

Lecturers Perspectives on the Advantages and Disadvantages of Tablet Use for Learning and Teaching in a South African Rustic University

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Keywords: Tablet Computers, Advantages, Disadvantages, Learning, Teaching, University, Educational Technology, Mobile Technology, Rustic University Education, Lecturers perspectives

Abstract: This research sought to establish the lecturers perspectives on the advantages and disadvantages of tablet use for learning and teaching at a rustic university in the East London district of South Africa. The research was anchored on qualitative approach and design used to collect the data was Case study research. The sample consisted of 10 lecturers from the departments of Information and Communications Technology and Electrical Engineering. The researcher developed an open-ended questionnaire to collect the data. The responses gathered were analysed thematically. Findings showed that lecturers experienced the advantages of tablet use for learning and teaching such as tablet as a vital and user-friendly tool, enhanced engagement and collaboration between students and lecturers and to do research. They also experienced disadvantages such as distractions, connectivity problems, taking photos during lecture hours and lack of concentration. Like any other device, tablets also have advantages and disadvantages. Therefore, if the university can set a policy that needs to be followed by each lecturer and student in classroom, disadvantages and ineffectiveness can be turned to advantages and effectiveness and thereby making tablet an effective tool for learning and teaching.

1. Introduction

The quick evolution of Information and Communication Technology in the 21st century has transfigured not only in all areas of works but also in education [1]. Lecturers and students are provided with internet access in higher education institutions to utilize the different tools of teaching and learning such as tablets, Personnel Digital Assistant, laptops etc [2]. Educators should learn and adapt with these latest technologies and current style of learning to safeguard an active environment of mobile learning [3].

The assimilation of tablets for pedagogy enhance the reading skill, encourage learning and it aid

to engage and collaborate between each other [4]. Emerging institutions were integrating tablets in classrooms to replace the earlier computer learning devices such as laptops and desktop computers [5]. Institutions in the New York City purchased a bulk number of tablets that costed more than \$1.3 million [6].

The multipurpose feature of tablet such as flexibility and to read ebooks itself makes tablet an appropriate tool for learning in tertiary institutions. It helps students to use it as textbooks as tablets are inexpensive than textbooks [7]. Apart from reading, tablets provide numerous benefits for the students and lecturers to use it in tertiary institutions. Findings of a research conducted by Enriquez [8] shows that there was a massive difference seen in students in their learning who used tablets when compared with the students without tablet use. It also made engagement and collaboration between students and lecturers easy. Furthermore, installing apps on tablets have enhanced the engagement and association between students [9].

On the other side, there are researches that shows the negative views of lecturers on using tablets in learning and teaching [10]. While the research conducted by Percival and Claydon [11] emphasise that lecturers had negative views due to the shortage of training and professional development, Flanagan [12] points that lecturers had negative views due to the off-task behaviours of students using tablets in classroom.

1.1. Problem Statement

It is clear from the background of the study that tablets are used for learning and teaching ubiquitously. However, studies on the implementation of tablets for education are scarce [13] and lecturers are in a dilemma as they try to assimilate the gadgets in effective ways [14]. Furthermore, despite studies on the tablet use for teaching have been done in developed countries such as Finland, the Great Britain and the Unites States of America, no adequate studies have been conducted in developing countries mainly in South Africa [14, 15]. Therefore, seeking the perspectives of lecturers on the advantages and disadvantages of tablet use in the classroom is a pertinent problem to be investigated.

1.2. Aim of the Research

This research sought to establish the lecturers' perspectives on the advantages and disadvantages of tablet use for learning and teaching at a rustic university in the East London district of South Africa. Therefore, the key research question was set forth as: What are the perspectives of lecturers on the advantages and disadvantages of using tablets for learning and teaching in university classrooms?

2. Literature Review

A very recent study conducted in India by [16] examined the views of medical faculty members on the use of iPad tablets for education. A cross-sectional study was conducted with self-administered questionnaire. Around 46 teaching faculty members participated in the pilot study. Findings showed that the faculty members have positive views on using iPad and thereby managing the time more effectively.

Another recent study conducted in Fujairah Men's College and Fujairah Women's College sought the perceptions of lecturers to inspect the limitations of iPad tablet. The data were collected by conducting online survey, class observations and interviews. A total of 14 lecturers participated in the online survey. After the class observation, five lecturers were interviewed. Findings showed that iPad has many limitations not only as a pedagogical tool but also as a learning tool such as the tiny touch screen, shortage of filling system, distractions that are causing due to the off-task behaviours

of students such as playing games, browsing non-educational sites during the lecture time [17].

