JPPIPA 10(3) (2024)

Jurnal Penelitian Pendidikan IPA

Journal of Research in Science Education

http://jppipa.unram.ac.id/index.php/jppipa/index

Teachers' perceptions towards the utilization of tablets for educational purposes in Tanzania

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Received: January 25, 2024
Revised: March 16, 2024
Accepted: March 25, 2024
Published: March 31, 2024

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DOI: 10.29303/jppipa.v10i3.7085

Abstract: The primary purpose of this study is to explore teachers' perceptions on the use of tablets for educational purposes in Tanzania for primary and secondary schools' level of education. It aimed to identify three key variables, which are knowledge and skills on use tablets; school's environmental support and sustainability of using tablets; and the attitudes of teachers towards using tablets. This study employed quantitative research approach by adopting post-positivist paradigm using research survey with Likert scale questionnaires through online. The study used the Technological Acceptance Model (TAM) to investigate the teachers' attitudes towards using tablets for teaching and learning process. 81 respondents were involved in the study, samples were selected from five zones (North, South, West, East and Central zone). The data were analysed quantitatively using Winsteps version 5.7.0 through Rasch Model. Results found that (-0.18) of teachers had high knowledge and skills in the use of tablets, (-0.032) teachers agreed that the environment supports internet, electricity and accessibility of internet bundle on the use of tablets, and (-1.09) there was a strongly agreed for the acceptance of the use of tablets while (+0.47) teachers disagreed for the acceptance of the use of tablets for educational purposes in Tanzania.

Keywords: Educational purpose; Tablet; Teacher's perceptions

Introduction

The digital media started spreading after Universal Commerce Machines Corporation (IBM) made the primary keen phone accessible to shoppers (Nithya et al., 2020). That was a starting departure for a widespread use of digital communication devices. In years 1981 – 1996, known as the millennial era (Alhamed, & Ohlson, 2021; Wang, 2019), and devices for digital communication started by diversified for specific sector or field usages. For instance, tablets became alternative adjusted smartphones and were accessible to millennial era individuals, (Kraglund-Gauthier, 2015). The refinement of those digital communication devices' architecture like touchscreens followed progressively and they were pricey. After 13 a long time, in 2007, Apple presented the iPhone to the world. With access to the Internet, touch screen, and an eight-hour battery life the primary iPhone sold for a beginning cost of $499 (DuPont, 2021).

Rafiq et al., (2020) composed there's an innovation advantage in utilizing smartphones in course gave a list of ways to lock in understudies. (Kay et al., 2017) labeled smartphones as the number one most common innovation understudies utilize in classrooms taken after by tablets, note pads, portable workstation computers and crossover gadgets. Be that as it may, smartphones have been famous as having endless conceivable outcomes within the classroom and can serve as an instructive asset when utilized (Sheth, 2019). Rafiq et al., (2020) proceeded this by sharing suggested uses for tablets in classrooms to preserve understudy engagement, such as video creation or collaboration through application.

Research-based viable prove has illustrated a positive affiliation with the utilize of tablet-based

How to Cite:
Mwakapemba, J. L., Phabiano, E., & Retnawati, H. (2024). Teachers' perceptions towards the utilization of tablets for educational purposes in Tanzania. *Jurnal Penelitian Pendidikan IPA*, *10*(3), 1331–1339. Retrieved from https://jppipa.unram.ac.id/index.php/jppipa/article/view/7085

applications and children's learning abilities change. Moved forward utilize of visual tablet-education applications can be of extraordinary advantage to both instructors and youthful extremely introverted children within the classroom. Tablet-education application is an upgraded learning asset for educating aptitudes, as well as learning fabric (Stuart & Collins, 2019). Concurring to Alhamed & Ohlson, (2021) Presenting a modern innovation asset, such as computer tablets, into learning settings is significant within the conveyance of more shifted and more intelligently directions substance at all understudy levels.

Sahlberg, (2021) defined three vital measurements for instructive advancement: (1) the conceivable utilize of versatile fabric; (2) the conceivable utilize of modern educating approaches and, (3) the conceivable alter of convictions. Whereas (Wilkinson, 2020) thinks about on the utilize of tablets in instruction tend to report on what works and what does not, or on the scenarios and conditions that must be in put for innovation and "mobile learning" to operate in course. In other words, they give great hone models that point to act as a teachers' toolkit on the subject (Suárez-Guerrero et al., 2016). The address postured by instructive considers on tablet utilize ought to not be almost whether these devices are viable or not, but how they can be situated within the classroom and whether their utilize proceeds to be conditioned by conventional academic or content book-based models.

