnaires was backed up by the data from interviews. For instance, one of the interviewees noted:

Arithmetic is another problem that hinders the performance of primary school pupils in this district. Many schools in our district have a problem with arithmetic. Mathematics is a major problem not only in this District but also in all Districts in Tanzania. However, the government is trying to improve the performance of the subject; hence, we are going to have great performance in mathematics and science subjects this year. (Interviewee B, 02)

It is argued here that such findings presented in this study are not unique. Other studies have found similar findings as well. For instance, in India, Sharma, Bajpai and Holani (2010) found pupils with low numeracy skills. One of the reasons for pupils to have low numeracy skills was poor support from the school administration on the achievement of the 3Rs. They argue that the school administration did not create a good and rich environment that could encourage and support speaking, listening, reading, and writing which could highly help pupils in mastering the 3Rs. A similar view was reported from Pakistan, where Iqbal, Rauf, Zeb, Rehman, Khan, Rashid and Farman (2012) observed that teachers failed to create a learning environment that could maximise learners' ability to interact with each other and their learning materials. The learning environment did not support discussion, collaboration and provision of feedback, which are important in studying numbers in elementary schools.

The Contribution of School Environment to Pupils' Mastery of 3Rs

On this aspect, the respondents were asked if pupils' mastery of the 3Rs was being influenced by the learning environment. Their responses in questionnaires are presented in Figure 4.

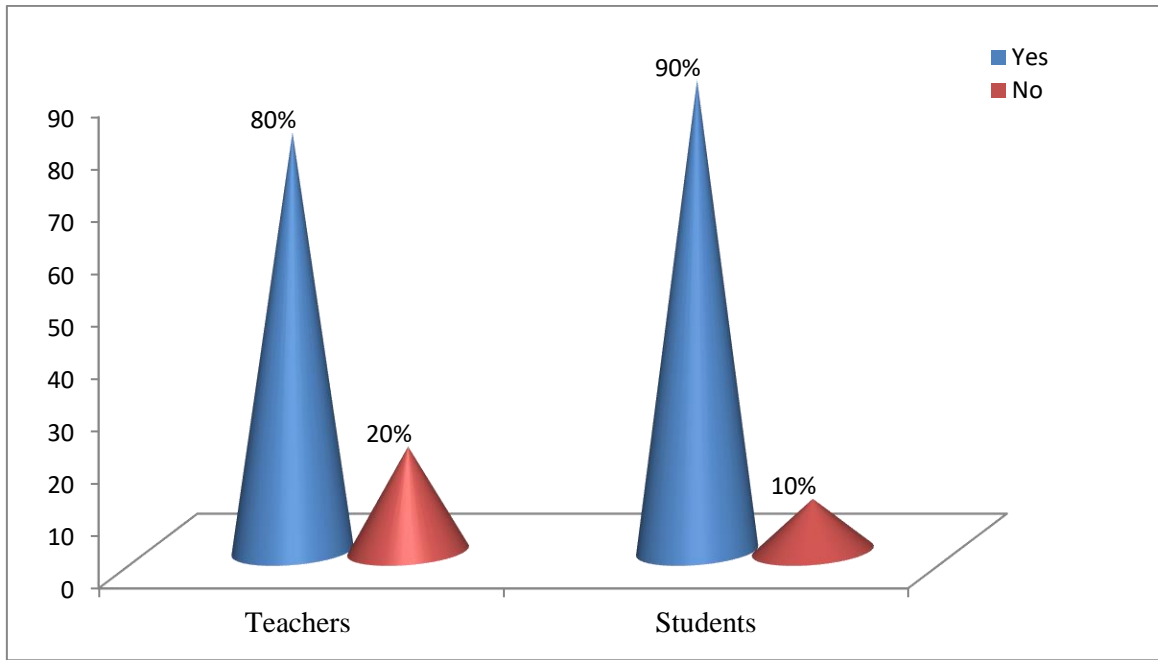


Figure 4: The Influence of the Learning Environment on Mastery of the 3Rs

Source: Field Data

As observed in Figure 4, it is clear that the majority of the respondents involved in this study (80% of teachers and 90% of pupils) believed that the learning environment had a great influence on pupils' mastery of the 3Rs. Based on the data, one would argue that if the learning environment were improved the pupils would easily master the 3Rs. The findings of this study are similar to Schneider (2002) who argued that conducive, attractive, clean, functional, and comfortable school facilities could improve students' achievement and mastery of important skills such as writing, reading and counting numbers. Therefore, educators need to advance the teaching facilities to improve the teaching process that can help pupils master the 3Rs. They need to conduct research and promote modern and innovative facilities to enrich the system of education. The findings of the current study correlate with the findings of Saeed and Wain (2011) who argue that poor mastering of the 3Rs in developing countries is caused by poor physical facilities of the schools. They believe that the school's physical facilities are fundamental factors for a better learning environment and have a positive influence on students' mastery of content in the classroom. With this perspective, one can argue that mastering of 3Rs can only be attained if the school has a conducive learning environment. In the same line, O'Sullivan (2006) argues that poorly maintained school physical facilities may send the message that education is not important and a negative attitude will be passed on to the pupils. Therefore, poor

mastery of the 3Rs in schools that have poor learning environments is a normal thing. That is why Leeper (1968) maintains that availability of the physical facilities such as compound walls, toilets, furniture, drinking water, technology, playgrounds, libraries, laboratories and health services have an impact on the mastering of the 3Rs. Effective learning environments provide necessary facilities in schools for students to learn and for effective teaching (Alobi, 2008). Along the same line, the researcher examined respondents’ opinions on the learning environment that they consider to have a great influence on the pupils’ mastery of the 3Rs. Table 1 summarizes the respondents’ opinions on the same:

Table 1: Respondents' Views on the Influence of Environment on Mastery of the 3Rs

S/N	Learning Environment	Teachers (%)	Pupils (%)
1.	Toilets	00%	00%
2.	Classrooms	40%	30%
3.	Qualified teachers	00%	00%
4.	Chairs and desks	45%	50%
5.	Libraries	15%	20%
TOTAL		100%	100%

Source: Field Data

The findings show that respondents believed that classrooms, chairs, desks and libraries greatly influence pupils’ mastery of the 3Rs. The respondents did not believe in the contribution of the availability of toilets and qualified teachers. Usually, qualified teachers are considered a key aspect of the teaching and learning process. Several studies such as Leeper (1968), Alobi (2008) and Tanner (2009) have indicated the significance of qualified teachers in schools. Hence, the findings of the current study are a contradiction of what is being presented by those studies. Perhaps it is an indication that the selected schools had qualified teachers, hence they mentioned what they did not have in their schools.

Ways to Improve Mastery of the 3Rs

The third objective of this study explored the appropriate measures to improve mastery of the 3Rs among the pupils in public primary schools in Nyang’hwale District. In addressing this objective, this study collected information on what teachers were doing to improve mastery of the 3Rs in their classrooms. Figure 5

summarizes teachers' responses in questionnaires on the techniques they were using to improve the mastery of the 3Rs among their learners.

