Exploring the Utilisation of Mwabu Interactive Tablets by Teachers and Pupils: A Case Study of Primary Schools in Lusaka District.

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ABSTRACT

In recent years, both pupils and educators have increasingly adopted technologies such as interactive tablets to enhance learning and teaching processes. The use of interactive tablets in classrooms has enriched pupils' engagement and collaborative activities by offering access to a variety of instructional content and applications. This study explored how Mwabu interactive tablets are utilised by teachers and pupils in eight selected private primary schools in Lusaka District. The study employed the Technology Acceptance Model 2 (TAM2) as a theoretical framework to assess the perceived usefulness of the tablets in facilitating teaching and learning. A survey research design was adopted, using both quantitative and qualitative methods. Data were collected from 208 participants, including 64 teachers and 144 pupils. Simple random sampling was used to select pupils, while purposive sampling was applied for teachers. Data collection tools included structured questionnaires and observation. Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS), while qualitative data were analysed thematically. Findings revealed that 47.4% of teachers used the tablets often for reading and listening to books, while 18.0% of pupils used them for taking quizzes. The study recommends increasing awareness and training to enhance the effective use of Mwabu tablets and encourages schools to promote their use at home through parental support.

Keywords: Intention to Use, iSchool Company, Mwabu Interactive Tablet, Perceived Usefulness, and Perceived Ease of Use.

INTRODUCTION

According to Kuyela (2022), education is considered the basis for development in every society. The development of any country depends largely on the quality of education, and Zambia is no exception. Modern education is no longer restricted to the classroom. The rapid advancement of Information and Communication Technology (ICT) has expanded the learning environment beyond physical boundaries. ICT now plays a crucial role in educational reforms and innovations across all levels—primary, secondary, and tertiary education (Mondal & Roy, 2010). Asabere and Kuyela (2022) define ICT broadly as resources and equipment that support the generation, transmission, processing, storage, and dissemination of information in forms such as voice, text, data, and graphics.

ICTs serve as powerful tools for both teaching and learning, presenting themselves in various forms such as educational networks, simulations, and interactive exercises (Jonassen, 2000). These tools enable the creation of blended learning environments and support both formative and summative assessments. Ogunlade (2015) observes that ICT enhances course delivery, encourages independent learning, and promotes both learner and teacher development. Its integration attracts pupil attention and makes learning more engaging and effective. As a result, it has become necessary for both pupils and teachers to not only use ICT but to become comfortable with it.

Kuyela (2022) further states that integrating ICT in classrooms helps develop collaborative learning, social skills, problem-solving, self-reliance, and initiative. Ghavifekr (2014) and Adeosun (2010) affirm that ICT promotes creativity, cognitive development, and improved educational outcomes. Countries like Malaysia recognized these benefits early and began integrating ICT in the 1970s (Marshall, 2007), aiming to develop a tech-literate, globally competitive workforce.

In Zambia, the importance of ICT in education is underscored in policy documents such as the Fifth National Development Plan (2006–2010), with the Ministry of General Education working to incorporate ICT in teaching and learning to improve quality and provide alternative modes of delivery (Grace, 2004). Interactive tablets, as defined by Brandrick (2010), are portable touchscreen computers used with fingers or styluses. These devices are gaining traction in classrooms due to features such as mobility, lightweight, and interactive capabilities. Despite their widespread use in developed countries, their adoption in primary schools in developing countries remains limited (Savas, 2014; Grace, 2004).

In Zambia, many private primary schools use the Mwabu interactive tablet, an e-learning platform that provides teachers with lesson plans and pupils with multimedia content (Kangwa, 2011). These tablets are especially helpful in urban poor areas with limited internet access and a shortage of trained teachers (Kuyela, 2022). Mweetwa (2016) notes that Mwabu tablets support group learning, accommodate large class sizes, and allow teachers to interact closely with each pupil. Mwabu, through its subsidiary iSchool, has distributed over 40,000 licenses and developed curriculum-aligned content for Zambian learners.