The primary nation to embrace the utilize of tablets for instruction reason within the world is the United States of America, taken after by China, South Korea, Uruguay, Thailand, Peru, Turkey, India, Indonesia, Argentina and Portugal (Trucano, 2013). The development of cell phones accessible in school classrooms has proceeded to climb on this direction for the final 20 years (Seat Investigate Center, 2019). The iPhone that numerous understudies utilize has so numerous capabilities; it would be considered more of a handheld computer than a phone (Miaz et al., 2019). Sheth, (2019) displayed that school authorities get it today's tablets are microcomputers whose capacity to supply numerous of the preferences that innovation can grant understudies and instructors to get to data.

In Africa Nigeria, Kanya and Rwanda are nominated to be the first countries to use Tablets for educational purpose (Trucano, 2013). After the eruption of pandemic disease in 2019 has made different countries in the World to utilize effectively use of tablets for education purpose and it has been traced to be useful for both offline and online studies.

According to the government Report Bhalalusesa, (2015), the initiatives to develop the Information communication and Technology with competency standards for teachers (ICT-CST) in Tanzania can be dated back to 2009 when the Ministry of Education and Vocational Training (MoEVT) implemented the Teacher Development for 21st Century (TDev21) pilot.

There is growing interest in the use of tablets in classrooms, and educational policies from different countries promote their integration (Mulet et al., 2024). Different literature reviews were conducted on the effects of the use of tablets in learning. In early of 2023, Tanzania mainland government through the Ministry of Education, Science and Technology has provided tablets to all Primary and Secondary teachers in the country for educational purpose. Therefore, the research is intended to understand the teachers' perceptions on the use of tablets provided by the government to the primary and secondary teachers in Tanzania.

Statement of the problem.

Tanzania is among the countries in Sub-Saharan Africa that have recognized the value and efficacy of Information and Communication Technology (ICT) in education. Various initiatives and strategies have been implemented by the Education Science and Technology. A decade into these initiatives, success stories have been documented, including an improvement in ICT infrastructure in schools and colleges an increase in ICT awareness among teachers and learners, and an increase in the use of ICT to facilitate administrative functions in schools.

Currently Tanzanian government has pushed strongly the transformation of educational system from the traditional way of teaching and learning process into the more digitalized system by giving tablets the primary and secondary teachers for the purpose of using them during the teaching and learning process. This situation has been boosted after passing through the era of COVID 19 erupted in 2019 that led all educational centers to be closed for unknown period, whereby the digital adopted countries shifted their teaching and learning approaches from Offline to Online learning. The second reason is the faster growing of science and technology that has made availability of different digitalized devices including Smartphones, Tablets, mini-computer and so forth to all people in the country, both local and urban.

Despite the fact that, there are some researches that were conducted before on the effects of ICT and some that talks about teachers' perceptions on the use of tablets in different countries for instance (Suárez-Guerrero et al., 2016), but there are limited researcher that have been conducted about the use of tablets in Tanzania, since; the devices have been just derived recently. Hence, the researcher aims to understand the teachers' perceptions on the use of tablets provided by the government to the primary and secondary teachers in Tanzania

Significance of the study

Since the development of science and technology is growing faster worldwide as well as different calamities foster the traditional ways of life to the new modern way. Likewise, what is happening in educational system in Tanzania is changing faster from traditional way of teaching and learning to the new ways of integrating education with the ICT using technological devices whereby the processes has been fostered by the hit of COVID-19 in 2019-2020. The government of Tanzania in 2023 distributed tablets to all primary and secondary teachers in public schools for the educational purposes. Therefore, the main purpose of the study is to explore teachers' perceptions on the use of tablets for educational purposes in Tanzania.

The study will provide valuable insights into the acceptance and effectiveness of tablets devices as educational tool in Tanzanian context. Secondly understanding teachers 'perception is crucial for successful implementation in facilitating students learning and determining the effectiveness of educational interactions. Also, the research will increase global trend of incorporating technology with education as tablets offers opportunities for interactive, engaging learning experience, access to digital resources and to overcome barriers related to resource scarcity. Eventually, the results will help the government and other educational stakeholders to rectify the challenges that teachers perceive in using tablets for teaching and learning processes.