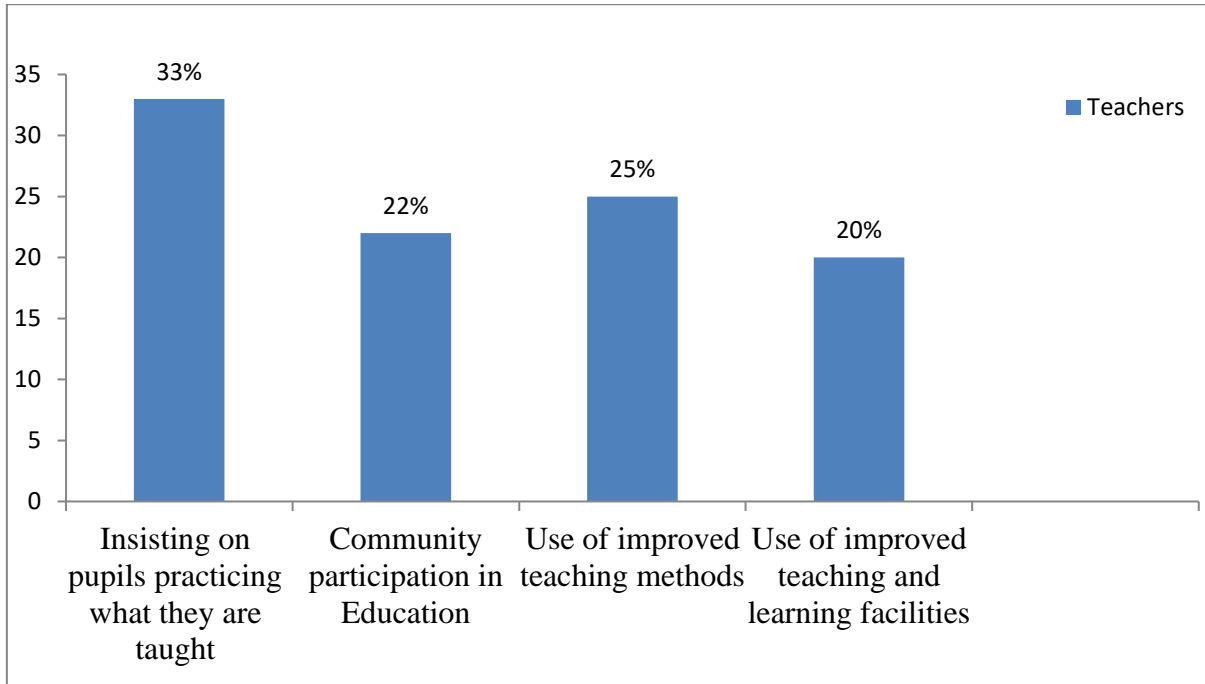


Figure 5: Ways Used to Improve Mastery of the 3Rs

Source: Field Data

Figure 5 indicates that teachers had ways to improve the attainment of the 3Rs in their classrooms. It is clear that the common techniques that were being used by the majority of the teachers included insisting pupils to practise what they had been taught, community participation in education, use of improved teaching methods and use of improved teaching and learning facilities. However, the data suggest that practice was the most preferred technique; 33% of the teachers mentioned it as their preferred technique. The findings of the current study are different from those of Duke and Nero (2011) who suggested that teachers should teach phonics, vocabulary, fluency, and comprehension to promote independent reading. Teachers should foster literacy by creating a community of literate learners. The school day should include time for self-selected reading; classrooms should reflect and encourage community and collaboration. Students need to use technologies that connect and expand concepts; learning facilities should be improved in schools to simplify the teaching and learning process.

Conclusions and Recommendations

This study concludes that most of the selected primary school pupils could not write read and do arithmetic. This proved that the status of the 3Rs to primary

school pupils in Nyang'hwale District was very low. The low status of mastering the 3Rs to primary school pupils in Nyang'hwale District is attributed to poor learning environments. Shortages of classrooms, chairs and tables, libraries and playgrounds were found to affect pupils' mastery of the 3Rs. It was noted that pupils failed to write, read and do arithmetic because they lacked chairs and desks in schools. It is argued that the best ways to improve mastery of the 3Rs to primary school pupils in Nyang'hwale District were to improve teaching methodologies, improve teaching and learning environments that were supposed to be attractive for learners to learn and to improve learning materials that would help learners master well the 3Rs. Since mastery of the 3Rs is mostly influenced by the environment, it is recommended that the government needs to create a conducive learning environment. The community should participate in the construction of school infrastructures such as classrooms and libraries. Also, teachers are urged to use proper teaching methodologies and advanced technologies to support learners in mastering the 3Rs.

REFERENCES

- Alobi, A. O. (2008). School size and facilities as correlates of junior secondary school students' performance in Ole State, Nigeria. *Pakistan Journal of Social Sciences*, 4(8), 836-840.
- Busljeta, R. (2013). Effective use of teaching and learning resources. *Czech-polish Tech 4 Learning, creating a 21st-century classroom combining 3rs and the 4cs*. San diego trajectories. *Child Development* 72(1):187– 206.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2ed.). Sage.
- Gray, L. R., Mills, G. E., & Airasian, P. (2012). *Educational research: Competencies for analysis and applications*. Pearson.
- Iqbal, A., Rauf, M., Zeb, A., Rehman, S., Khan, W., Rashid, A., & Farman, A. (2012). Teachers' perceptions of classroom management, problems and its solutions: Case of government secondary schools in Chitral, Khyber Pakhtunkhwa, Pakistan. *International Journal of Business and Social Science*, 3(24).
- Ivankova, N. V. (2015). *Mixed methods applications in action research: From methods to community action*. Sage.
- Lawrent, G. (2018). *Secondary education expansion in Tanzania: Policy and practice implications for teachers' sense of efficacy* [Unpublished PhD thesis]. The University of Waikato
- Leeper, S. H. (1968). *Good schools for young children: A guide for working with three, four and five year old children* (2nd ed.). Macmillan.
- Ngussa, B. M. & Mjema, N. (2017) Factors influencing mastery of 3Rs among learners of primary schools in Ilala District. Tanzania. *Saudi Journal of Humanities and Social Sciences*, 2(7), 523-533.
- Saeed, M. & Wain, K. U. (2011). Status of missing physical facilities in government schools of Punjab. *Journal of Research and Reflections in Education*, 5(2), 105-127.
- Schneider, M. (2002). Do school facilities affect academic outcomes? *National Clearinghouse for Educational Facilities*, 1-24. <https://www.azdeq.gov/ceh/download/greenscho ol.pdf>
- Tanner, C. K. (2009). Effects of school design on student outcomes. *Journal of Educational Administration*, 47(3), 381-399
- TWAVEZA. (2015). *Evaluation Twaweza: Tanzania-2009 2014*. TWAVEZA.
- URT. (2003). *Joint review of the primary education development plan (PEDP) final report*. Ministry of Education and Culture.
- Uwezo. (2017). *Are our children learning? Uwezo Tanzania sixth learning assessment report*. Twaweza East Africa
- Yin, R. K. (2014). *Case study research: Design and methods* (5ed.). Sage.

Bottlenecks to Inclusive Higher Education for Students with Disabilities during the COVID-19 Pandemic in Tanzania

Abdallah Jacob Seni

ajseni@gmail.com

The University of Dodoma

ABSTRACT

This study explored the bottlenecks to the inclusive higher education for students with disabilities (SWD) during the COVID-19 pandemic in Tanzania and ways proposed to overcome them. The study used a qualitative approach that was informed by the phenomenological and multiple holistic case study design. A total of 158 research participants from four higher learning institutions in Tanzania were involved. They included 28 academic staff and 28 wardens who were selected through simple random selection. Others were 4 deans of students, 80 students with disabilities, 2 students' leaders with disabilities, 8 personal assistants of students with physical impairments, and 8 heads of academic departments (these were purposively selected). The sample size was, however, determined by the point of saturation. Data were collected through interviews, focus group discussion (FGD), and direct observation where thematic analysis was used for data analysis. The findings revealed that allocation of rooms without consideration to SWDs and their personal assistants, difficulties in accessing information, unhygienic hostels, mobility difficulties, difficulties in access to preventive facilities and inadequate counselling services were part of the bottlenecks to inclusive higher education among SWD during COVID-19. The paper suggests ways to overcome the bottlenecks to inclusive education such as allocating rooms for SWDs and their assistants, improvement of infrastructures, orientation on mobility, and purchasing facilities and equipment which improve hygiene within inclusive education. It is recommended in this paper that the universities should establish units and resource centres well furnished with necessary equipment for students with disabilities which will be responsible for all matters related to SWDs.

Keywords: Bottlenecks, inclusive higher education, COVID-19 pandemic, students with disabilities

INTRODUCTION

The past two decades have witnessed developments in higher education (Marginson, 2016) in response to rapid increase in the demand for higher education (Giannakis & Bullivant, 2015; Mok & Neubauer, 2015; Powell & Solga, 2011; Scott, 2005). Despite the growing social demand for higher education, there are still several bottlenecks in access and participation of students with disabilities, thus calling for the need to embrace inclusive education. Inclusive education (IE) refers to educating students with special education needs (SEN) in a regular education setting (Mitchell, 2015). It can broadly be conceptualised as the formation of enabling learning spaces that are concerned with diverse educational needs for all regardless of race, social economic background, gender, disability and so on (Ainscow & Cesar, 2006; Armstrong, Armstrong & Spandagou, 2011). This paper focuses on barriers to inclusion of higher education students with disabilities during COVID-19 pandemic in Tanzania and ways used to overcome. The government of Tanzania has overtime endeavoured to make sure that access to education is widened to all children. Its commitment to ensuring access to education for students with disabilities is expressed in various international, national and regional instruments and protocols to which the country has subscribed and ratified.

