



Integration of Use of Tablets into Teaching and Learning in Secondary School of Michewen District in Zanzibar

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The purpose of this study was to assess the extent to which teachers in Zanzibar are incorporating tablets into their teaching and learning. The study was conducted particularly in the MICHEWENI District, which is in the northern region of Tanzania-Zanzibar. The government of Zanzibar implemented various ICT programs and plans to motivate teachers to use technology in their teaching such as the Introduction of ICT subjects in Primary and secondary schools in Zanzibar (ZICT 2017) and distributing tablets for all teachers in Zanzibar which was done in January 2023. This study employs a qualitative approach to explore How teachers integrate tablets into teaching and learning in Zanzibar. To achieve this objective, we conducted semi-structured interviews with the teachers, headmasters, district officers, and Ministry officers who engage in the integration and supervising the tablets in teaching and learning in Zanzibar. Several tools were employed by the researcher such as interviews, classroom observation, and documentary review. The study's

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findings reveal that some teachers in Zanzibar have good attitudes about adopting tablets in teaching and learning there are significant barriers to their effective implementation. These difficulties include a lack of training and assistance, insufficient infrastructure, and limited access to relevant digital resources.

The results of the study showed that several effective motivational strategies can be used to motivate teachers to integrate tablets into the teaching and learning process. These include Providing seminars and training for teachers in using Tablets, Cultivation positive school Administration support, Providing the financial budget for using ICT tools, Ensuring Reliable Power Supply, and Availability of Technical support, These factors motivated school teachers to integrate tablets in teaching and learning efficiently and effectively.

Keywords: Tablets; integration; assessment; teaching and learning.

1. INTRODUCTION

Zanzibar government made more efforts to improve the use of ICT in education, such as providing tablets to all primary and secondary school teachers. This condition makes it easier for teachers to integrate tablets into their teaching, learning, and educational activities. So, through this study, it is possible to learn how teachers integrate tablets into their teaching and learning processes. It will also be possible to identify some challenges that prevent teachers from using tablets in teaching and learning and to devise the best strategies for teachers to integrate tablets in efficient and effective ways. Because of this study, the government will be able to identify some issues and make changes in the use of tablets for instructors.

In the recent few years, tablet computers and other mobile technology have been successfully used in teaching, learning, and evaluation in schools [1]. Every new technology has problems, as is widely known. One shouldn't anticipate being able to rapidly and easily adjust to this new model because technology makes teaching a little more complicated (Davis, 1991). Teachers must be excited about the possibilities to provide their students with more in every aspect (Jacques, 2012). With the usage of tablets, it is no longer possible to solely use traditional teaching strategies; new ideas must be added to meet learning objectives. A school should do a needs assessment before investing in tablets.

According to the UNESCO ICT competency framework for teachers (UNESCO, 2011, p. 17), professional teachers should have the following fundamental abilities: (1) the capacity to learn using Tablets as a tool of ICT (2) the capacity to address complex real-world problems; and (3) the capacity to generate new knowledge using ICT tools such tablets. This means that teachers

should know how to search relevant materials from the internet by using tablets and how can generate students to improve their performance of students. For example, Biology teachers can download practical videos to learn themselves and gain knowledge, also they can use those videos to display in front of the students to see how they can conduct practical.

Logically, the incorporation of Tablets is assumed to be a helpful instrument for teaching and learning and is mostly an act of emotional conviction by an individual to embrace or dispute the significance of the technology [2] The conviction stems from an individual's opinion that ICT tools such tablets meet their demands [3] Perceived utility as well as the perceived ease of use of tablets are two important elements that influence how ultimately a user uses technology, according to the widely accepted Technology Acceptance Model (TAM) framework [4].

2. RESEARCH QUESTION

- a) How do teachers use tablets for teaching and learning?
- b) What are the challenges for teachers in terms of using tablets for Teaching and learning?
- c) What are the strategies to support teachers' use of tablets in teaching and learning?

3. LITERATURE REVIEW

According to [5], teachers must understand what to teach, why to teach it, and how to teach it using tablets. [6 and 7] suggested stages to assist new teachers in moving forward while adopting tablets, such as the teacher using tablets only as an alternative for current teaching practice where technology is not used, and the adaptation of ICT tools such as tablets by

teachers should (and does) challenge and support changes in teaching practice, going to build on personal pedagogical expertise. As teachers' teaching techniques with new technologies evolve and organizational support and access to ICTs expand, it becomes possible to move beyond the adaptation of tablet applications to fit current practice.