However, despite the growing deployment of interactive tablets like Mwabu, there is limited empirical research on how effectively these technologies are being utilised by teachers and pupils in Zambian primary schools, especially regarding their impact on teaching methods, learner engagement, and academic outcomes.

This study is necessary to fill this gap by exploring the actual utilisation of Mwabu interactive tablets in selected primary schools in Lusaka District. Understanding how these tools are applied in real classroom settings will help determine whether they are meeting their intended educational objectives and what challenges or successes users are experiencing. The findings will contribute to more informed policy decisions and improved implementation strategies for ICT integration in education in Zambia and similar contexts.

Statement of the problem

The evolution of Information and Communication Technologies (ICTs) has transformed the world into a digital society, expanding access to mobile devices such as interactive tablets and enabling new modes of teaching and learning. In recognition of this global shift, the Government of Zambia has outlined a vision to become an information and knowledge-based society by the year 2030, supported by equitable access to ICTs for all citizens (Kangwa, 2011). In line with this vision, the education sector has adopted strategies to integrate ICT into classroom practice, including the deployment of Mwabu interactive tablets.

As part of this initiative, the Zambia Information and Communications Technology Authority (ZICTA), in partnership with iSchool Zambia, launched a project to empower primary schools through the provision of digital learning content delivered via tablet computers (iSchool Zambia, 2013). The Mwabu interactive tablet system offers a comprehensive e-learning platform, providing multimedia content for learners and structured lesson plans for teachers. It is designed to support active learning, improve engagement, and strengthen learning outcomes.

Despite the growing presence of Mwabu interactive tablets in primary schools, there is a noticeable lack of empirical research evaluating how these devices are actually being utilised and how effective they are in enhancing teaching and learning in the Zambian context (Kuyela, 2022). While policy and programme reports highlight the potential of such technology, there is limited evidence on the real-world experiences of teachers and pupils using the tablets, their perceived usefulness, and the challenges they encounter.

This gap is significant because without a clear understanding of how Mwabu interactive tablets are being used and whether they are meeting educational goals, it is difficult for policymakers, educators, and stakeholders to make informed decisions about future ICT investments and implementation strategies. Evaluating the actual utilisation and perceived usefulness of these tablets is critical at this stage to ensure that Zambia's ICT-driven education reforms are evidence-based, contextually relevant, and responsive to the needs of both teachers and learners.

Objective

The study sought to meet this objective:

i. To explore the utilisation of Mwabu interactive tablets by teachers and pupils in primary schools in Lusaka District.

LITERATURE REVIEW

Theoretical Review: Technology Acceptance Model 2 (TAM2)

The Technology Acceptance Model 2 (TAM2), developed by Venkatesh and Davis (2000), builds on the original TAM by adding two major constructs that influence perceived usefulness: social influence and cognitive instrumental processes. TAM2 is widely used in educational technology studies to predict and explain user behaviour in adopting new technologies.

In the context of this study, TAM2 is relevant in evaluating the extent to which teachers' and pupils' perceived usefulness and ease of use of the Mwabu interactive tablets influence their actual utilisation in the classroom. The model also helps assess the role of external variables, such as school leadership support, training, and infrastructure, in shaping user attitudes and behaviour toward technology integration.

Conceptual Review

Interactive Tablets:

Interactive tablets are portable, touchscreen devices that support multimedia capabilities and allow learners and educators to interact with digital content using fingers or styluses (Brandrick, 2010). They are increasingly being used in education due to their mobility, adaptability, and potential to enhance learner engagement.

Technology Integration in Education:

Technology integration refers to the effective use of technology tools in general content areas in education to allow students to apply computer and technology skills to learning and problem-solving. According to Ghavifekr et al. (2014), successful integration involves aligning technology use with curriculum goals, pedagogy, and assessment strategies.