Galway, Maddigan and Stordy [18] assessed the experiences of teacher educators on using tablets and their ways in integrating the device for lecturing. Qualitative approach was followed for this study. Data were collected from a group of nine teacher educators using focus group interviews. Findings revealed that positive attitudes towards the appraisal of tablets. Despite the device was a vital tool for exploratory pedagogy, reflective teaching, collaborative and inquiry-based learning, some challenges were also identified such as the cross-platform compatibility and technical infrastructure issues.

A research conducted in a Midwestern university explored the views of faculties about the factors that influenced them on the integration of iPad tablets into curriculum. Using two focus group interviews, data were collected from 14 faculty members and analysed using content analysis. Results showed that three factors such as device capabilities, faculty attributes and student attributes influenced them on the implementation of iPad [19].

Ali [20] examined the different activities of lecturers and students using tablets and how frequent was their use for learning and teaching. Mixed method study was adopted in this research. Data were obtained from survey, class observations and interviews. Out of 28 participants who received the questionnaire, only 14 participants responded. Furthermore, other ways in which the data collected were by means of six class observations and five interviews of the lecturers. Findings showed that use of iPads enhanced the focus of students on the tasks and activities and encouraged students to engage more with the topics taught in the classroom.

3. Research Methodology

3.1. Research Approach

The research was anchored on qualitative approach as it allows to explore the concepts and experiences of the participants in detail.

3.2. Research Design

The design used to collect the data was Case study research as it offers a continuous analysis of the facts.

3.3. Study Site

The site of the study was at a rustic university in the East London district of South Africa as this university was the only higher education institution, which was using tablets for learning and teaching in this area.

3.4. Population and Sample

The population of lecturers from both departments such as Information and Communications Technology (ICT) and Electrical Engineering (EE) were 25 and the sample were 10. “An extremely large number of articles, book chapters, and books recommend guidance and suggest anywhere from 5 to 50 participants as adequate” [21, pg. 1321]. A minimum of 10 is acceptable – assuming the population integrity in recruiting [22]. Although there were many departments that were using tablet computers for education in the selected university, it was the ICT department that has more number of students registered for the programme among all other departments. The researcher felt that if there were more students, then the lecturers who were lecturing them would have different experiences regarding the usage of tablets, which will definitely be a benefit for this study. This made the

justification for sampling lecturers from ICT department. As EE department was also in the same building of ICT department, it was convenient for the researcher to approach the lecturers in EE department.

3.5. Data Collection Instrument

The researcher developed an open-ended questionnaire to collect the data. The objective of using open-ended questions in the questionnaire was to find what lecturers think and feel [23]. Questionnaire consisted of two sections in which the first section comprised of the demographic data and the second section comprised of five open-ended questions.

3.6. Ethical Compliances

The researcher obtained permission from the university authorities to conduct the study. Furthermore, consent was also obtained from the participants to gather the data.

3.7. Pilot Study

The researcher himself distributed the questionnaire to five lecturers who agreed to participate in the pilot study and feedback received from them were positive and mentioned that everything was clear and able to understand.

3.8. Data Collection Procedure

The researcher checked with all the lecturers whether they can participate in the main study or not and all of them were keen to participate in the main study. The researcher emailed the questionnaire to all the participants to make the survey fast and easy. As all the respondents were researcher's colleagues, he was already having their email addresses and cell phone numbers. Immediately after emailing, he met all the participants in person to provide them with the information about the research and the questionnaire although it was described in the consent form.

Despite the researcher indicated to the participants that the participation would be voluntary, he reminded them to sign at the bottom of the consent form if they wish to participate and requested them to fill and return it back within a timeframe of 14 days. Out of 25 respondents from ICT and EE, only seven of them responded back within that duration. A polite reminder was sent through whatsapp to all the remaining respondents on the 15th day and requested them to participate in the survey at the earliest. While only one lecturer filled the questionnaire, others were occupied with many workshops. A polite reminder was sent again in the form of whatsapp and personnel message to the remaining lecturers to respond back at their earliest convenience. However, only two lecturers answered. Therefore, response rate of the questionnaire collected back from both ICT and EE was 40%.

3.9. Data Analysis

The responses gathered were analysed thematically. Major themes and sub-themes were identified based on the recurrence data obtained for each question in the survey

4. Results

Open-Ended Question 1: Write any three advantages that you have experienced through the use of tablets in classroom?

Themes have been extracted from the responses of open-ended Question one regarding the

advantages of tablet use in university classrooms. The researcher collected responses from all 10 lecturers. Firstly, the major theme that was extracted was tablets were very user friendly. Around 80% of the participants averred that accessibility of internet was easier.

Lecturer 1: *"Tablets are fun and easy to use for students during class"*.

Secondly, 70% of the lecturers indicated that tablets were useful for students' learning purposes such as reading electronic copies and Books, learning through Wiseup or blackboard, writing assignments using tablets and reading notes and handouts.