Mutisya et al, [8], who investigated the use of Tablets in public elementary schools in Kenya, concluded that a lot of teachers had a positive opinion of using Tablets in their instruction. They did discover, however, that few of the teachers believed that the time allotted for the integration of technology was insufficient and that the majority of their lessons were spent putting the devices together. If they believe that using Tablets in their instruction will require more time and effort, Teachers are more likely to reject using them. Tablets, according to [9], can be a vital component of enhancing face-to-face teaching and learning in the classroom. Several researchers and theorists contend that using tablets computers can assist teachers in learning, and finding the appropriate materials from websites to make the students understand more the subjects and provide teachers the chance to assist those with specific needs.

The usage of tablets, according to [10] can help teachers to learn knowledge and interact with their students by showing images and videos and promoting communication and teamwork. According to Osborne and Hennessy (2003), tablets may also allow learners to become more motivated, think more clearly, and improve their ability to comprehend data. According to [11] the effectiveness of integrating tablets into teaching and learning varies from curriculum to curriculum, location to location, and class to class, depending on how it is used. Previous educational techniques emphasized a passive, one-way transfer of knowledge from teachers to students.

According to the World Bank (2004), contemporary tendencies towards a constructivist approach to teacher-student interaction indicate that the learning process can be improved using technological tools like tablets that alter how requirements, preferences, and requests are presented. The interactive nature of most tablet devices makes them ideal for a creative learning strategy emphasizing experimentation and creative thinking skills. Tablets can be utilized to quickly and affordably

deliver current resources utilizing one or more media to many learners and students.

The teacher can download the resources easily and update them without imposing significant additional expenditures for distribution to teachers and students. According to [12], a tablet can transcend location and time, enabling asynchronous learning for teachers. Online resources are available seven days a week, twenty-four hours a day. ICT has made it possible for several geographically distant teachers to get instructions simultaneously and connect with global experts, mentors, and learning resources. [13] argues that tablet offers teachers a wide range of very interesting prospects for developing resources that enable highly interactive learning. This could result in the development of engaging and fascinating interactions between teachers and students with instructional resources.

4. METHODOLOGY

This study employed a qualitative research design to understand how teachers integrate tablets into teaching and learning in Zanzibar. Qualitative research tries to comprehend complicated social processes as they occur in their natural environments. It usually intends to come out with a case-specific rather than a general conclusion on the matters under study (Corbetta 2003). As for the case of this study, a qualitative research approach helped the researchers to understand the barriers and strategies to the effective integration of tablets in teaching and learning from different participants and draw a conclusion based on the specific case study. To achieve this objective, the study was conducted in secondary schools located in the MICHEWENI district in the North region. These secondary schools were selected because they are among the schools in which teachers of these schools use tablets in teaching and learning. The Michweni district was selected as a study site to collect the data necessary to answer the research question.

In this study, the researcher selected respondents from the study site using both purposive and simple random sampling procedures. Purposive sampling techniques were defined by Kothari (2003) as a strategy that includes the purposeful selection of specific units to form a sample that is representative of the entire natural world. 30 school teachers were chosen by a researcher from five selected schools in the MICHEWENI district using

purposeful sampling, 06 school leaders (Headmaster and its Assistant), 04 District educational management, and 02 ministry officers. Purposive sampling was utilized by the researcher to gather additional information from the participants. These participants were leaders and professionals with extensive backgrounds in education. A total of 42 respondents including teachers, headmasters, district officers, and ministry officers were interviewed.

Data was gathered using semi-structured interviews with the headmasters and teachers of the five schools that were chosen. One of the most highly advised methods for gathering qualitative data is semi-structured interviews, which give the researcher the opportunity to get rich, in-depth information from the respondents. The best method for gathering data is to use semi-structured interviews since they facilitate the exchange of fresh insights on the subject of the study (Dearnley 2005). Additionally, it enables the researcher to question the respondents to collect more information from them. The qualitative semi-structured interview, according to Kallio et al. (2016), is more objective and maintains credibility, making the study conclusions more probable.