Digital Learning Tools in Primary Education:

Digital tools in primary education include multimedia content, e-learning platforms, and interactive resources like Mwabu tablets. These tools aim to foster active learning, collaboration, independent study, and formative assessment. Ogunlade (2015) notes that such tools increase learner autonomy, motivation, and engagement, particularly in large classrooms or resource-constrained settings.

Empirical Review

Several scholars have explored the use of interactive tablets in facilitating teaching and learning. For instance, Twining (2005) found that learners utilized tablet PCs in diverse ways inside and outside the classroom. Their mobility allowed students to learn beyond the classroom environment. Tools like Microsoft OneNote enabled students to record lectures, take digital notes, and embed multimedia files (Cicchino & Mirliss, 2004).

Burden et al. (2012) studied the adoption of portable technologies across eight Scottish learning sites and observed that tablets enabled access to online interactive learning activities. These tools also encouraged teachers to explore alternative teaching strategies that made lessons more engaging.

In the African context, Mtebe and Raisamo (2014) investigated the adoption of mobile learning technologies in Tanzania and found that teachers' attitudes, technical support, and availability of digital content significantly influenced effective utilisation. Similarly, Oketch and Kimemia (2018) in Kenya highlighted that access to content-aligned tablets improved student performance and encouraged self-directed learning in primary schools.

In Zambia, Kuyela (2022) and Mweetwa (2016) provide insight into the role of Mwabu interactive tablets, which aim to improve teaching quality and learner engagement by providing structured lesson plans and curriculum-

aligned multimedia content. However, there remains a significant gap in empirical research evaluating how these tablets are actually utilised by teachers and pupils in Zambian classrooms, particularly regarding their effectiveness, challenges in implementation, and user perceptions.

This gap in current literature reinforces the need for studies focused on the actual utilisation and perceived usefulness of Mwabu interactive tablets in Zambia's primary education system. Understanding how these tools are impacting learning outcomes and classroom practices will provide valuable feedback to educators, policymakers, and technology providers.

RESEARCH METHODOLOGY

Research Design

A research design is an overall plan for collecting and analysing data including specification for enhancing the internal and external validity of the study. It involves a plan of activity which guides a researcher in collecting, analysing, and interpreting data). This research adopted a quantitative method.

Population and Sampling

The target population is defined as all the individuals' are interested in studying who have specific characteristics in common (Macnee, 2008). The target population involved teachers who were familiar with the Mwabu tablet and grade seven pupils, grade six and five from schools that had two streams only. The group was picked because they had interacted with the tablet for some time, hence they were deemed to be the information-rich for the study. Purposive sampling was used in the study to select pupils and teachers. As the name indicates, simple random sampling is nothing but a random selection of elements for a sample (Creswell, 2013

Data Collection Methods

The study used questionnaires to collect data from the respondents. Two sets of questionnaires were designed to suit participants; one for teachers and another for pupils. Questionnaires are reliable data collecting instruments when collecting data over a large sample. They equally save time; especially that time was a limiting factor in the study. The administration of the questionnaires to respondents was arrived at after creating an understanding between the researcher and the respondents, by explaining the purpose of the study

Data Analysis

The analysis of data was done at the end of the data collection. The responses were categorised based on information provided by respondents. The software called Statistical Package for Social Sciences (SPSS version 20) was used to present and interpret data using frequency distribution tables, percentages, pie charts, and bar charts.

RESULTS

Respondents demographic characteristics

To assess the proportion of male and female respondents, the frequency of each gender was calculated, Tables 1 gives a summary of the findings for both teachers and pupils respectively.

Table 1: Teachers and Pupils' Gender

Teachers			**Pupils**		
Gender	**Frequency**	**Percentage**	**Gender**	**Frequency**	**Percentage**
Male	25	44	Male	54	49
Female	32	56	Female	57	51
Total	**57**	**100**	**Total**	**111**	**100**

The findings in Table 1 indicate a relatively balanced gender distribution among both teachers and pupils who participated in the study, with a slightly higher representation of females. Among teachers, females made up 56% of the respondents compared to 44% males, suggesting that more female teachers were willing or available to participate. Similarly, among pupils, the gender distribution was nearly equal, with female pupils accounting for 51% and males 49%, showing only a minimal difference in questionnaire response and completion rates. This slight disparity suggests that gender did not significantly affect participation levels in the study.