These instruments include the Universal Declaration of Human Rights (Article 26) (UN, 1948); the International Covenant on Economic, Social and Cultural Rights (UN, 1966); the Convention on the Rights of the Child (UN 1989); and the Convention on the Elimination of All Forms of Discrimination against Women (UN, 1979). Others are the Convention on the Rights of Persons with Disabilities (UN, 2006); the Convention against Discrimination in Education especially article number 4 (UNESCO, 1960); the African Charter on the Rights and Welfare of the Child (Article 11) of 1990; and the African Youth Charter (Articles 13 and 16) of 2013 (Right to Education Project, 2014). Tanzania's efforts to pledge widening of education access are further informed by the 1990 World Conference on Education for All (UNESCO, 1990), the Dakar Framework for Action (DFA) (UNESCO, 2000), the Millennium Development Goals (MDG) and further refined in the Sustainable Development Goals (SDGs). Likewise, the Salamanca proclamation and Framework for Action on Education of people with disabilities urge all governments to provide education to all, including those with special needs. It stipulates that those with special needs must have access to regular schools. These

goals required countries to implement strategies for ensuring access to quality education for all children (UNESCO, 1994). A critical review of the history and development of special needs education reveals that in the two decades before 1981, there was no clear policy for people with disability. Although the Arusha Declaration of 1967 clearly stated equality to all people, it was until 1981 in the proclamation of the International Year of Disabled People (IYDP) that the government of Tanzania began to take serious measures (URT, 2004). In a bid to implement EFA goals, the government of Tanzania passed different acts and policies for people with disabilities including Act No.3 of 1982 on Disabled Persons Care and Maintenance (URT, 1982). The formulation of the National Policy on Disability (NPD) in 2004 was another landmark towards the recognition of the rights of people with disabilities by providing guiding principles and setting parameters for service delivery to students with disabilities (URT, 2004). In 2008, Tanzania embarked on an inclusive education programme and came up with a National Strategy for Inclusive Education (NSIE) to cater for 2009 -2017. The NSIE outlined deliberate areas of accomplishment from the existing education sector policies and programmes that needed to be reinforced and consolidated to provide access to quality education to all children with an emphasis on children with disabilities (URT, 2017).

It was insisted all education policies and programmes to embrace inclusive standards and practices. The teaching and learning needed to consider and accommodate the diverse needs of learners; to build professional capabilities for inclusive education and to enhance community ownership and participation in inclusive education. Research on inclusive education has been dedicated on lower levels of education. consequently, a large number of studies have focused on analysing the inclusion of students with special educational needs at the childhood, primary, and secondary education levels (Friskawati, et al., 2021; Holahan & Costenbader, 2002; Kavale & Forness, 2000). Considering that inclusive education at higher learning is the key segment that guarantees the development potential of all students (UNESCO, 2009), a study of bottlenecks to inclusivity in higher education is crucial. Additionally, the education system in Tanzania, similarly to many other educational systems globally, was drastically affected by the COVID -19 pandemic. Globally, a variety of measures were taken such as closure of the schools, colleges and universities. To that effect, a paradigm shift of teaching and learning entailing online in addition to the traditional face to

face mode emerged. Teaching and learning thus began utilising digital technology and global classrooms supported by various media including Google meetings, Zoom, WhatsApp, and so forth (Friskawati, et al., 2021). However, in Tanzania, due to several reasons including poor connectivity, poor electricity and low preparedness of institutions, lecturers and students; the situation was worse. For students with disabilities, the situation was even worse (Seni, 2022). This study explored the bottlenecks to inclusive education among higher education students with disabilities during the COVID-19 in Tanzania and the ways proposed to overcome them. Specifically, the study was carried out with the following objectives:

- i. To explore the bottlenecks to inclusive higher education for students with disabilities during COVID-19 pandemic in Tanzania.
- ii. To identify ways to overcome the bottlenecks to inclusive education among higher education students with disabilities during pandemic like COVID-19 in Tanzania.

Theoretical Underpinnings

This study was framed under the ecological system theory by an American psychologist Urie Bronfenbrenner. The theory was put forward in 1974 (Bronfenbrenner, 1974). The theory views child development as a multifaceted system of relationships affected by multiple levels of the surrounding environment from immediate settings of family and school to broad cultural values, laws, and customs. To study a child's development then, we must look not only at the child and her immediate environment but also at the interaction of the larger environment as well. Bronfenbrenner divided the person's environment into five different systems: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. The microsystem is the most influential level of the ecological systems theory. This is the most immediate environmental setting containing the developing child such as family and school. Bronfenbrenner's ecological systems theory has implications for educational practice. The ecological system theory is relevant to this study since it guides how learning in an inclusive setting was affected by COVID-19 outbreak. The idea of the role of social environment in the development of the child with a disability has also been put forward by the Russian scientist Kaschenko (1870-1943) who contends that educational programmes and trainings should be adapted to children rather than children adapting to the programmes and training. The relevance and utility of the

Ecological Systems Theory (EST) is based on its ability to guide our understanding of students' relationships with their multiple contexts such as home, community, and educational environments. In this case, the EST provides a more comprehensive understanding of students with disabilities and appreciates that a number of aspects shape their university experiences, development, and outcomes. The theory guides us to examine students in their educational contexts (Renn, 2003; Renn & Arnold, 2003). In his view, education should take into account the characteristics of each child and that any back-breaking demands will cause negative scenarios to a child's development in terms of abilities and inclinations which are likely to be unused or undeveloped. Within the context of this study, an inclusive education could thus be regarded as a model that proposes an environment and arrangement in which all students can learn, participate and are welcomed as valuable members of higher learning institutions (Ainscow, 1998; Sapon-Shevin, 2003). Thus, the ecological system theory that brings about a socially-centred approach (McGibbon, 2012) and the physical environment is a crucial framework for the consideration of inclusivity in higher education. Though the theory was initially framed for children, it is deemed relevant to study adult learners in higher learning institutions as it emphasizes the environment in which the learner is surrounded with.

Bottlenecks to Inclusive Education

Empirical studies have highlighted a number of bottlenecks to inclusivity resulting from COVID-19 globally and in the local context. In the Pacific, a lack of inclusive education policy at the school level and a lack of proper facilities to support the learning of children with disabilities were cited as barriers to inclusive education. Furthermore, the lack of proper classroom sanitation, ramps, playgrounds, signs on buildings as well as teachers', students' and parents' negative attitudes are other bottlenecks to inclusivity (Sharma, et al., 2018). Likewise, the teachers' workload due to large classes and shortage of teachers are other barriers to inclusive education in Bangladesh (Runa, et al., 2022). Süt and Öznaçar (2017) researched the impacts of pandemic on education and revealed that social distancing and isolation were important remedies to consider for protecting the people from the pandemic. During COVID-19, the institutions of higher learning were banned to gather students and lecture through face-to-face mode. Consequently, the delivery of courses and activities of learning were interfered. The little consideration of parents for online learning made it more complex for the lecturers to provide online learning to students with disabilities.

Zdravkova and Krasniqi (2021) contend that the COVID-19 pandemic resulted into an abrupt shift towards online teaching, learning and assessment, which was troublesome for teachers and students. The most troubled people were students with various disabilities, whose inclusive options were no longer available at home where they were forced to go as a result of the lockdown and so the closure of schools, colleges and Universities. A review of the literature reveals a number of bottlenecks resulting from COVID-19 for people with disabilities. They include inadequate fiscal resources, food insecurity, increased violence for women and girls, low access to public health information, and difficulties in accessing regular health care, assistive devices and rehabilitation, as well as personal protective equipment (PPE) and hand sanitiser (Hillgrove, 2020). In Nigeria, inclusive education is hampered by a mismatch between policy and practice, a lack of an accessible environment, a lack of funding, and a shortage of teachers with basic skills in special needs education, as well as cultural constraints (Sambo & Gambo, 2015). Some schools are less accessible to physically impaired students using wheelchairs because of the absence of elevators, ramps as well as paved pathways. Likewise, an enormous amount of literature on inclusive education has focused on the attitudes of parents, teachers, 'non-disabled' peers and sometimes disabled children and adults themselves (Van Kraayenoord, 2007).