The study included secondary data sources, such as ICT policies and other significant papers that included information on integrating tablets in teaching and learning, in addition to primary data. Lastly, thematic analysis was used to analyze the data (Braun and Clarke 2006). The identities of the respondents or the schools they attend will not be mentioned in any way throughout the analysis to protect their privacy. Pseudonyms such as Teacher A, Teacher B, and Teacher C were chosen by the researchers. However, tablet use in teaching and learning has been incorporated into all of the chosen schools.

5. RESULTS

In this section, Data is presented thematically according to the three main objectives which are how teachers integrate tablets into teaching and learning, the challenges facing teachers, and finally came up with strategies to support teachers in using tablets in teaching and learning.

5.1 How teachers Integrate Tablets into Teaching and Learning

According to the findings of this study, teachers use tablets for demonstration. Tablet demonstrations can be an effective tool for

teaching and learning. Tablets are used to provide students with a more engaging visual and interactive learning experience than traditional teaching techniques. According to the findings, tablets are used to display images, diagrams, and videos that can assist pupils in visualizing and comprehending complicated subjects. Teachers also used tablets to take students on virtual field trips to museums, historical sites, and other locales, creating an immersive learning environment. Tablet demonstrations can assist teachers and students in improving the learning experience by making it more interesting, interactive, and successful.

Teachers also used tablets to find useful resources to employ in their lessons and teaching activities. Here are some examples of how teachers use tablets to find learning materials. Internet lookup: Teachers utilize tablets to search for articles, videos, and other resources relating to the topics they teach. Apps for education, Teachers utilize tablets to download and use educational apps that supply their pupils with learning materials and tools.

Digital libraries, the tablets are used by teachers to access digital libraries and Internet databases, giving them access to numerous academic resources to use in their classes. Teachers access a wide selection of resources and information to use in their lessons by using tablets to search for learning materials, offering the teacher a more engaging and successful teaching and learning experience. Tablets can also assist teachers in staying organized and efficiently managing their resources, making it easier for them to give high-quality instruction.

Also, the result of this research shows that teachers integrate with tablets by storing teaching and learning materials. Tablets are used to store learning materials in cloud-based storage solutions, such as Google Drive or Dropbox, allowing teachers to access and share materials from anywhere. Also, this research proved that Tablets are used to store digital textbooks and other educational materials, reducing the need for physical textbooks and making it easier for teachers to carry their teaching and learning materials. Some teachers use tablets to store educational apps that provide learning materials and resources, allowing students to access them easily and conveniently. These apps are created by a government institution and there are learning resources for example Tanzania Institute of Education (TIE)

created a platform to enable teachers to access teaching and learning materials. So, the teachers store that platform on the tablets and make it easy to integrate with tablets in teaching and learning materials. Tablets can be used to store multimedia materials, such as images, videos, and podcasts, making it easy for the teacher to access and use these materials in their teaching and learning process.

5.2 The Challenges Which Facing Teachers When using Tablets in Teaching and Learning

It is a known fact that many teachers face difficulties in using tablets for teaching and learning due to a variety of causes. This objective aims to explore what those challenges are and how to address them as exposed by the respondents.

5.2.1 Shortage of ICT infrastructures

The term "ICT infrastructure shortage" describes the absence of the tools and materials required to enable the use of tablets in the classroom. This can involve insufficient technology, such as insufficient tablets, restricted access to electricity or charging stations, and a lack of Wi-Fi or internet connectivity.

According to the findings of this study, many schools have problems with ICT infrastructure that prevent teachers from properly utilizing tablets in teaching and learning activities. Inadequate ICT infrastructure restricts access, hinders efficacy, and slows educational progress. This comprises inadequate internet connectivity to access online resources and educational apps, tablets require a dependable and fast internet connection. Slow download speeds, interruptions, and other connectivity challenges might result from insufficient internet connectivity, making it difficult for teachers to use the tablets efficiently. Also, insufficient electrical supply, Tablets require a consistent power supply to function, so insufficient power supply can cause charging and battery life concerns. Teachers may find it challenging to use the tablets for extended periods, restricting their teaching and learning opportunities.