Pupils Age

The findings in Table 2 indicate that the majority of the pupils who participated in the study were aged 12 years, representing 44% of the total respondents. This suggests that the sample was largely composed of pupils within this age group. Pupils aged 13 years formed the second-largest group at 24%, followed by those aged 11 years at 14%. Pupils aged 10 and 14 years constituted 10% and 6% respectively, while those aged 15 years and above were the least represented, accounting for only 2%. Overall, the data shows a concentration of respondents in the 11 to 13-year age range, reflecting a relatively young study population.

Table 2: Pupils' Age in Years

Variables	**Pupils Age**	
	Frequency	**Percentage**
10 years	11	10
11 years	16	14
12 years	49	44
13 years	27	24
14 years	7	6
15 years and above	2	2
Total	**111**	**100**

Level of Education of Respondents

The findings in Table 3 indicate that the majority of the pupils who participated in the study were in grade seven, accounting for 51 (46%) of the total 111 pupils. This was followed by grade six pupils, who were 37 (33%), while the least represented were those in grade five, comprising 23 (21%). These results suggest that upper-grade pupils, particularly those in grade seven, were more engaged or more available to participate in the study, possibly due to their higher level of understanding or readiness to respond to research questionnaires compared to their younger counterparts.

Table 3: Pupils Level of Education

Variables	**Distribution of Academic Qualification**	
	Frequency	**Percentage**
Grade 5	23	21
Grade 6	37	33
Grade 7	51	46
Total	**111**	**100**

The findings in Table 4 indicate that the majority of the teachers (42.1%) held diploma qualifications, followed by those with bachelor's degrees at 33.3%. A smaller proportion (19.3%) had certificates, while only 5.3%

possessed master's degrees. Notably, none of the teachers had attained a PhD. This suggests that most teachers have at least a diploma or degree qualification, reflecting a relatively well-qualified teaching workforce, although the low number of teachers with postgraduate qualifications may highlight limited opportunities or incentives for advanced academic progression in the teaching profession.

Table 4: Teachers' Level of Education

Variables	**Distribution of Academic Qualification**	
	Frequency	**Percentage**
Certificate	11	19.3
Diploma	24	42.1
Degree	19	33.3
Master's degree	3	5.3
PhD	0	0
Total	**57**	**100**

Usage of Mwabu Interactive Tablet by Teachers and Pupils

The respondents were asked to state the usage of the Mwabu interactive tablet by ticking the following responses: research, reading and listening to books, taking quizzes, preparing a lesson plan, and note-taking. Table 1 and 2 gives a summary of the findings.

Table 5: Usage of Mwabu Interactive Tablet by Teachers

	Responses			
Variables	**Never**	**Not Often**	**Often**	**Very Often**
Research	7(12.3%)	12(21.0%)	14(24.6%)	24(42.1%)
Reading and listening to books	6(10.5%)	11(19.2%)	27(47.4%)	13(22.8%)
Taking quizzes	9(15.8%)	7(12.3%)	26(45.6%)	15(26.3%)
Preparing a lesson plan	11(19.3%)	13(22.8%)	9(15.8%)	24(42.1%)
Note taking	15(26.3%)	24(42.1%)	10(17.5%)	8(14.0%)

The findings from Table 5 indicate that the Mwabu Tablet is being utilized by teachers for a variety of educational purposes, with the highest usage reported for reading and listening to books (47.4%), followed closely by taking quizzes (45.6%) and research (42.1%). Additionally, a significant number of teachers (42.1%) reported using the tablet very often for preparing lesson plans, demonstrating its importance in lesson preparation. Note-taking also had a notable usage rate (42.1%). These results suggest that the Mwabu Tablet is a versatile tool that supports multiple aspects of teaching, including planning, content delivery, and assessment.