Method

This study employed quantitative research approach and it adapted the post-positivist paradigm (worldview) (Creswell, 2017) using research survey with Likert scale questionnaires to collect quantitative data through Google Forms. The data were analysed quantitatively analysed Winsteps version 5.7.0. The researchers used descriptive statistical analysis through Rasch Model applied to social sciences following the Sumintono & Widhiarso, (2014) that consists of frequencies, means, and percentages. A 30-item questionnaires was developed to measure teacher's perceptions. The items were selected based on a Technological Acceptance Model TAM's model.

Technological Acceptance Model (TAM)

According to the modified model focuses on the factors that influence the individuals' acceptance and usage of technology. This model is grounded in social psychology Theory and the Theory of Reasoned Action (TRA) in which asserts that beliefs influence altitudes which lead to intention and generate behavior. It includes two constructs that is Perceived Usefulness (PU) and Perceived ease of use (PEOU), attitude and behavioral intention to use. Technological Acceptance Model states that the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) have the most influence on the adoption rate of a new product where by the perceived Usefulness weighs about one and half current usage and self-predicted future usage (Dwivedi et al., 2019).

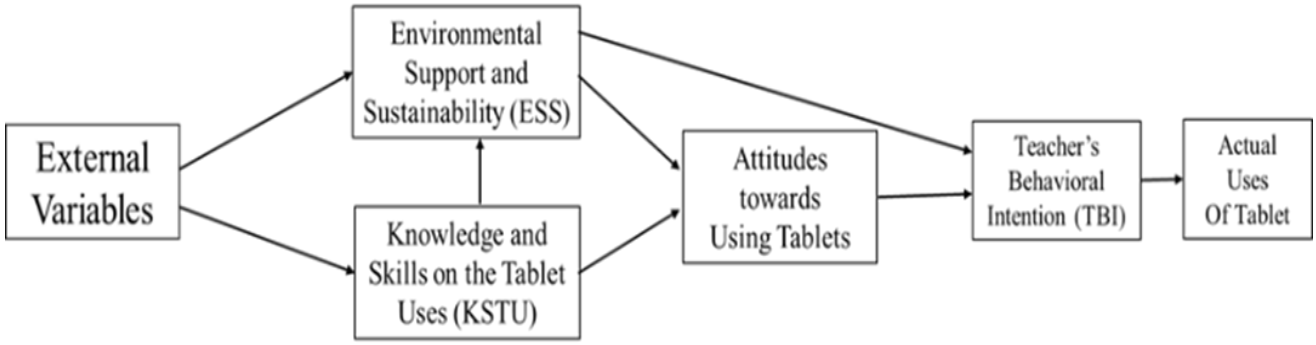

Figure 1. The Modified model from Davis's TAM model, (1989); (Alghamdi et al., 2022); (Alsuhaymi, 2023)

The Cronbach Alpha Reliability test.

It is crucial to compute the reliability index for the data collection instruments used in this research. Given the thirty items used to collect data, the researcher calculated the Cronbach Alpha as the reliability index. Table 1, shows the reliability value.

Table 1. Cronbach Alpha Reliability Statistics

Cronbach's Alpha	No. of Items
.818	11
.893	13
.743	6

According to the results or values for reliability which are 0.818, 0.893 and 0.743 for the 11, 13 and 6 consecutive items. There are three variables that indicate the items in each variables are reliable or data collection

item consistency. If ever used on the other sample from the same population and under the same conditions, it would consistently yields almost the same results.

Zones of selected samples

The sample were selected from five zones (North, South, West, East and Central zone) as shown in Table 2.

Table 2. The Display of Sample Size Involved with Their Respective Zones

Zone	Region	Sample
Northern Zone	Kilimanjaro, Shinyanga, Simiyu, Manyara, Mwanza, Mara	19
Southern zone	Iringa, Songwe, Mbeya, Ruvuma, Njombe	17
Western zone	Geita, Kigoma, Katavi, Kagera	14
Eastern zone	Pwani, Lindi, Tanga, Dar es Salaam	16
Central zone	Morogoro, Dodoma, Singida	15
Total		81

The samples were chosen from each of the five (5) zones using the Cluster sampling technique. The criteria were teacher employed in public primary and secondary schools who had received tablets from the government for educational purposes. The respondents were 81 teachers who filled the questionnaires on the teachers' perceptions about the use of tablets for educational purposes. The questionnaires that lacked at least two among of the three targeted themes were eliminated and only 77-79 questionnaires which were filled completely.