5.2.2 Shortage of training and skills in using tablets in teaching and learning

A difficulty that restricts the efficient use of tablets in teaching and learning for teachers is that there is a shortage of training on how to use them in teaching and learning. The study found that a

lack of training affects the usage of tablets in teaching and learning in a variety of ways. Teachers who have not received proper tablet training may lack the knowledge and skills required to properly incorporate tablets into their lessons and activities. As a result, tablets are used less effectively in the classroom. Teachers who have not had proper tablet training may use them inconsistently or not at all, limiting the opportunities for pupils to profit from their use. Also, teachers lack the confidence to use them properly, resulting in less effective tablet utilization in the classroom. Teachers' capacity to use tablets imaginatively to enhance their teaching and engage their pupils is limited by this situation. To deal with this issue, teachers must be given enough training and professional development opportunities to enable them to properly integrate tablets into their classes and activities.

5.2.3 Shortage of follow-up and feedback from the educational leaders

Another difficulty for teachers adopting tablets in teaching and learning is the shortage of follow-up and feedback from ministry authorities. According to the study, there is a shortage of follow-up and feedback, and teachers feel alone and abandoned. The teachers are unable to acquire direction or assistance on how to utilize tablets successfully, and their attempts to integrate tablets into the classroom are rarely acknowledged or appreciated. Due to a lack of desire or passion, this limited the potential advantages of tablet use in teaching and learning.

Furthermore, without proper follow-up and feedback, teachers are not held accountable for the efficient use of tablets in the classroom. Ministry authorities are unaware of the issues or achievements that teachers are having when adopting tablets and lack the information needed to make educated judgments about resource allocation or policy changes linked to technology in education. According to research, a shortage of follow-up and feedback leads to inconsistency or standardization in the use of tablets across different schools. Without clear guidelines or supervision from ministry officials, teachers may utilize tablets in a variety of ways or for a variety of objectives, resulting in unequal access to integrating tablets into teaching and learning.

5.2.4 Poor ICT vision and plan

Teachers who want to integrate tablets into their teaching and learning face considerable obstacles due to a lack of ICT vision and

preparation. In a time where digital technology is altering the educational landscape, having a clear and effective strategy for integrating Information and Communication Technology (ICT) into the classroom is critical. Inadequate ICT vision and planning, on the other hand, may hinder this process and make it impossible for teachers to realize the full potential of tablets in education.

5.2.5 Language of the resources from the internet

A scarcity of online materials in Arabic and Kiswahili is one of the biggest problems facing Arabic and Kiswahili teachers. Most of the websites, apps, and other resources that are available for tablets are only available in English or other European languages. Teachers find it challenging to locate relevant materials that are available in Arabic or Kiswahili due to this shortage of resources.

Restricted Vocabulary, another issue is the restricted vocabulary of online language. Many online terms and phrases are not regularly used in Arabic or Kiswahili. It is difficult for teachers to convey and explain these concepts to their students because of this. Teachers of Arabic and Kiswahili may not be comfortable with the abundance of technical vocabulary found in the language of the internet. Many times, this phrase is utilized in technical contexts such as programming, technology, and other areas that may not have anything to do with the subjects being taught.

The Researcher found that a lack of a clear ICT vision might lead to a gap between the purpose of employing tablets and their actual implementation in the classroom. Teachers may struggle to link tablet usage with educational objectives, resulting in unplanned and unproductive tablet use. Without a clear goal, tablets may end up being more of a novelty than a strong educational tool. In addition, the lack of an organized strategy can leave teachers in the dark about how to integrate tablets into their teaching methods efficiently. They may be unclear about which apps or software to use, how to administer the devices, or how to customize their classes to fully utilize tablet capabilities. This lack of direction can result in disappointment and misuse of resources.

5.3 Strategies for Supporting Teachers in using Tablets for Teaching and Learning

5.3.1 Improvement of ICT infrastructure in a school environment

The study found that one of the most important strategies for teachers to use tablets in their classrooms to teach and learn is the improvement of the ICT infrastructure. Teachers can access a variety of digital resources, such as e-books, videos, and interactive simulations, with better ICT infrastructure. This can assist teachers in enhancing their classes and giving teachers more dynamic and engaging learning opportunities. A better ICT infrastructure also gives teachers access to digital tools, interactive whiteboards, and online materials, which helps them plan lessons more effectively.