Such studies also include Mdikana et al (2007) who examined the attitudes of student teachers in Johannesburg towards the inclusive education of learners with special educational needs. Similarly, Kuyini and Desai's (2007) and Ocloo and Subbey's (2008) research in Ghana studied teachers' attitudes towards inclusive education. Other bottlenecks experienced by students with disabilities in higher learning institutions are concerned with accommodations. A study by Lyman et al. (2016), in the United Kingdom, focused on the reasons that students with disabilities denied accommodations. It was found that students with disabilities denied to use accommodations set aside for them because they did not want to be a burden. Hong (2015) acknowledged accommodations as one of the many bottlenecks faced by students with disabilities within the higher education environment. Across the literature, there was a great deal of variation regarding what constituted a barrier. Generally, the research identified barriers to knowledge, function, or attitude. For example, Lyman et al. (2016) treated students' lack of knowledge about disability support services on campus as a barrier to accommodation. Swaziland, as it is in many parts of Africa; people with

disabilities are prone to encounter dreadful situations in terms of stigma and segregation due to negative beliefs, norms, traditions and cultural aspects. All of these render them to appear as objects, scorn and victims of all sorts (Ndlovu, 2016). In the context of pandemics such as COVID-19, stigmatization and marginalisation of people with disabilities were accelerated since each person was worried about interactions. Sonn et al., (2021) studied the success and challenges for higher education during the COVID-19 pandemic in South African higher education institutions. They point out that the shutdown of normal operations interfered with key activities such as face-to-face teaching and learning. The transition to online teaching and learning during the lockdown conversely led to uncertainty about the academic future for all students and much so for SWDs. Additional costs and expenses were added to SWDs, staff and other students. Transition to online teaching and learning caused postgraduate student dissertations and thesis writing to come to a brief standstill; Students were concerned that this would delay their completion process. Many research projects were suspended or terminated due to the national lockdown regulations.

In Kenya, Eunice et al (2015) assert that there are particular bottlenecks in negative attitudes and behaviour among educators and parents regarding the skills of children with disabilities to be taught. Another major challenge to inclusive education in the Republic of Kenya is the lack of funding. Teaching children with disabilities in general education classrooms takes specialists and additional classrooms to support student needs. Coordinating services and offering individual support to children requires additional money that many schools do not have, particularly in a tight economy (UNESCO, 2009). Therefore, inadequate funding can hinder ongoing professional development that would help keep specialists and classroom teachers updated on the best practices. However, Cortiella (2009) asserts that a major constraint is a serious shortage of educational resources (a lack of schools, inadequate facilities, shortage of professionally trained qualified staff, and shortage of modern learning/ instructional materials). Again, policymakers who do not understand the concept of inclusive education can be a barrier to the implementation of this wonderful aspect of education (Ainscow & Booth, 2005). Bhat and Geelani (2017) researched issues, challenges and prospects of inclusive education in India. They assert that issues in an inclusive context entail low student enrolment, lack of competencies among teachers to successfully implement inclusive education, and large class sizes which are hindrance to the students with special needs to benefit in the

mainstream classrooms. Other challenges entail an inflexible curriculum which does not permit students with special needs to benefit equally to those without special needs, negative attitudes of parents and teachers as well as inadequate infrastructure and a lack of assistive devices. Likewise, the absence of political will towards the execution of inclusive education is one of the bottlenecks that impair the realisation of the dream of inclusive education in a practical manner. In Tanzania, Ngusa and Joseph (2017) studied inclusivity education in public secondary schools. They found that teachers and students were ready for inclusive education and held positive attitudes towards students with disability. However, there was an acute shortage of braille for the blind; also, the school grounds were not favourable for them to walk. In contrast, some other studies report the existence of negative attitudes towards students with disabilities (Mbwambo, 2015; Possi & Millinga, 2017). These studies have indicated negative attitudes by teachers, peers, and community members to be one of the main bottlenecks towards the realisation of inclusive higher education among students with disabilities. Other bottlenecks highlighted refer to accommodation challenges. The culture of the school also played a major role in the implementation of inclusive education (Revelian, 2021).

Ways to Overcome the Bottlenecks to Inclusive Education

A study conducted in the Pacific by Sharma et al (2018) points out that all schools are supposed to have a policy catering to inclusive education and mainstream facilities that would support inclusive education (IE) in their budget. The provision of training on inclusive education to teachers through pre-service and in-service training is also recommended for the inclusivity of the schools. The necessity to raise awareness of inclusive education to various stakeholders is pertinent. The achievement of the inclusion process relies on diverse factors including the qualification and ability of the teachers (Toomsalu et al., 2019; Ovcharenko et al., 2021) and their attitudes toward inclusivity (Leyser & Tappendorf, 2001). A substantial literature on inclusive education (Mugambi, 2017; Ajuwon, 2008) recommends the mobilisation of stakeholders on the right to education for everybody, and having additional governmental reforms to support inclusive education. Critically speaking, having impressive policies, legislations and Acts may not be sufficient if they were not put into practice. Eunice et al (2015) point out that challenges to inclusive education can be dealt with by conscientizing communities on human rights and inclusive education. Other

ways to support people with disabilities to air their views and take part in planning and promoting action research and disability-responsive pedagogy to teachers (Croft, 2010). This is to say, we can be able to reduce barriers to inclusive education by effectively engaging people with disabilities in the quest for a solution. In India, Bhat and Geelani (2017) recommend the necessity to encourage the complete involvement of people with disabilities and families in the formulation of policies and guidelines. This will enhance the inclusiveness of people with disabilities in education.

Synthesis and Gaps

Based on the empirical literature reviewed, it can be indicated that students with disabilities encounter various bottlenecks to inclusivity in higher education which are extremely significant. However, there is a paucity of research on the bottlenecks to inclusive higher education. There are also scanty studies linked to the inclusiveness of students with disabilities in higher learning institutions during the situation of COVID-19. The purpose of this study, thus, was to explore the bottlenecks to inclusive education among higher education students with disabilities during COVID-19 in Tanzania. It also sought to identify ways of overcoming the bottlenecks to the inclusivity of students with disabilities in Tanzanian higher education institutions.

Methodology

Design

This study was informed by a qualitative research approach, phenomenological and multiple holistic case study design. To that effect, in-depth data information from the four sampled schools was wholistically regarded i.e. multiple holistic (Msoroka, 2018; Yin, 2014). In realising the study objectives, data were collected from four Tanzanian higher learning institutions. The inclusion of a mix of public and private universities was important to ease a deeper understanding of the pertinent matters under enquiry.

Sample Size and Sampling Techniques

Students with visual impairment, hearing impairment, Autism, down syndrome, behavioural disorders, cognitive disorder and physical impairment were purposively sampled. Deans of Students, HoDs, Personal Assistants of students with physical disabilities, and (students' leaders) representatives of students with

disabilities were also purposively sampled. Wardens and academic staff were randomly selected from their respective departments. The sample size was eventually reached after arriving at saturation point whereby the responses provided were repeated.

Table 1: Sample Size

Category of Participants	Male	Female	Total
Academic staff	16	12	28
Deans of students	2	2	4
Wardens	12	16	28
SWD	40	40	80
Students leaders SWD	2	-	2
Personal Assistants of SWD	4	4	8
HoDs	4	4	8
Total	80	78	158

Source: Field Data

Data Collection and Analysis

Before the data collection process, the researcher sought permission from the Regional Administrative Secretaries (RASs) of the regions where the study was conducted. Consent forms were developed and offered to the aforesaid respondents before data collection. (Cresswell, 2007; Bailey, Hennink, & Hutter, 2011). Data from students with disabilities, wardens, and academic staff were collected through FGDs. Interviews were used to tap information from HoDs, Personal Assistants of students with disabilities, and student leaders, particularly representatives of students with disabilities. All interview sessions lasted for 30 minutes; each interview session was audio recorded in the national language (Kiswahili) and translated into English. The interview and FGDs sessions took place in areas where participants felt comfortable and all data were regarded as confidential. Thematic analysis was adopted to analyze data abiding to three main steps namely preparing and organising the data right from the field, creating the themes, and coding (Ezzy, 2002). Themes were inductively generated as findings emerged from the field and verification of themes was achieved by re-reading the transcripts and associating them with the data collected in notebooks. The analysis was preceded by listening to audio records of interview and FGD sessions to familiarise and become conversant with the data and then a verbatim transcription of the interview and FGD sessions was made. In this paper,

pseudonyms have been used throughout the presentation of the findings for anonymity purposes (Ary et al., 2010).