Result and Discussion

Demographic Information

This part describes the demographic information of the respondents. The information described here are Education level and teaching experiences, their importance to use them has been described in each category respectively.

Educational Level

Education level of the participants was important to be known as the key indicator of Information and Communication Technology basic knowledge for teachers gathered from their education institutions. The study found that 11 (13.6%) teachers had certificate level of education, 18 (22.2%) had Diploma, 45 (55.6%) had Bachelor degree, and 7 (8.6%) had master degree. The education details are displayed in Table 3. This implies that, the education level of teachers appears to be a significant factor influencing their ICT knowledge, with a higher percentage of those with Bachelor's degrees (55.6%) having a presence in the study. This is based on a study by De Villa & Manalo, (2020) that concluded that in order to improve the teaching-learning process, teachers need to get continual professional development in order to link with the new pedagogies and learning technologies.

Working experiences

On the other hand, the study also examined the working experiences of the teachers. The working duration in similar field was important as it would influence deep understanding of various issues pertaining to teaching and learning and the easily detection of pedagogical transition from the traditional way of teaching to the technological integrated ways of teaching and learning process. It was found that majority of the participants in teaching experiences ranges from less than 5 years were 14 (17.3%), 5-10 years were 36 (44.4%), 11-15 years were 13 (16.0%), 16-20 years were 15 (18.6%) and more than 20 years were 3 (3.7%) as displayed in Table 3. This demographic distribution suggests a balance between beginners and more experienced educators in the study, allowing for a diverse perspective on the adoption of technology in the teaching and learning process. This finding is supported by the study of (Lawrence & Tar, 2018; Al-Fraihat et al., 2020), their studies claimed that experienced teacher's low adoption on integrating Information and communication technology such as tablets to their teaching.

Table 3. Educational Qualifications and Working Experiences

Working Experiences	Education level				
	Certificate	Diploma	Bachelor	Master	Total
Less than 5 years	2 (2.5%)	3 (3.7%)	8 (9.9%)	1 (1.2%)	14 (17.3%)
5-10 years	5 (6.1%)	8 (9.9%)	20 (24.7%)	3 (3.7%)	36 (44.4%)
11-15 years	2 (2.5%)	3 (3.7%)	7 (8.6%)	1 (1.2%)	13 (16.0%)
16-20 years	2 (2.5%)	3 (3.7%)	8 (9.9%)	2 (2.5%)	15 (18.6%)
More than 20 years	0 (0%)	1 (1.2%)	2 (2.5%)	0 (0%)	3 (3.7%)
Total	11 (13.6%)	18 (22.2%)	45 (55.6%)	7 (8.6%)	81 (100%)