5.3.2 Providing frequent training and skills for all teachers on using tablets in teaching and learning

All teachers should receive regular tablet training to ensure that they are well-equipped to integrate tablets into their teaching and learning practices. This condition improves digital literacy, and regular training helps teachers improve their digital literacy skills, such as how to properly use tablets, educational apps, and other digital resources. This increases teachers' confidence and competence in integrating tablets into their teaching and learning practice. Teachers can keep up with the most recent trends and advancements in technology and education with the help of regular training. To improve their teaching and learning practices, teachers are required to stay current on new digital tools, learning platforms, and teaching techniques. The availability of regular training helps teachers deal with any difficulties or problems they could run across when utilizing tablets in their teaching. This helps teachers examine issues, find solutions, and raise the quality of teaching and learning when using tablets. By working together and exchanging ideas through regular training, teachers can share their experiences, ideas, and best practices. This could help foster an innovative culture and continue teaching and learning improvement.

5.3.3 Presence of follow-up and feedback to the teachers

Continuous Growth, Teachers can make ongoing improvements to their teaching strategies with

the help of feedback and follow-up. Teachers who receive regular feedback are better able to recognize their areas of weakness and address them. This results in the creation of more effective teaching strategies that may be applied to the use of tablets in the classroom. Teachers can also use feedback to help students' learning be more specific to them. Teachers may provide each student with a customized learning experience using tablets according to their abilities, hobbies, and learning styles. By analyzing feedback, teachers may determine which teaching strategies are most effective for each student and modify their approach accordingly.

Enhanced collaboration and communication, Feedback, and follow-up help to enhance communication between teachers and educational leaders. Teachers may quickly and simply give the challenges faced when using tablets appropriately. So, the leaders get this feedback from the teachers and find a solution to improve the integration of tablets for the teachers. Therefore, follow-up for the leaders is very important to stimulate the teachers to use tablets in teaching and learning.

5.3.4 Developing good ICT vision and plan

Developing an ICT vision and plan for teachers in Zanzibar schools is a critical technique for successfully incorporating tablets into teaching and learning. A well-thought-out ICT strategy and plan provides a road map for educators, administrators, and policymakers, ensuring that technology is successfully exploited for educational objectives.

The study found that a vision for ICT in education establishes long-term aims and expectations for the use of ICT tools such as tablets in education. It provides a clear direction for how tablets can improve the learning experience and increase educational outcomes in the context of Zanzibar. A clear ICT vision explains the expected impact of technology integration and the benefits it can provide to students and staff. It serves as a guide for educators, directing their efforts towards the main aim.

A well-structured vision and plan also make collaboration among many stakeholders easier. It brings together educators, administrators, lawmakers, and technology specialists to cooperate toward similar objectives. In Zanzibar, where teacher training and technology

infrastructure may differ from area to region, this collaborative strategy might assist in ensuring that tablet integration is uniform and efficient across the whole education system. Tablet integration into teaching and learning in Zanzibar can considerably improve educational performance. Tablets can provide teachers with access to plenty of digital resources, enable individual learning, and prepare learners for a technologically driven world. However, these advantages may only be realized if they are accompanied by a complete ICT vision and plan. Further support was provided by Bangkok (2014), who said that ICT vision is important for effective ICT integration in teaching and learning for teachers.

5.3.5 The availability of resources by subjects' languages

The study revealed that the availability of resources by subjects' languages on the internet is an important technique for teachers to combine with tablets in teaching and learning since it gives all teachers equal access to teaching and learning materials. Arabic teachers, for example, can obtain teaching and learning resources on the internet, as can Kiswahili teachers. This provides a varied range of learning materials that can meet the needs of all teachers. Teachers can obtain Teaching and learning materials in multiple languages that are customized to the curriculum of their disciplines by employing online resources. Because of this, they can design a more welcoming and inclusive teaching and learning environment that meets the requirements of all subjects such as Arabic and Kiswahili languages.

Furthermore, the internet's availability of resources in several languages allows teachers to employ a range of teaching strategies that can help students learn more efficiently. Teachers, for example, can use movies, audio files, and other multimedia tools to teach complex ideas in an exciting and easily understandable manner to their pupils.