Lecturer 3: *"It has made significant impact over the learning environment for our learners"*.

Subsequently, 50% of the lecturers felt tablet as an effective device, which can be used by students for engagement, collaboration, group discussion, communication with classmates and lecturers.

Lecturer 5: *"Tablets provide for more interactive communication and engagement between peers"*.

Furthermore, 20% of the respondents indicated that students used tablets to gather information or searching information through internet.

Lecturer 2: *"Promotes students to be information seekers as they have information literally at their fingertips"*.

Open-Ended Question 2: Write any three disadvantages that you have experienced through the use of tablets in classroom?

Themes have been extracted from the responses of open-ended Question two regarding the disadvantages of tablet use in university classrooms. The researcher collected responses from all 10 lecturers. The first major theme recorded was the connectivity issues. About 50% of the lecturers' indicated that there were problems with internet connections and Wi-Fi.

Lecturer 4: *"Unavailability of communication medium such as medium such as Wi-fi make difficult to use it to connect to internet"*.

Around 40% of them believed that tablets were making high level of distraction in classroom due to the students' usage of social network such as facebook, twitter.

Lecturer 6: *"The technology can be distracted"*.

Taking photos while the lecture takes place was another drawback, which was reported by 20% of lecturers.

Lecturer 8: *"They use tablets to take photos of each other and also access Facebook"*.

While 10% of the lecturers stressed that students focus were deviating in class due to the use of tablets, another 10% of them reported that students learning did not happen when they brought tablets with battery having low charge.

Lecturer 9: *"Student's focus is questionable in class and pay attention to the rest of the matters"*.

Lecturer 10: *"If a student doesn't have a charged iPad, then they lose access to all their learning materials for the day"*.

Open-Ended Question 3: Why do you think the usage of tablet in classroom is effective?

Themes have been extracted from the responses of open-ended Question three regarding the effectiveness of tablet use in university classrooms. As one lecturer did not respond to this question, total number of lecturers responded to this question were only nine. The major theme extracted was multitasking. While around 44% of the participants agreed that it enabled them to do research, take photos for educational purposes and watch videos for learning and teaching, another 44% of the participants indicated its effectiveness due to easy accessibility.

Lecturer 1: *"Tablets give students instant access to individual research, an enormous knowledge base is available at their fingertips"*.

Lecturer 4: *"Electronic accessibility from anywhere and anytime"*.

Around 22.2% of the participants mentioned that tablets were effective for communication, engagement and collaboration.

Lecturer 6: *"Because students are all engaged. All students participate in the lecture"*.

About 11.1% of them posited that tablets were effective as it was easy to obtain information and download eBooks.

Lecturer 7: *“Tablets are capable of offering enhanced eBooks featuring images, video and audio”*.

Another 11.1% of them indicated that using tablets were motivating and making an interest among students to learn and among lecturers to teach the students.

Lecturer 8: *“In our experience over the past two years, teaching and learning through tablets create more interesting and enjoyable learning environment not only for the students but also to the lecturers as well”*.

Open-Ended Question 4: Why do you think the usage of tablet in classroom is ineffective?

Themes have been extracted from the responses of open-ended Question four regarding the ineffectiveness of tablet use in university classrooms. As two lecturers did not respond to this question, total number of lecturers responded to this question were only eight. Around 50% of the participants stated that use of tablets were causing disturbance in students’ studies.

Lecturer 2: *“Tablets are distracting - Tablet could potentially be a distraction as it is associated more with entertainment than education”*.

Moreover, students taking photos of lecture notes written on the board made them lazy to write the important points while explaining. This made 12.5% of the lecturers to emphasize that tablet was an ineffective tool.

Lecturer 3: *“There is a tendency among students to not listen in the class and just take photos of the information written on the board as they think it is enough for them to understand the topic. They do not realise that not everything that has been said in the class is written on the board. Due to this laziness in copying notes from the board the students also losing good handwriting skills”*.

Additionally, 12.5% of the lecturers posited that the tablets were ineffective when the Wi-Fi connection was poor.

Lecturer 5: *“It becomes ineffective when there is no wireless connection or when students start loading unnecessary personal stuff that distract their attention in class”*.

Open-Ended Question 5: Write your suggestions to improve the use of tablet in classroom?

Themes have been extracted from the responses of open-ended Question five regarding the suggestions to improve the tablet use in university classrooms. The researcher collected responses from all 10 lecturers. Around 40% of the lecturers suggested the different ways to improve learning and teaching that includes eLearning, download eBooks and online assignments.

Lecturer 5: *“Suitable for eBooks for student access. Load all course materials to tablet and make it compulsory for all teaching and learning activities”*.

Around 20% of the participants suggested to block unnecessary apps particularly all social networking apps.

Lecturer 7: *“Include more content on them. Ability to lock other apps during lecture”*.