Table 6: Usage of Mwabu Interactive Tablet by Pupils

	Responses			
Variables	**Never**	**Not Often**	**Often**	**Very Often**
For reading and listening to stories	28(25.2%)	30(27.0%)	35(31.5%)	18(16.2%)
For playing games	18(16.2%)	26(23.4%)	38(34.2%)	29(26.1%)

For calculations	21(18.9%)	27(24.3%)	34(30.6%)	29(26.1%)
For spellings	24(21.6%)	27(24.3%)	32(28.8%)	28(25.2%)
For tests and quizzes	20(42.3%)	33(29.7%)	47(18.0%)	11(9.9%)
Note taking	45(40.5%)	27(24.3%)	21(18.9%)	18(16.2%)
For homework	15(13.5%)	25(22.5%)	37(33.3%)	34(30.6%)

The findings in Table 6 indicate that pupils use the Mwabu interactive tablets for a variety of educational activities, with the most frequent use being for tests and quizzes (42.3%). A significant proportion also reported using the tablets often for playing games (34.2%), reading and listening to stories (31.5%), calculations (30.6%), and spellings (28.8%). Additionally, 30.6% of the pupils reported using the tablets very often for homework. These results suggest that the Mwabu tablets are widely utilized across different learning tasks, supporting both academic engagement and interactive learning, with particular emphasis on assessment-related activities such as quizzes and homework.

In a similar study done by Kuyela (2022), it was discovered that 209 primary schools were using the tablets often for learning purposes. Nguyen (2014) also reported that interactive tablets are often used successfully for a variety of purposes in higher education. This shows that teachers and pupils had the desire to use the Mwabu interactive tablet most of the time. The study established that many teachers often use the Mwabu interactive tablet for reading and listening to books. Furthermore, the study revealed that the many pupils (42.3%) often use the tablets for tests and quizzes. The finding validated that of Kuyela (2022), who observed that it is easy and convenient to use tablets for tests and quizzes and instructors can then provide immediate feedback to pupils electronically. A study by Seferoglu (2011), also revealed that tablet computers were often used for extracurricular purposes such as games, music and entertainment, both in and out of class. This shows that teachers and pupils were using the Mwabu interactive tablet for school related activities.

CONCLUSION

The findings indicate that the Mwabu interactive tablets are widely utilized by both teachers and pupils for various educational purposes. A significant proportion of teachers reported using the tablets often or very often for activities such as research (42.1%), reading and listening to books (47.4%), quizzes (45.6%), lesson planning (42.1%), and note-taking (42.1%). Pupils also frequently used the tablets for reading and listening to stories (31.5%), playing games (34.2%), calculations (30.6%), spellings (28.8%), quizzes (42.3%), and homework (30.6%). Moreover, both teachers and pupils generally perceived the tablets as useful in facilitating teaching and learning, with 70% of teachers and 78% of pupils either agreeing or strongly agreeing with this statement. These findings suggest that the Mwabu interactive tablets are a valuable tool in enhancing educational engagement and supporting a variety of teaching and learning activities.

RECOMMENDATIONS

Arising from the foregoing findings and conclusions, the following recommendations are made.

i. The study established how useful the Mwabu interactive tablet was in bridging the digital divide in today's information age; it is therefore, being recommended that schools should ensure that teachers and pupils should make use of the Mwabu interactive tablet in schools and this can be done through awareness activities and training.

ii. School managers should encourage parents/guardians to buy Mwabu interactive tablets for their children so that pupils can even use them at home

Suggested for further studies

i. An Evaluation of the Impact of Mwabu Interactive Tablets on Learner Academic Performance in Primary Schools

ii. Challenges and Opportunities in Integrating Digital Learning Tools in Rural Versus Urban Primary Schools in Zambia

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