6. DISCUSSION

This chapter contains a discussion of the results which have contributed and linked to research in the field. The focus of the discussion is on exploring how teachers integrate tablets into teaching and learning including the challenges that teachers face and strategies to support teachers in using tablets in teaching and learning in Zanzibar.

According to the findings of the study, using tablets for demonstration and searching materials can be an effective strategy for teachers to include tablets in their teaching methods. Tablets can be used by teachers to demonstrate concepts, give visual aids, and access digital resources not found in traditional textbooks. This technique has the potential to make teaching more engaging and participatory for teachers. Teachers can obtain relevant and up-to-date information to add to lesson plans by searching for items. However, teachers must have proper training and support to use tablets effectively. My observation was further supported by [14], who demonstrated that the integration of ICT facilities enabled teachers to create animations, simulations, and movies, which improved the effectiveness of teaching and learning.

It's critical to adhere to best practices when integrating tablets into teaching and learning. Using educational apps is one of the best ways to integrate into tablets. There are many different educational apps available that cover a wide range of disciplines, giving teachers a variety of tools and resources to improve the teaching and learning process. With the use of apps, teachers can modify their lesson plans to the individual learning preferences and skills of each student. Project-based learning with tablets is an additional recommended practice. My observation is supported by [15] further observed that ICT tools give teachers access to educational apps that enable them to get a lot of teaching and learning resources.

In terms of challenges, Zanzibar teachers face a lot of challenges when integrating tablets into teaching and learning as follows.

6.1 Insufficient Pre-service and in-service Teacher Training

Teachers in many schools in Zanzibar seemed to lack the ability to integrate tablets into the teaching-learning process due to insufficient training opportunities. The study found that Teachers were seen utilizing tablets in the classroom in few times since most teachers were hesitant to embrace new technologies. New technologies such as using tablets in teaching and learning must be integrated into the classroom, and teachers must be trained to tablets in efficient and effective ways. In this condition, teachers will require some basic training to build relevant skills, knowledge, and

attitudes towards the efficient use of tablets to enhance the teaching and learning process. My conversation is supported by [16], who noted that one of the top three issues with teachers using ICT tools such as tablets in the classroom was a lack of training.

According to (Becta 2004), the matter of training is surely complex because numerous components must be considered to ensure the efficiency of the training. These included time for pedagogical training, skill development, and ICT use in the first stages of teacher education. It's essential to give teachers pedagogical training instead of only instructing them how to use ICT technologies. Furthermore, the study discovered that a lack of training resulted in a lack of alignment between the technology used and the curriculum. Teachers do not understand how to include tablets in their lesson plans or are unaware of the educational apps or resources that can help them teach. This might result in a disjointed or uneven use of technology in the classroom, which can be confusing for teachers and restrict their learning prospects.

6.2 Poor Curriculum Alignment with ICT

Also, there is a curricular misalignment that causes a lack of coherence between what is taught in the classroom and what is offered via tablets. Like many other locations, Zanzibar may confront challenges with old or outdated curricula that do not include technology as a major component. Teachers may struggle to properly incorporate tablets or digital resources into their teaching if the curriculum does not expressly highlight their use. Furthermore, inadequate curricular alignment might lead to a lack of direction for instructors on how to properly integrate tablets. Clear directions, rules, and examples of how to use tablets to enhance the curriculum are required for teachers. Without such assistance, Teachers may be afraid to try new technology or may not know where to begin. Poor integration of curriculum can also influence assessments. Teachers might find it difficult to measure what pupils have learned through technology-enhanced exercises if evaluations are not aligned with the usage of tablets and digital resources. Traditional and technology-mediated learning experiences should be evaluated in assessments. This discussion is supported by [17] who states that poor curriculum integration with ICT acts as a challenge for teachers to use ICT tools such as tablets in teaching and learning.

6.3 Big Teaching Load of Teachers in Zanzibar Schools

The study revealed that when it comes to integrating tablets into teaching and learning, teachers in Zanzibar schools have tremendous obstacles due to their heavy teaching loads. While tablets have the potential to improve educational experiences, the demands on instructors because of a heavy teaching load make it difficult for them to properly implement this technology into their classrooms.