Table 4. Item Statistics: Order Measure

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM
13	149	78	1.25	.16	1.38	2.4	1.37	2.3	.46	.52	37.2	46.5	4
20	161	77	.92	.15	1.16	1.1	1.12	.9	.52	.53	49.4	45.6	1
28	168	78	.79	.15	1.36	2.4	1.65	3.9	-.13	.50	50.0	45.7	4
15	170	78	.77	.15	.80	-1.5	.78	-1.6	.65	.52	55.1	45.7	4
3	169	77	.74	.15	1.12	.9	1.14	1.0	.53	.52	49.4	45.7	2
16	178	78	.59	.15	.64	-2.9	.64	-2.9	.71	.52	57.7	45.4	4
30	185	79	.49	.15	1.28	1.9	1.40	2.6	.20	.51	45.6	45.1	4
29	188	79	.43	.15	1.31	2.1	1.41	2.6	.07	.51	36.7	44.7	4
24	188	78	.38	.15	.84	-1.1	.84	-1.1	.58	.51	53.8	44.9	4
11	190	78	.34	.15	.81	-1.4	.82	-1.3	.62	.51	55.1	44.9	3
9	191	78	.32	.15	1.33	2.2	1.37	2.4	.43	.51	39.7	44.9	3
2	193	79	.31	.15	1.49	3.1	1.52	3.2	.42	.52	36.7	44.8	4
23	193	78	.27	.15	.83	-1.2	.82	-1.3	.59	.51	60.3	45.4	3
21	195	78	.23	.15	.78	-1.6	.80	-1.4	.62	.51	57.7	45.6	1
27	194	77	.18	.15	1.09	.7	1.22	1.5	.14	.49	46.8	45.5	4
4	197	77	.11	.15	1.20	1.4	1.21	1.4	.55	.51	35.1	46.0	3
22	201	78	.10	.15	.76	-1.8	.76	-1.8	.62	.50	60.3	46.0	2
14	207	78	-.03	.15	1.01	.1	.98	-.1	.62	.50	39.7	46.8	4
12	212	78	-.13	.15	1.09	.6	1.05	.4	.60	.49	37.2	47.2	3
1	221	79	-.29	.15	1.68	3.9	1.68	3.9	.16	.49	39.2	48.2	3
19	225	78	-.42	.15	.94	-.4	.91	-.6	.54	.47	52.6	49.0	3
18	226	78	-.45	.15	.87	-.9	.84	-1.1	.55	.47	52.6	49.1	4
8	230	79	-.49	.15	.59	-3.3	.59	-3.2	.63	.48	63.3	49.4	4
5	236	79	-.63	.15	.71	-2.1	.69	-2.2	.65	.47	63.3	50.0	3
10	236	79	-.63	.15	.85	-1.0	.87	-.9	.63	.47	50.6	50.0	3
7	239	79	-.70	.15	.65	-2.6	.64	-2.6	.66	.46	62.0	50.5	4
26	247	78	-.95	.16	.78	-1.5	.87	-.8	.48	.44	61.5	51.9	4
6	252	79	-1.02	.16	.85	-.9	.85	-.9	.57	.44	62.0	52.4	2
17	257	78	-1.23	.17	1.07	.5	.97	-.1	.51	.41	55.1	52.6	4
25	257	78	-1.23	.17	.70	-2.0	.71	-1.8	.48	.41	59.0	52.6	4

In Table 4, the most important columns valuable for this data that are in the social science domain or related to perception is the "Entry Number" showing the item and then the "Measure" that transcends the level of agreement by the respondents. According to the Rasch Model applied to social sciences, the negative logits imply the high agreement on an item by a respondent. Below are the criteria used to categorize the respondents' agreement level to items or statements presented to them.

Table 5. Criteria for Categorizing Respondents' Agreement

Interval	Agreement level
-2≥X>-1	Strongly Agree/Very High
-0.99≥X>0	Agree/High
0.01≥X>1	Disagree/Low
X>	Strongly Disagree/Very Low

Rasch Model's criteria, 2014

By applying the criteria in Table 5, we can categorize the respondents' perceptions based on their agreement with related items or statements. Table 5 categorizes those respondents' perceptions into the strongly agree or very high, agree or high, disagree or low, and strongly disagree or very low categories. The results of the Table 4 above, given the categorization of the logits while Table 5 used to guide the selection of the categorized respondent's agreement in Table 6.

Table 6. Categorizing the Teachers' Perceptions

Strongly Agree	Agree	Disagree	Strongly Disagree
6,17, 25	14, 12, 1, 19, 18, 8,5, 10, 7, 26	22, 4, 27, 21, 23, 2, 9, 11, 24, 29, 30, 16, 3, 15, 28, 20	13

The same criteria also used to categorize the themes of knowledge and skills in the use of tablet, environmental support and sustainability, and teachers' attitudes (positive or negative) towards tablets' usage for teaching purposes.

Table 7. Themes, Logit Value and Decision Results

Theme		Logit value	Decision
Knowledge and skills in the use of tablet		-0.18	High
Environmental support and sustainability		-0.03	Agree
Teachers' attitudes towards tablets' usage	Positive	-1.09	Strongly Agree
	Negative	0.47	Disagree

Knowledge and skills on the use of tablets.

This aspect comprises three indicators that were used to gather the detailed information from teachers, which are awareness of tablet use in teaching and learning, skills on the use of tablets and Technical skills on hardware and software. The results are shown in table 4 that means Item Statistics: Order Measure and the

results were interpreted using the criteria shown in table 4 that means Criteria for categorizing respondents' agreement levels.