Findings

This study explored the bottlenecks to inclusive higher education for students with disabilities during COVID-19 pandemic in Tanzania. It also identified ways to overcome the bottlenecks. The subsequent section presents the findings as per respective research objectives.

Bottlenecks to Inclusive Education during COVID-19

The study revealed a number of bottlenecks to inclusive education among higher education students during COVID-19 as presented in the following sections.

Difficulties in Accessing Information

The findings revealed that SWDs had difficulties in accessing information related to COVID-19 which made them lack information on how to prevent the pandemic including sanitation measures, wearing of the masks and social distancing. Responding to an interview question regarding the challenges encountered by SWDs during COVID-19, one of the participant students with hearing impairment said:

It was difficult for me as deaf to access information on COVID-19 as it was not provided using sign language. We relied on imitation of what others were doing to protect themselves from catching the disease (Student G).

Likewise, students with intellectual impairments such as those with Autism, down syndrome, behavioural disorders and cognitive disorder had difficulties to process, interpret and restore massive information they received regarding COVID-19, thus making it difficult for them to observe restrictions, directives and protocols related with the pandemic. They, thus, proceeded with their daily routines as if there was no disease. It was difficult to handle and monitor their movement, hence becoming more vulnerable to contact COVID-19. Explaining this experience, one of the interviewed academic staff commented:

Students with behavioural disorder and those who are addicted to alcohol, smoking, or sex were difficult to control their movement. We advised students to avoid movement. However, as it was happening, one might go to town in search of things which were unnecessary thus becoming vulnerable to COVID-19 (Academic Staff H).

Though such problems were present even before COVID-19, they exposed SWDs to more vulnerable conditions and prone to catch the pandemic. Another bottleneck revealed was poor access to information on COVID-19. Due to the presence of the pandemic, students minimized interactions which could be a source of information. There were bottlenecks which applied to all types of disabilities while others were specific to certain kinds of disabilities. Explaining the bottlenecks to the inclusivity of SWDs, one of the participant wardens said:

Students with social and emotional disorders lacked social skills and pertinent information. As a result of not mingling with their fellow students, they lacked sufficient information on COVID-19 the situation which exposed them to the dangers of being infected. This was also the case with students with language and communication disorders (Warden G).

Based on the study findings, it could be argued that difficulties in accessing information about COVID-19 varied based on categories of disabilities. Thus, some students were more prone to lack important information regarding COVID-19. This, arguably, exposed them to the pandemic more than their counterparts with a certain disability and those without disabilities.

Challenges Associated with Students' Hostels and Hygiene

Despite the efforts by universities to address the needs of SWD, several challenges were identified in students' hostels that made hygiene and life of SWD difficult. First, the toilets were situated far from their rooms. Most of the toilets for SWD were misused. In this case, one of the interviewed deans of students intimated:

Some toilets for SWD were used as storage facilities for cleaning materials by cleaning companies; some were used by wardens and security guards and were locked most of the time. Moreover, toilets were not well cleaned and there was inadequate water supply in most hostels which made toilet usage for people with disabilities more challenging (Dean of Students B).

It was also observed that some of the toilets for students with disabilities did not have facilities that could support students with disabilities. For example, not all toilets for students with disabilities had grab rails which are important for students with physical disabilities to support moving using their hands. Also, they had no low sinks that could be easily used by students with disabilities. Another challenge was associated with the allocation of rooms for students with disabilities. Through interviews with Deans of Students, it was found that there was no specific process, guideline or policy on how to allocate rooms for students with disabilities. The procedure depended on the will of the warden in charge. On

top of that, some students with disabilities were not allocated the same rooms with their assistants thereby making the task of supporting them in walking, reading notes and fetching water difficult. In situations where water supply was scarce and did not flow in tapes, one had to fetch water for himself or herself despite the disability he or she had. The complications to access water facilities compromised hygiene and exposed SWD to COVID-19. Some rooms for students with disabilities were observed to have been used as offices for hostel wardens. As a result, students with disabilities were allocated rooms that were not specially built for them. Some rooms for students with disabilities in some blocks were locked or used as stores. It could thus be said that accessibility to students' hostels for students with disabilities was minimal. The narrow doors in some hostels for students who were using wheelchairs made their entrance difficult.

Mobility Difficulties

Observation revealed that some buildings had ramps and were constructed without rails for physically impaired students to walk without problems. Moreover, as students and the general public were urged to observe social distancing, the fear of COVID-19 by personal assistants made some keep their distance from the SWDs they were guiding in walking. Since ramps were mostly at entrances and did not connect to pavement systems within the universities, consequently, students who were using wheelchairs and others with mobility challenges found it difficult to move from one point to the other in the absence of personal assistants due to widespread fear of COVID-19. The lack of pavements connecting students' hostels to other buildings such as lecture theatres and staff offices, and a lack of personal assistants made the mobility of students with disabilities difficult. Through observation, it was noted that there was a lack of bridges to facilitate the movement of students including those with disability.

Difficulties in Accessing Facilities and Services

In this study, it was found that SWDs had difficulties accessing preventive facilities such as sanitisers and face masks. During interviews with academic staff informants, one of them revealed that:

SWDS had problems accessing various preventive facilities. For instance, students with visual impairment could not see where the sanitisers were placed. Sanitisers (water, bucket, tap, and liquid soap) were publically located for all students to access. The distance to the point at which sanitisers were placed and infrastructures which were not supportive of the movements of

visually impaired people and physically impaired students made it difficult for them to access the sanitisers, and thus become prone to COVID-19 infections (Academic Staff E).

Additionally, visually impaired students relied on touching to identify an item such as a mask, sanitiser, soap, and so on. In this regard, one of the interviewed academic staff revealed that:

Since SWD had to touch several times to identify an item such as a door or facility such as sanitiser and soap, the chances for contamination and COVID-19 infection increased. One had to touch the mortice lock more than once to open the door; thus, increasing the chances of infections (Academic Staff D).

The physically impaired students were observed to have difficulties in operating the sanitiser machines as some had no arms, or legs to walk and stand up, or some fingers with which to touch the sanitiser machine. Despite the efforts made by universities to address the needs of SWD, the inclusivity of students with disabilities do not correspond to their needs. An interview with one of the Heads of Departments revealed that he had only one (1) transcriber for 35 students with visual impairments, and only one (1) sign language interpreter to serve the requirements of 21 students with hearing impairments. This caused SWDs to make frequent follow up to get the subject notes suitable for their type and level of disability, all of which maximized interaction contrary to the COVID-19 protocols of maintaining social distance and avoiding unnecessary movements. It was also found that a lack of awareness on issues related to disabilities and inclusion among students and staff members caused difficulties for SWD to access some services. On this particular aspect, one of the participant students stated:

Some staff members at our University are not aware of disability and inclusive education. Thus, SWD fails to access services such as signing loan allocation forms timely as they are left to queue like others. This is particularly so since some disabilities such as deafness are hard to recognise (Student A).

As for students with albinism, some sanitisers were harmful to their skin and thus acted as a challenge to their health. This was a challenge since the use of sanitisers could have been detrimental to the health of their skin but non-use of them could make them vulnerable to COVID-19. The study also found short of counselling services for students with disabilities in universities. One of the interviewed HoD said:

The University has not employed professional counsellors to serve SWD. Instead, the task has been left to wardens and academic advisers who are not professional counsellors (HoD C).

It was suggested by participants that there should be inclusive education units which could conduct counselling to students on different matters such as health, social, academic, technological issues and so forth. Furthermore, the study found that there were no resource centres for students with a disability that could house all equipment for teaching students specializing in special needs, those having disabilities and those for inclusive education. The findings from FGD with academic staff revealed that Universities had inadequate facilities and equipment for students with disabilities. This included Perkins Braille machines, Embossers, Close Circuit Television (CCTV), A 4 slate and stylus, Abacus, Laptops with talking programmes and Desktop computers for students with visual impairment (VI). There was also a lack of equipment for teaching students specialising in hearing impairment (HI) such as video cameras, Audiometers, hearing aids, otoscopes, bone conductor vibrators, soundproof booths, audiogram papers and sign language dictionaries.

Academic Challenges

Data emerging from the FGDs with academic staff revealed a number of academic concerns for SWD. There is a lack of awareness on matters related to disabilities and inclusivity of students with disabilities among members of university communities including academic staff, non-academic staff and students without disabilities. Lack of awareness has caused for example academic staff to fail to identify, give modified notes and assignments or handle other issues related to students with disabilities.