The researcher proved that Zanzibar's education system frequently suffers from overcrowded classrooms and a shortage of skilled teachers. Teachers in Zanzibar are usually assigned to big groups of children, which can be overwhelming and offer little time for individualized instruction. Tablets as an instructional tool necessitate careful planning, preparation, and attention to each student's needs. Teachers may struggle to give the essential specific support that tablet-based learning necessitates if they have a heavy teaching load. Furthermore, teachers with severe workloads frequently encounter time limits, which limit their capacity to create and adjust digital content for their courses. Tablet integration requires the development of interesting, interactive, and personalized materials that correspond with the curriculum and the requirements of the students. The process of creating and altering information takes time and requires careful study. Teachers with a heavy teaching load may not have the time to engage in building these tools. My observation is supported by [18] reported that in Tanzania Schools there an overcrowded of student in classrooms so this condition reduces the efficiency of teachers to integrate tablets in teaching and learning addition, when dealing with heavy teaching loads, teacher burnout is a common issue.

Finally, tablet integration is a major problem that teachers and school administrators encounter in their teaching and learning activities. As the demand for ICT in teaching and learning grows, it is critical to ensure the efficient and effective integration of tablets for teachers. The success of incorporating tablets into the teaching and learning process is frequently dependent on education stakeholders and the strategies used to encourage teachers to use tablets in efficient and effective ways. It is critical to understand the unique problems that teachers experience and develop solutions to solve these challenges to ensure that teachers integrate tablets. Among the

strategies that can be used to encourage teachers to adopt tablets in teaching and learning activities are

6.4 Provide Pre-service and in-service Training for Teachers

The research found that Pre-service training, which takes place before teachers enter the classroom, lays the basis for tablet integration. It provides prospective teachers with the information and abilities they need to effectively employ technology in their teaching practices. Modules on tablet use, digital pedagogy, and classroom management using technology should be included in pre-service training programs in Zanzibar. These programs can assist teachers in comprehending the possibilities of tablets and creating compelling digital learning resources. Furthermore, they can inspire the confidence required to accept technology as a vital component of the teaching process. This observation was supported by [19] asserted that training teachers in ICT tools enhances effective utilization during the teaching and learning process.

6.5 Good Curriculum Alignment with ICT

Another strategy is Curriculum alignment entails ensuring that the information and activities supplied via tablets correspond with the curriculum's educational goals and requirements. In Zanzibar, as in many other parts of the world, the curriculum acts as an outline for what pupils are supposed to learn, laying out the subjects, topics, and learning outcomes for each grade level. For tablet integration to be effective, educational technology must complement and support these goals. To solve this issue, intentional efforts must be made to evaluate and update the curriculum to reflect the role of technology in education. The curriculum should include instructions on how to use tablets and other ICT resources to promote learning objectives and standards. To guarantee effective integration, this update should be led by cooperation among developers of curriculum, education leaders, and technology specialists. My observation is supported by [17] who said that implementing ICT tools such as tablets in teaching and learning should be associated with the curriculum.

To support curriculum alignment, teachers must first determine the curriculum's learning objectives. They must recognize the precise

skills and knowledge that pupils must gain. Once these objectives are established, teachers can choose or produce digital content, apps, and activities that are directly related to these objectives.

6.6 Reducing the Teaching Load of Teachers in Zanzibar Schools

A heavy teaching load can exhaust teachers, leave them with little time and energy to play with, and integrate technology into their teaching practices. Overcrowded classrooms and a lack of skilled teachers hinder Zanzibar's education system. With limited resources and a growing number of students to teach, teachers are frequently preoccupied with basic classroom management and content delivery. Reduced teaching loads are critical for giving teachers the time and space they need to incorporate technology as a fundamental part of their instruction.

The study realized that reducing the teaching load might also help teachers with administrative duties. Many teachers in Zanzibar are obliged to perform administrative activities in addition to teaching, such as grading, reporting, and maintaining student data. These duties take up valuable time that could be utilized better on creating interesting digital content, adapting to technology, and effectively integrating tablets into the curriculum. Teachers can focus more on enriching the classroom by using technology optimizing administrative activities and decreasing paperwork.