1. Awareness of tablet use in teaching and learning: From item number 1 to 5

Results from Table 4 indicate majority of respondents (-0.29) ever used tablet in teaching and learning process and the respondents (+0.31) who never attended one seminar while (+0.74) of the respondents never attended seminar more than one times. The results also reveal that (+0.11) of the respondents disagreed that the seminar never helped them and the respondents (-0.63) agreed that they are familiar with apps and software on use tablets in teaching and learning process. That means, there is a widespread integration of tablets into educational practices, but also indicate a potential gap in the effectiveness of seminars in supporting teachers in connecting the full potential of tablet technology. This result is supported by the study of (Maboe et al., 2018; Khlaif, 2018) that teachers need to attend regular training and seminars about technology to learn and strengthen their abilities to cope with the changes in technology in the educational field.

2. Skills on the use of tablets: From item number 6 to 8

It can be seen from Table 4 that number of respondents (-1.02) were familiar with search engine and database while (-0.70) of respondents used search engine and database to integrate applications and software. Furthermore, Substantial proportion agreed that (-0.49) of respondents had an ability to apply apps and database for teaching and learning activities. These results suggest a fundamental proficiency and acceptance of digital tools among the surveyed teachers, emphasizing the importance of these skills in the contemporary technological landscape. This supported by (Fernandez & Mammen, 2020) that the incorporation of technology into teaching and learning is usually influenced by technological abilities of teachers.

3. Technical skills on hardware and software: From items number 9 to 11

Findings from Table 4 reveal that respondents (+0.32) had never attended ICT training, moreover most of respondents (-0.63) were familiar with installation of software and applications. Findings also indicate that majority of respondents (+0.34) were not able to solve problems associated with tablets. These findings suggest a potential gap in knowledge, particularly in resolving technical problems associated with tablets, which warrant further targeted training initiatives to improve technical competencies among teachers. According to (Kaban & Ergul, 2020) teachers need an adequate technical and training prior to the technology implementation as the use of mobile technology is considered with two crucial issues to promote sustainable and effective technology integration that teacher preparation and motivation to utilize technology.

Environmental support and sustainability

This variable comprises three indicators which are internet, electricity and internet bundle. The results are shown in table 4 that means Item Statistics: Order Measure and the results were interpreted using the criteria shown in table 5 that means Criteria for categorizing respondents' agreement levels.

1. Internet

It is clear from Table 4 that (-0.13) of the respondents agreed an accessibility of internet in their working place while many respondents (+1.25) disagreed presence of internet system in schools such as WIFI. Findings from Table 4 further reveal that respondents (-0.03) agreed that there is strong internet in their working place. Moreover, number of respondents (+0.77) disagreed presence of a technical support associated with internet system and tablets, with respondents (+0.59) disagreed that there is an alternative to overcome any problem associated with internet. The results show the majority perceive deficiencies in internet systems and support structures within their working environments, especially in educational settings, suggesting potential areas for improvement or intervention to enhance internet infrastructure and technical assistance. It can be deduced that the majority of teachers were not using computers in teaching and learning due to those schools were not well equipped with technological devices and internet system (Chisango et al., 2020; Al-Mubireek, 2020) as well as some schools have lack of technical support that led to some teachers stopped using the devices temporarily because they were challenged by technical problems when using the tablets in their classrooms with that some schools were not well equipped with technological devices (Al-Mubireek, 2020; Khlaif, 2018).

2. Electricity

In addition, it can be learnt from Table 4 that majority of respondents (-1.23) agreed an availability of electricity in their working place and (-0.45) of the respondents agreed that the situation of electricity in their working place is very satisfied. Findings from Table 4 also indicate that respondents (-0.42) agreed the electricity system is satisfied in working place while (+0.92) of respondents disagreed that there is an alternative to overcome the electricity problem. These results suggest that presence of an opportunity to explore and implement contingency measures or alternative systems in schools to mitigate any electricity-related disruptions that might arise in their work

settings. This supported by (Maboe et al., 2018) that there is a must to have an electricity's assurance to recharge them after using with presence of strong internet accessibility in schools as well as through Sheth, (2019) showed that some schools have poor ICT infrastructure that led teachers to fail recharging their tablets due to power cuts and also presence of unreliable internet access resulting in time being wasted waiting for reconnection.