One of the academic staff shared the following during FGD:

Some students (without disabilities) and academic and administrative staff lacked awareness about disability issues which made them fail to render the required help to SWDs. Some instructors fail to identify students with disabilities in their classrooms. Those who are able to identify SWD fail to modify their mode of teaching due to a lack of pedagogical skills to accommodate students with disabilities (Academic Staff C).

Consequently, most of the students with disabilities become just present in the class without effective learning. This is true for both students with hearing and visual impairment. It was revealed that students with visual impairment cannot

take notes due to their disability; some rely on recording lectures through their voice recorders or their phone while students with hearing impairments rely mostly on lecturers' notes. Some lecturers neither allowed students to record lectures nor provided notes to students, thus making learning difficult among SWD. Despite the fact that students with disabilities (in some universities) are set in a special room, given large font examination question papers, given Braille machines and so on, the examination duration has always been a challenge. The addition of examination time as provided for by the National Examination Council of Tanzania (NECTA) has remained on the wish of invigilators as a specific guide and standard was lacking. The findings that there were still some bottlenecks that hampered the inclusivity of students with disabilities in higher learning institutions in the country are inconsistent with policy pronouncements and the NSIE. The findings indicated that the lack of internet access and "useful" devices served as a barrier to learning. When schools closed during COVID-19, many countries turned to online or blended learning models to support their students. Without access to the necessary devices or adequate internet connectivity to engage in online learning activities, learning inequalities are likely to widen for learners with disabilities.

As a person with disabilities from University A said:

At the moment, I am not able to access reading materials. My parents do not have access to the internet, laptops and smartphones. As a learner with disabilities, I have stopped learning at this time of University closure.

Based on the findings, it is argued here that ICT inaccessibility and the digital divide implicitly widened the gaps on the grounds of one's disabilities.

Ways to Overcome the Bottlenecks to Inclusive Education

Based on the study findings, a number of ways to overcome the bottlenecks to inclusive education among students with disabilities were pointed out. Though such ways are useful at all times, within the COVID-19 context are even crucial to observe so as to rescue SWD to double vulnerability.

Allocate Hostel Rooms to SWDs with their Assistants

It was suggested that higher education institutions that have less inclusive rooms should allocate each student with a disability a room with his or her assistant. SWDs such as physically impaired who could not walk and those with visual impairment require self-contained rooms. The need to build self-contained rooms

to cater to students with special needs was mentioned. One of the interviewed dean of students had the following to share:

Rooms for SWD need to have special toilets and self-contained ones; this is crucial for hygiene and security reasons. The sharing of toilets could be detrimental to SWD not only in the context of the COVID-19 pandemic but often (Dean of Students B).

Examining the data above, one would conclude that members of the university communities were uncomfortable with the modalities of allocating hostel rooms. Arguably, this contributed to the lack of inclusivity of students with disabilities in higher learning institutions.

Improvement of Infrastructures to Enhance Mobility of SWDs

Mobility issue is a critical concern for SWD especially those with visual impairment, hearing impairment and physical disabilities. To facilitate mobility for students with disabilities, wheelchairs, tricycles (Bajaj) and structures such as pavements that connect buildings were highlighted as important.

In this regard, one of the interviewed Deans of students commented:

Universities should provide wheelchairs and Bajaj to facilitate the movements of students with disabilities. These could be University owned or donated wheelchairs and Bajaj. Likewise, walkways and pavements should be roofed to protect SWDs from rainy and sunny effects. Furthermore, universities should have facilities for the identification of students with visual and hearing impairments (Dean of Students A).

Thus, it is argued here that there is a need for infrastructure improvements such as construction of ramps with rails to enhance mobility of students with disabilities. While facilities such as wheelchairs may be provided, it appears that infrastructure catering for students with disabilities are less prioritized calling for a need to revitalize the same.

Orientation on Mobility

The study participants suggested that there was a need to have an orientation on mobility for SWDs. It was noted that orienting SWDs on the university environment and how to move from one point to the other could help SWDs during COVID-19 as personal assistants kept their distance from them as a requirement for COVID-19. Responding to an interview question, one of the participant students with physical impairment said:

We face a challenge with mobility, but during COVID-19 it was worse as some of our assistants feared to interact with us; they avoided infections. Orientation on mobility to us could be a solution to this challenge and may relieve us from the guidance vacuum created between us and our assistants as a result of COVID-19 (Student B).

Another important way to overcome the bottleneck to inclusive higher education among students with disabilities has to do with changing attitudes and mindsets on disability issues by raising awareness of various stakeholders in higher learning institutions. Pedagogies of lecturing students with disabilities are also a challenge for inclusivity in higher learning institutions. One HoD noted:

There is a need to create more awareness within the higher learning institutions on disabilities, especially on accommodation of SWDs, Universal Design for Learning (UDL) to all lecturers and tutors. This will make their mindset positive and pro-students with disabilities (HoD C).

Based on the findings of this study, one can argue that lecturers who hold a positive attitude on disability issues and are acquainted with Universal Design for Learning (UDL) skills can deliver lectures to students with disabilities comfortably. Lectures without Universal Design for Learning (UDL) skills cannot be delivered comfortably. This is to say that, it is not a matter of attitude only but more so pre-requisite pedagogies.

Purchase of Equipment to assess Disabilities

It was recommended by the HoDs and academic staff that universities should have the equipment to facilitate effective teaching and learning of SWDs. One academic staff had the following to say:

To eliminate barriers to the inclusivity of SWDs in higher learning institutions, universities should have tape recorders, embossers, Perkins Braille and computers. Most of these facilities are for students with visual impairment. The need for having CCTV which helps students with low vision to read texts without help from another person was noted as crucial. Regarding hearing impairments, higher learning institutions should have soundproof rooms and audiometers, and employ or hire speech trainers. (Academic Staff C)

The findings on the need for purchasing various equipment, facilities and assistive devices for students with disabilities are obvious and sound. The bottlenecks to inclusivity of students with disabilities in higher learning institutions could be minimized if respective institutions and stakeholders prioritize procurement of the same.

Discussion

The study has revealed that COVID-19 pandemic adversely affected SWDs and that the kind and intensity of disability determined how a respective student was affected. Based on the study findings, a number of bottlenecks to inclusive higher education among students with disabilities have been established. In this case, while all students encountered challenges during COVID-19, the SWDs faced more critical challenges. The findings that some toilets for people with disabilities were within public toilets and used by anybody contradict the need for cleanliness which was highly emphasized during the COVID-19 (UNHCR, 2021). This suggests that the state of unhygienic toilets made SWD more vulnerable to COVID-19 infection. The study findings offer an avenue to rethink the link between policy pronouncements, national strategies and inclusive practices within higher learning institutions so that different support services for students with disabilities are in place. These include interpretation services, note-taking, reading services for blind students, personal assistants and identification services. In view of the findings, it is clear that there is a need for each student with hearing impairment to be assigned a note-taker. The note-takers who could be students at the respective higher learning institution may be remunerated.

For students with visual impairment, a reader to each student with visual impairment may be assigned as a personal assistant who could help him/her with movement and other needs as they arise. It is argued here that the higher learning institutions which employ Braille transcribers tend to be more inclusive than those without. The findings reveal the need to use personal assistants to the most needy categories of disabilities in this case those with severe physical and intellectual impairment. Those who are deaf-blind and have multiple disabilities seem to be the most needy. Over-reliance on using personal assistants may in the long run impair the need of making SWDs as much independent as possible. Likewise, the need for orienting SWDs on mobility arises as it will make them move without help from another person. This could arguably make SWDs independent which is acceptable under the principles of inclusive education. Overreliance on personal assistants could reinforce the concept of handicap. Efficient utilization of orientation and mobility skills enables visually impaired learners (VILs) to achieve better and accomplish their daily routines as independent individuals (Rosen & Joffe, 1999). While higher learning institutions' management appears to have the willingness to make their institutions inclusive, a lack of skills in accommodating

SWDs by individual staff and students, negative attitudes and scarcity of funds collectively antagonize the rigorous move towards inclusivity of higher education. A harmony of all these forces and a change in the mindset of all stakeholders cannot be overemphasized. The findings that many students had no resources to make a swift and comprehensive shift to online teaching and learning impeded the possibility to achieve SDG 4 by 2030. This recognition of a digital divide advocates the need for a more inclusive approach when considering bottlenecks to educational access for vulnerable students, especially those with disabilities. While the utility of ICT was apparent in enhancing communication through emails, WhatsApp, and downloading and uploading lesson materials, it was coupled with a lack of and unreliable electricity, poor connectivity of the internet and incapability of some people to purchase internet bundles, especially SWDs (Seni, 2022). The findings that the physical and social environment was not yet fully inclusive to SWDs in higher learning institutions are akin to the ecological system theory which stresses the role of the environment in enhancing a conducive education system (Renn, 2003; Renn & Arnold, 2003). Thus, the education of SWDs was positively and negatively affected by the immediate as well as external environment.