Another 20% of the participants suggested that there should be rules that is to be followed by lecturers and students.

Lecturer 8: *“There should be a proper set of rules and regulation for the students on the usage of school tablets during teaching or lectures”*.

While 10% of the participants suggested to improve internet connection, another 10% of the participants suggested to provide tablet training to students before it is implemented in the classroom.

Lecturer 9: *“Improve on Internet connection”*.

Lecturer 10: *“Proper training must be given to students earlier”*.

5. Discussion

The responses showed that tablet was a user-friendly and learning tool which can be used for

engagement, collaboration and research. Alyahya and Gall [24], George et al. [25] and Shen [26] posited that tablets could be considered as a user-friendly tool. Agir [27] showed that students focus on learning and research had increased due to their use of iPads. Rossing et al. [28] averred that using tablets enhanced students' engagement and collaboration in learning. Therefore, findings of the current study are in line with the findings by Alyahya and Gall [24], George et al. [25], Shen [26], Agir [27] and Rossing et al. [28].

The current study revealed that using of tablets have disadvantages such as connectivity problems, taking pictures during lecture hours, distractions, lack of concentration and inconvenience. Semerci [29] articulated that poor internet connection was a serious issue that had affected students learning using tablets. Shen [26] indicated that only a quarter of the participants felt that the use of tablets make distractions. Alyahya and Gall [24] reported that participants were using tablets for taking photos during lecture period. Therefore, while the findings of the current study corroborate with the findings by Semerci [29], Alyahya and Gall [24], they contradict with the findings by Shen [26].

Students started to do multitasking activities after getting the tablets. Alyahya and Gall [24] stressed that students were performing more than one task at the same time using tablets. As it is a small device that can be taken anywhere, internet accessibility was easier from anywhere and anytime. Shen [26] indicated that internet accessibility was easier on tablet. Additionally, the current study established that engagement and collaboration were taking place for group study. Mango [30] specified that engagement and collaboration among students was higher after using tablets. Therefore, findings of the present study are parallel with the findings by Alyahya and Gall [24], Shen [26] and Mango [30].

The study revealed that students were interrupting during the class hours due to students' off-task behaviours using tablet. McBeth et al. [31] affirmed that playing games using tablets in the class cause interruptions. Taking photo using tablets made students lazy to write the notes. Alyahya and Gall [24] averred that respondents in their study were using tablets to take photos. Therefore, findings of the present study coincide with the findings by McBeth et al. [31] and Alyahya and Gall [24].

Suggestions made by the lecturers for improvement were enhancement in learning and teaching, block unnecessary apps, rules to follow while using tablets, improve internet connection and training for students. Diemer, Fernandez and Streepey [32] corroborated with the suggestion of the present study that enhancement is required for teaching and learning. Conn [33] posited that guidelines of dos and don'ts on using tablet should be kept in each classroom. Drouin et al. [34] and Hargis et al. [35] suggested the need for additional training on the use of tablets. Therefore, findings of the present study are consistent with the findings by Diemer, Fernandez and Streepey [32], Conn [33], Drouin et al. [34] and Hargis et al. [35].

6. Conclusion

On the basis of the results of this study, it is established that lecturers experienced the advantages of using tablets for learning and teaching such as it was a vital and user-friendly tool for learning, enhanced engagement and collaboration between students and lecturers and to do research. They also experienced disadvantages such as connectivity problems, distractions, taking photos and lack of concentration. While tablets were effective due to its features of multitasking, easy to access and download the information, engagement and collaboration, they were ineffective as it was making students lazy to write, interruptions during the class hours and Wi-Fi issues. It should be highlighted that lecturers suggested to enhance learning and teaching by insisting students to perform more activities using tablets. Furthermore, they also suggested to block unnecessary apps, offer training to students, improve the internet connection and to inform all students about the rules to be followed in classroom. Overall, it should be noted that like any other device, tablets also have advantages and

disadvantages. Therefore, if the university can set a policy that needs to be followed by each lecturer and student in classroom, disadvantages and ineffectiveness can be turned to advantages and effectiveness and thereby making tablet an effective tool for learning and teaching.

6.1. Limitations

The sample of the study were only from the departments of EE and ICT. It would have been more effective if lecturers from other departments were also involved to provide the data.

6.2. Recommendations

This study has some recommendations that are shown below.

(1) Management of institutions should provide a training to both lecturers and students on the dos and don'ts of using tablets in classroom.

(2) Before distributing tablets to the students, network administrators must block all unnecessary apps and websites for the effective learning and teaching to take place.

6.3. Implications for Further Research

A study that compares the perspectives of lecturers, students, managers and parents on the advantages and disadvantages of using tablets for learning and teaching would be a valuable study to be investigated.

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