3. Internet bundle

Results from Table 4 reveal that respondents (+0.23) were not able to afford the price of internet bundle while (+0.10) of respondents had low ability to handle an internet bundle. Furthermore, findings from Table 4 show that (+0.27) of respondents disagreed to sustain using the bundle per month but the respondents (+0.38) were not able to afford network bundle in a month. This indicates a financial constraint in maintaining continuous access to internet services, warranting consideration for more accessible or flexible pricing models in internet bundle offerings. According to Galera-Zarco & Papadonikolaki, (2023) insist that such financial constraints, as highlighted, emphasize the necessity for re-evaluation in internet bundle pricing models.

Attitude towards using tablet: From items number 25 to 30.

This variable comprises two antagonistic attitudes which are positive and negative. The results are shown in table 4 that means Item Statistics: Order Measure and the results were interpreted using the criteria shown in table 5 that means Criteria for categorizing respondents' agreement levels.

Positive or negative attitudes on the utilisation of tablets in educational purpose.

It can be learnt from Table 4 that majority of respondents (-1.23) agreed that using tablets increase productivity in teaching and learning activities, with (-0.95) of respondents uses tablets in teaching and learning because it is easy. Moreover, results from Table 4 indicate that respondents (+0.18) were not afraid of losing of tablets because of compensation but the respondents (+0.79) were not fearing of damaging tablets as the respondents were not familiar with it. Number of respondents (+0.43) were not fearing of making mistakes resulting to lose of information in the tablet, with respondents (+0.49) did not have fear of using tablets due to lack of training or seminar. The findings suggest that the perceived benefits of tablet use in education while also highlighting apprehensions regarding potential losses, damages, and mistakes associated with tablet handling. It emphasizes the importance of addressing these concerns through training, support systems, and a clearer understanding of tablet use to maximize their educational potential while mitigating associated risks. According to (Kaban & Ergul, 2020; Chisango et al., 2020) some teachers were portable device illiterate such as tablets were afraid of using tablets in teaching, which cause fear and anxiety in them though some teachers have got knowledge on use of tablets, they are still fear making a technological mistake while using the tablets. According to Chisango et al., (2020) teachers with technology's knowledge use easy to them to be motivated to accept and use tablets in teaching rather than teachers with no that knowledge. The technology leads a positive attitude to the teachers to use tablets in teaching.

Conclusion

While tablets offer benefits for Tanzanian teachers, optimized realization of their educational potential requires addressing remaining barriers like targeted training to improve tablet literacy, upgrading school internet infrastructure/support, and ensuring accessible internet pricing models. As tablet policies continue unfolding, monitoring teacher adoption and challenges via research allows evidencing areas needing intervention to facilitate effective technology integration in Tanzanian classrooms. Basing on the results presented in Table 7.

Knowledge and skills on the use of tablets

Indicates that (-0.18), teachers have high knowledge and skills in the use of tablets that has been grasped from ICT courses from universities. This has been revealed in table 3, that most of the teachers have knowledge from their Universities and are ready to integrate tablets use with education while the experienced teachers seemed to have low adoption on tablets use to their teaching.

Environmental support and sustainability

Indicates that (-0.032), teachers agreed that the environment supports internet, electricity and accessibility of internet bundle on the use of tablets in educational purpose.

Positive or negative attitudes on the utilisation of tablets in educational purpose

Indicates that (-1.09), there was a strongly agreed for the acceptance of the use of tablets while (+0.47) teachers disagreed for the acceptance of the use of tablets for educational purposes in Tanzania.

Acknowledgments

We thank all participants who spent their time on this study and the validators who helped us validate instruments before collecting data.

Author Contributions

Conceptualization, James L. Mwakapemba, and Edward

Phabiano.; methodology, Edward Phabiano; Software, James L. Mwakapemba; Validation, James L. Mwakapemba and Edward Phabiano; formal analysis, James L. Mwakapemba; investigation, Edward Phabiano; resources, James L. Mwakapemba and Edward Phabiano; Data curation, James L. Mwakapemba; writing—original draft preparation, Data curation, James L. Mwakapemba; and Edward Phabiano; writing, James L. Mwakapemba, and Edward Phabiano; review & editing Prof. Dr. Heri Retnawati, M.Pd; Funding acquisition, James L. Mwakapemba; and Edward Phabiano; All authors have read and agreed to the published version of the manuscript.

Funding
This research received no external funding.

Conflict of Interest
The authors declare no conflict of interest. The authors hereby declare that the work included in this paper is original and is the outcome of research carried out by the authors listed.

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