Conclusions and Recommendations

Based on the findings, this paper concludes that despite the previous attempts to implement inclusive educational practices in higher education institutions in Tanzania, there are still bottlenecks that hamper the inclusivity of students with disabilities. These bottlenecks are mainly situated around difficulties in accessing information, challenges associated with students' hostels especially allocating hostel rooms to students with disabilities without consideration of their assistants, and hygiene issues. Other challenges relate to mobility difficulties due to inaccessible roads, pathways and corridors. As for academic challenges, it is concluded that higher learning institutions are less inclusive due to a lack of pedagogical skills on inclusive education to most lecturers thus making teaching, learning and assessment coupled with less inclusivity. The paper concludes allocation of rooms to SWDs with their Assistants, Improvement of infrastructures to Enhance Mobility of SWDs, Orientation on Mobility and Purchase of equipment to assess Disabilities, assist effective inclusive learning as proposed ways to mitigate the challenges.

Based on the study findings and conclusions drawn thereof, the following recommendations are made to overcome the bottlenecks to inclusive education among higher education students with disabilities:

- i. Higher learning institutions should establish units and resource centres well furnished with the necessary equipment for students with disabilities, which will be responsible for all matters related to SWDs.
- ii. They should establish inclusive education policies that shall set standards on how inclusivity could be achieved in the presence or absence of pandemics such as COVID-19. Additionally, the Universities should develop different guidelines such as examination guidelines, teaching and learning guideline, accommodations guideline and registration guidelines which are responsive to the needs of SWD.
- iii. Higher learning institutions should dedicate specific residential blocks that may accommodate SWDs. The residential blocks should be closer to services such as a cafeteria, library, seminar/lecture room and theatres. The residential blocks should meet the needs of SWDs. They should have wide doors, enhanced security, installed special toilets in rooms and if possible, the rooms of students with disabilities should be self-contained.
- iv. Higher learning institutions should ensure that ramps and pavements within the University allow students with mobility challenges to move easily within the University.
- v. Also, the universities should purchase white canes, wheelchairs and tricycles (Bajaj) to help students with mobility challenges.
- vi. Higher learning institutions should make sure that all students' hostels have reliable water and electricity supply. For blocks that will be accommodating SWDs, it is recommended that water tanks be installed to serve their rooms. Likewise, alternative power such as solar is desirable for hostels which will be set aside for SWD.
- vii. Higher learning institutions should ensure that there are enough personnel to serve SWDs. This includes employing more Sign Language Interpreters, Braille transcribers and readers that will provide services to students with disabilities.

- viii. Higher learning institutions should make sure that all its staff (non-academic and academic) and students (with and without disabilities) are sensitized on matters related to people with disabilities in order to elevate their responsiveness to disabilities issues.
- ix. The need to focus on the attitudes of people toward disability issues within higher learning institutions is crucial. A positive attitude will consequently improve other areas such as teaching and learning, examination procedures, accommodation, registration of students with disabilities and so forth.

REFERENCES

- Ainscow, M. & Cesar, M. (2006). Inclusive education ten years after Salamanca: Setting the agenda. *European Journal of Psychology of Education*, 21(3), 231-238.
- Ainscow, M. (1998). 'Developing links between special needs and school improvement.' *Support for Learning*, 13(2), 70-75.
- Ajuwon, P.M. (2008). 'Inclusive Education for students with disabilities in Nigeria: Benefits, challenges and policy implications.' *International Journal of Special Education*, 23(3).
- Anderson, J., & Boyle, C. (2019). Looking in the mirror: Reflecting on 25 years of inclusive education in Australia. *Int. J. Incl. Educ.*, 23, 7-8. <https://doi.org/10.1080/13603116.2019.1622802>
- Armstrong, A., Armstrong, A.C & Spandagou, I. (2011). Inclusion by choice or by chance? *International Journal of Inclusive Education*, 15(1), 29-39.
- Ary, D; Jacobs, L.C & Sorensen, C. (2010). Introduction to research in Education (8th Edn). Wadsworth.
- AU. (1990). *The African Charter on the Rights and Welfare of the Child*. AU
- AU. (2013). *The African Youth Charter*. AU
- Barnard, R., & Campbell, L. (2004). *Sociocultural theory and the teaching of process writing: Scaffolding of learning in a primary education context*. University of Waikato.
- Bailey, A., Hennink, M., & Hutter, I. (2011). *Qualitative research methods*. Sage.
- Bhat, M.U.D & Geelani, Z.A. (2017). Inclusive education in India: Issues, challenges and cprospects. *The Communications*, 25(1).
- Bronfenbrenner, U. (1974). Developmental research, public policy, and the ecology of childhood. *Child development*, 45(1), 1-5.
- Cresswell, J. W. (2013). *Research design: Qualitative, quantitative and mixed methods approaches*. Sage.
- Eunice, L.A., Nyangia, E.O & Orodho, J.A. (2015). Challenges facing Implementation of inclusive education in public secondary schools in Rongo Sub-County, Migori County, Kenya. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 20(4), 39-50
- Ezzy, D. (2002). *Qualitative Analysis: Practice and Innovation*. London: Rutledge
- Friskawati, G., Karisman, V., Supriadi, D., & Stephani, M. R. (2021). Elementary school physical education teachers' attitudes toward the use of mobile learning during COVID-19 pandemic. *Universal Journal of Educational Research*, 8(12B), 8446-8452.
- Giannakis, M., & Bullivant, N. (2015). The massification of higher education in the UK: Aspects of service quality. *Journal of Further and Higher Education*, 40(5), 630-648.
- Hillgrove, T. (2020). *Experiences of people with disabilities in COVID-19: A summary of current evidence*. CBM-Nossal Institute Partnership for Disability Inclusive Development. <https://www.cbm.org.au/wp>

- Hilt, L. T. (2017). "Education without a shared language: Dynamics of inclusion and exclusion in Norwegian introductory classes for newly arrived minority language students." *International Journal of Inclusive Education*, 21(6), 585–601.
- Holahan, A., & Costenbader, V. (2000). A comparison of developmental gains for preschool children with disabilities in inclusive and self-contained classrooms. *Topics in Early Childhood Special Education*, 20, 224–235.
- Hong, B. S. (2015). Qualitative analysis of the barriers college students with disabilities experience in higher education. *Journal of College Student Development*, 56, 209-226.
- Hunt, P. (2000). Community is what I think everyone is talking about. *Remedial Spec. Educ.*, 21,305. <https://doi.org/10.1177/074193250002100507>
- Kamenez, N. V., Vaganova, O. I., Smirnova, Z. V., Kutepova, L. I., & Vinokurova, I. V. (2019). Development of content of educational programs of additional education for professor-teaching composition in organization of educational services of training with disability. *Amazonia Investiga*, 18, 267–278
- Kavale, K., & Forness, S. (2000). History, rhetoric, and reality: Analysis of the inclusion debate. *Remedial and Special Education*, 21(5), 279-295.
- King, N., and Ryan, B. J. (2019). The impact of social inclusion on the social development of students with a general learning difficulty in postprimary education in Ireland. *Educ. Res. Int.* 2019, 1–7. <https://doi.org/10.1155/2019/6327567>
- Kurilenko, V. B., Biryukova, Y. N., Ahnina, K. V., Pestushko, Y. S., & Kulikova, E. Y. (2020). Foreign language test for people with disabilities: Basic requirements and specifics of development. *Amazonia Investiga*. 9, 489–496. <https://doi.org/10.34069/AI/2020.28.04.53>
- Kuyini, A. B. & Desai, I. (2007). Principals' and teachers' attitudes and knowledge of inclusive education as predictors of effective teaching practices in Ghana. *Journal of Research in Special Education Needs*, 7(2), 104-113.
- Luhmann, N. (1977). "Differentiation of Society." *Canadian Journal of Sociology/Cahiers Canadiens de Sociologie*, 2(1), 29–53.
- Luhmann, N. (1995). *Social systems*. Stanford University Press.
- Luhmann, N. & W. Rasch. (2002). *Theories of distinction: Re-describing the descriptions of modernity*. Stanford University Press.
- Lyman, M., Beecher, M. E., Griner, D., Brooks, M., Call, J., & Jackson, A. (2016). What keeps students with disabilities from using accommodations in postsecondary education? A qualitative review. *Journal of Postsecondary Education and Disability*, 29, 123-140.
- Marginson, S. (2016). *Higher education and the common good*. MUP Academic.
- McCarty, K. (2006). Full inclusion: The benefits and disadvantages of inclusive schooling. An overview. *Online Submission*, 1–11.
- McGibbon, E.A. (2012). *Oppression: A social determinant of health*. Fernwood Publishing.