Furthermore, an excessive teaching load frequently leads to teacher exhaustion, which hurts educational quality. Teachers who are overworked and anxious may struggle to adapt to new teaching methods or stay up with the ever-changing world of educational technology. Teachers can keep their excitement, creative thinking, and ability to experiment with innovative teaching approaches, such as tablet integration, by lowering their teaching load and guaranteeing a reasonable class size. Also, the study realized that lower class sizes and reduced teaching loads allow teachers to provide pupils with more individualized attention. It is difficult to deal with each student's needs in a crowded classroom. Tablets can be useful instruments for personalized learning since they allow teachers to develop at their speed and investigate areas of interest.

7. CONCLUSION

This study examined how teachers integrate tablets into teaching and learning in secondary schools in Micheweni District in Zanzibar. The study drew the following conclusions:

There is a scarcity of qualified teachers who are proficient in the use of ICT tools such as tablets in teaching and learning. Many secondary school teachers lacked the necessary skills to facilitate the usage of tablets in the classroom. A key barrier to successful tablet integration in schools is the lack of a critical mass of teachers who are comfortable using tablets and can thus provide guidance and examples of good practice to those who are still unfamiliar with tablet use. Due to inadequate exposure during formative training in initial teacher training institutes, the study has indicated that the quality of ICT training for many teachers is far from satisfactory. Teachers were not given enough opportunity to practice effectively integrating tablets into teaching and learning during in-service training through seminars and conferences.

Additionally, the study has demonstrated that there are several supporting effective strategies that can be used to make teachers perform well in integrating tablets into teaching and learning in Zanzibar. These include the presence of technical support, improving ICT infrastructure, providing pre-service and in-service teachers, providing the ICT budgets to stimulate the teachers to use tablets effectively and efficiently school in environment, Presence of follow-up and feedback, Provision of Appropriate ICT Software, building a positive Attitude towards using tablets in teaching and learning. Findings suggest that a combination of these strategies along with other initiatives would help teachers to perform better in integrating tablets in teaching and learning, and will improve the quality of education in Micheweni district. These strategies, if implemented properly, will benefit not only the teachers but also the students, the schools, and the entire Micheweni district.

8. RECOMMENDATIONS

The study recommends that the Government of Zanzibar, through the Ministry of Education and Vocational Training (MoEVT), should employ more ICT teachers in secondary schools and train them in ICT skills so that they can effectively integrate ICT tools such as tablets in teaching and learning. Zanzibar needs well-

trained teachers who can deploy ICT in schools in a way that shifts teaching and learning patterns from old to new. This will provide teachers with adequate training on how to include tablets in teaching and learning. Furthermore, teacher education institutions should align their curricula to train teacher trainees on the skills and competencies required for classroom teaching using ICT tools such as tablets in the teaching and learning process. Rather than basic tablet training, teachers should be taught the use of ICT tools. Teachers must be taught ICT skills in word processing and other packages so that they understand the usefulness of these packages in the classroom.

To prepare teachers for the adoption and use of tablets in the classroom, ICT skill standards should be established that offer methodologies for planning training needs and staff development initiatives.

The study also recommended that the government should construct appropriate ICT infrastructure in schools. It should be acknowledged that teaching and even learning from students can both result in significant learning. As a result, schools should invest in modern ICT infrastructure so that both teachers and students may train on it. If they have access to ICT infrastructure, teachers might be encouraged to use it to study. This would stimulate curiosity, which would support its adoption in the classroom. Also, to foster a positive attitude to teachers on the use of tablets in teaching and learning, there should be Comprehensive in-service courses. In-service courses should be designed that will enable all teachers to acquire ICT skills. Continuing professional development of teachers is central to the successful implementation of using tablets in school.

The government should adopt a plan of action to ensure the long-term success of tablet integration. The plan should include budgeting for tablet acquisition, maintenance, and updates. It should also assess the program's sustainability and long-term financial feasibility. The government can ensure that tablet integration persists as a useful and ongoing element of education by planning for the future.

To successfully integrate tablets into teaching and learning in schools, teachers require models of effective practice and leadership from their school leaders, as well as the necessary time for

professional development. The employment of tablets by school leaders will have an encouraging and admirable impact on those teachers who may be more resistant to technology, presenting them with a good incentive to give it a try. They must be transformed from information consumers who access resources and information via the internet to information producers who adapt ICT tools such as tablets to their specific cultural and educational reality.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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