- Mbwambo, A. B. (2015). *Teachers' attitudes toward inclusive education in regular primary schools in Tanzania*[Master Thesis, Hedmark University College].
- Mdikana, A., Ntshangase, S. & Mayekiso, T. (2007). Pre-service educators' attitudes towards inclusive education. *International Journal of Special Education*, 22(1), 125-131.
- Mitchell, D. (2015). Inclusive education is a multi-faceted concept. *Centre for Educational Policy Studies Journal*, 5(1), 526-534.
- Mok, K. M., & Neubauer, D. (2015). Higher education governance in crisis: A critical reflection on the massification of higher education, graduate employment and social mobility. *Journal of Education and Work*, 29(1), 1–12.
- Msoroka, M. (2018). Prison education in Tanzania: An exploration of policy and practice. (PhD thesis, The University of Waikato, Hamilton, New Zealand)
- Mugambi, M.M. (2017). 'Approaches to inclusive education and implications for curriculum theory and practice.' *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 4(10), 92-106.
- Muniroh, N., Apriyanti, M., Musayroh, S., & Yuliana, S. (2017). The positive impact of collaborative learning for students with intellectual disability in inclusive school. *J.ICSAR*, 1, 68–71. <https://doi.org/10.17977/um005v1i12017p068>.
- Ndlovu, H. (2016). African beliefs concerning people with disabilities: Implications for theological education. *Journal of Disability & Religion*, 20(1–2), 29–39.
- Ngussa, B.M & Joseph, M. (2017). Accessibility to inclusive education in Arusha region public secondary schools, Tanzania. *Saudi Journal of Humanities and Social Sciences*, 2(7), 534-547.
- Ocloo, M. A. & Subbey, M. (2008). Perception of basic education school teachers towards inclusive education in the Hohoe district of Ghana. *International Journal of Inclusive Education*, 12(5), 639-650.
- Possi, M. K. & Milinga, J. R. (2017). Special and inclusive education in Tanzania: Reminiscing the past, building the future. *Educational Process International Journal*, 6(4), 55-73.
- Powell, J. W., & Solga, H. (2011). Why are higher education participation rates in Germany so low? Institutional barriers to higher education expansion. *Journal of Education and Work*, 24(1–2), 49–68.
- Qvortrup, A., & Qvortrup, L.. (2018). "Inclusion: Dimensions of inclusion in education." *International Journal of Inclusive Education* 22(7), 803–817.
- Renn, K. A., and Karen D. (2003). Reconceptualizing Research on College Student Peer Culture. *The Journal of Higher Education* (74) 3 261–91
- Renn, K. A. & Arnold, K. D. (2003). Reconceptualizing Research on College Student Peer Culture. *The Journal of Higher Education*. Taylor & Francis.

- Revelian, S. (2021). Effective implementation of inclusive education in enhancing quality education in public primary schools in Tanzania: A case of Karagwe district [Master thesis, St. Augustine University of Tanzania].
- Rosen, S., & Joffe, E. (1999). Motor development. In K.M. Huebner, J. G. Prickett, T. R. Welch, & E. Joffe (Eds.), *Hand in hand: Essentials of communication and orientation and mobility for your students who are deaf-blind* (pp. 493-520). AFB Press.
- Runa, F.H., Mizan, M.M.I., Uddin, M.M., Rahman, M. & Meeto, M.J. (2022). The enablers and barriers to the successful implementation of inclusive education policy: Insights from the primary school context in Bangladesh. *IJARIIIE*, 8 (2)
- Sambo, A. N. & Gambo. M.B. (2015). 'Administration of inclusive education in Nigerian schools: Issues and implementation strategies.' *National Journal of Inclusive Education*, 3(1).
- Sapon-Shevin, M. (2003). 'Inclusion: A matter of social justice.' *Teaching all students*, 61(2), 25–28.133
- Scott, P. (2005). Mass higher education – Ten years on. *Perspectives: Policy and Practice in Higher Education*, 9(3), 68–73.
- Seni, A.J. (2022). Effects of Covid-19 Pandemic and coping mechanisms of ordinary level secondary school finalists in Tanzania. *Uongozi Journal of Management and Development Dynamics* 31(2).
- Sharma, U., Armstrong, A.C., Merumeru, L., Simi, J., & Yared, H. (2018). Addressing barriers to implementing inclusive education in the Pacific. *International Journal of Inclusive Education*, 23(1). 1-14. <https://doi.org/10.1080/13603116.2018.1514751>
- Sonn, I. K., Du Plessis, M., Jansen Van Vuuren, C. D., Marais, J., Wagener, E., & Roman, N.V. (2021). Achievements and challenges for higher education during the COVID-19 pandemic: A rapid review of media in Africa. *International Journal of Environment Research and Public Health*, 18, 12888. <https://doi.org/10.3390/ijerph182412888>.
- Strain, P.S., Bovey, E.H., Wilson, K., & Roybal, R. (2009). LEAP preschool: Lessons learned over 28 years of inclusive services for young children with autism. *Young Exceptional Children Monograph Series*, 11, 49–68.
- Süt, H.M & Öznaçar, B. (2017). Effects of COVID-19 period on educational systems and institutions. *International Journal of Curriculum and Instruction. Special Issue* 13(1) 537–551.
- UN. (1948). *The Universal Declaration of Human Rights*. UN
- UN. (1966). *The International Covenant on Economic, Social and Cultural Rights*. UN
- UN. (1989). *The Convention on the Rights of the Child*. UN
- UN. (1979). *The Convention on the Elimination of All Forms of Discrimination against Women*. UN
- UN. (2006). *The Convention on the Rights of Persons with Disabilities*. UN
- UNESCO. (1960). *The Convention against Discrimination in Education*. UNESCO

- UNESCO. (1990). World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs. UNESCO.
- UNESCO. (2009). Defining an inclusive education agenda: Reflections around the 48th session of the international conference on education. UNESCO.
- UNESCO. (2000). The Dakar framework for action education for All: Meeting our commitments. Adopted by the World Education Forum. UNESCO.
- UNHCR. (2021). *COVID-19 water, sanitation and hygiene in schools: A safe return to schools for refugee children and youth*. UNHCR.
- UNICEF. (2019). Sustainable development goals and children in Tanzania: Sustainable changes start with children. Dar es Salaam: Briefing note series on SDG global indicators related to children. UNICEF.
- URT (2008). *Child development policy*. URT.
- URT (1996). *Child development policy*. URT.
- URT (2009). *The Law of the Child Act*. URT.
- URT (1982). *The Disabled Persons (Care and Maintenance) ACT, 1982*. URT.
- URT (2004). *National Policy on Disability*. URT.
- URT (2017) National Strategy for Inclusive Education (2018-2021). URT.
- Van Kraayenoord, C. (2007). Revisiting the key lessons learned from inclusive education: Continuing the research agenda. *International Journal of Disability, Development and Education*, 54(2), 145-149.
- Vanderstraeten, R. (2020). "How does education function?" *European Educational Research Journal*, 20(6), 729–739. <https://doi.org/10.1177/1474904120948979>.
- Yin, R.K. (2014). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.
- Zdravkova, K & Krasniqi, V. (2021). Inclusive higher education during the Covid-19 Pandemic. *44th International Convention on Information, Communication and Electronic Technology (MIPRO)*, Opatija, Croatia, pp. 833-836. <https://doi.org/10.23919/MIPRO52101.2021.9596862>.