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## THE EFFECT OF MOBILE LEARNING APPLICATIONS ON STUDENTS' ACADEMIC ACHIEVEMENT

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### ABSTRACT

The impact of mobile learning applications on students' academic performance is investigated in this study. In the study, a quasi-experimental design was employed. Students participated in the study. The study was conducted in the year 2020–2021. The experimental group (n = 15) used a mobile learning technique, whereas the control group (n = 26) attended a lecture-based classroom. A criteria was utilized to assess the animations created by the pupils. Interviews with students were performed for the exploratory study. The results imply that mobile learning might increase students' academic success. Both groups scored quite well on attitudes toward mobile learning. The students also valued mobile learning as a strategy that might greatly boost their motivation.

*Keywords: mobile learning; tablet computer; graphic; animation; academic achievement; attitude*

### INTRODUCTION

The number of people who subscribe to mobile cellular networks is projected to reach seven billion in the year 2016. Additionally, 3.2 billion people are known to utilize the Internet. Mobile technologies have a significant impact on how we interact, communicate, and collaborate in daily life (Chien et al.,2014). Mobile technologies, more notably smartphones and tablet computers, potential to transform educational systems and instructional methods. Although mobile learning provides advantages for many interactions and may be used to supplement learning inside the curriculum, it cannot be utilised to eliminate formal qualifications.

The notion of flipped classroom evolves with moment and is impacted by new technologies. Clusters of learners may also develop among those who are on the go. When you take into account numerous specialisations, teaching is at the frontline as a major resource of in-service instruction and context of an integrated. Phone learning's interaction capabilities allow ongoing training outside of a traditional classroom environment Davis (2003).

In the digital age, mobile devices are frequently used. Social networking sites, which are becoming increasingly important with Web 2.0 technology, make it easier for teachers and students to adopt mobile devices. Students' attitudes toward their courses are improved by the educational use of mobile devices inside and outside of the classroom. Mobile learning increases the motivation and interest of students. Additionally, the use of mobile devices in educational settings motivates students to engage in educational activities. Consequently, it is possible that mobile devices will become essential for both students and teachers (Chapelle,2011).

According to researchers, the access time should be extended (Arnseth and Hatlevik,2010). Access to educational materials outside of class hours is one of the benefits of mobile learning. For this, mobile learning management systems might be employed. Additionally, design principles for effective interactions are used to create mobile learning materials.

Mobile learning study has implications and suggestions for application. Numerous studies showing that mobile learning improved academic performance resulted to the conclusion that it is more permanent for learning. Additionally, the use of social networks and mobile technologies has a positive impact on how well students perform in their classes. Therefore, the study aims to examine the mobile educational application for children learning



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## **MATERIAL AND METHODS**

### **Research Design**

The research methodology used in this study was a quasi-experimental approach .Each group received lectures that were split 50/50 between theory and practice. Both groups had access to learning materials (blog, presentation, sample, video, podcast, homework, test, and forum) via a learning management system. Academic success, attitude toward mobile learning, and animation development level are the research's dependent factors. Both traditional learning environments and mobile learning environments are independent factors in the study. a mobile learning group of fifteen future teachers: This group received instruction using a mobile learning strategy. This group received tablets, and mobile devices had access to the learning management system and instructional materials. For this group, an online learning management system and educational materials were accessible.

### **Data Collection**

#### **Test of Academic Achievement**

Researchers created the exam to gauge students' intellectual growth based on what they had learned in the course. Before the exam was produced, the subject's scope, goals, and substance were established. Based on comments from industry experts, the questions were developed. Even during project development, a table of specifications was produced. The item analysis exam had participation from 15 university students. The TAP (System Testing Procedure) system was used to carry out the descriptive statistics.

#### **Interview**

The purpose of the moderately conversations was to elicit participant opinions out about change initiative. Five randomly selected students from the mobile learning group received contacted. The instrument for gathering data would have been the jeep interviewing form, which also was completed in reference to the learning for mobile apps.

#### **Analysis of Data**

In this study, gaussian distribution and homogenous were taken into account when using a mix of regular and pre tests. Software called SPSS 20.0 was used to analyse the participant data. The "Anime Type Of skills Rubric" was used by academics and industry professionals to score the students' videos independently.

## **ASSESSMENT & RESULTS**

Mann-Whitney To examine the scientific attainment results of the two groups, the U exam was used (see Table 1). Prior data, there were no significant variance in the school performance of the two groups ( $p > .05$ ), but after research, there were a significant variance in favors of the experimental and control group ( $p .05$ ). These findings support the notion that e - learning has a more positive influence on educational attainment.



**Table 1**The effect of mobile learning on academic achievement

Group	Test	N	Mean rank	Sum of ranks	Mann-Whitney U	Z	Sig.
Experiment	Pre test	15	25.20	378.00	132.000	-1.716	.086
Control		26	18.58	483			
Experiment	Post test	15	31.13	467.00	43.000	-4.150	.000
Control		26	15.1	394			
Experiment	Follow up test	15	28.67	430.00	80.000	-3.130	.002
Control		26	16.5	431			

Six months following the survey's conclusion, move tests were conducted to determine persistent control. Data from post-tests and follow-up tests were compared. According orders tests, it can be demonstrated that there was a still a massive distinction in experimental groups (U=80.000, p0,005). On academic accomplishment, higher education may be considered to have a long-lasting impact. Between of two groups' mood ratings from the pre- and post-test, there were no discernible variations. The reason for the from before the and post-excellent test's performance in this instance. The fact that volunteers were computer savvy and majored in e - learning and teaching methodologies may be attributed to the high attitudinal ratings. It can be shown that both parties scored well on their attitudes about teaching and learning (p>.05).

**The effect of mobile learning on animation development levels**

Analysis was done on the student-made animations. Meaningful effects in favour of the experimental group were detected (p.05), which is comparable to the outcomes of the thread and move tests for graduation rates assessments.

**Table 2. The effect of mobile learning on animation development levels.**

Group	N	Mean rank	Sum of ranks	Mann-Whitney U	Z	Sig.
Experiment	15	30.97	464.50	45.500	-4.096	.000
Control	26	15.25	396.50			

This research examined at how mobile learning apps affected undergraduate students' academic performance, attitudes toward mobile learning, and degrees of animation development. In this study, mobile learning greatly outperformed traditional learning in terms of its impact on academic attainment. According to Hussain et al. (2011), mobile learning promotes student success in addition to capturing their interaction. On the other hand, Chien et al. (2014) underline that due to cognitive overload and inadequate learning design, mobile learning has a negative impact on academic attainment.

According to Arnseth and Hatlevik (2010), pupils exhibit favorable opinions about mobile learning. This study indicated that both groups had favorable opinions regarding mobile learning, which was



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consistent with the findings of earlier studies. Researchers believed that this condition to be fair because both groups are considered to be "digital natives" in age. The students that took part in this study were ICT majors and were regarded as being literate in the digital world.

Students underlined said they would prefer more options for teaching methods, such as utilising tablets for modulation schemes, more desktop computer projects, and mobile app presentations. A few programming and console glitches did arise, however. Slow Broadband access and smart education management system notice restrictions were among these issues.

## CONCLUSION

Applications for mobile learning improve learning outcomes and the learning process. Students underlined said that they would prefer more options for teaching and learning, such as utilising computers for modulation techniques, more desktop computer applications, and mobile device presentations. A few programming and electronics technical error did arise, however. Slow Internet connectivity and digital blended learning communication restrictions were among these issues. Also, the few mobile apps were utilised in this investigation. It is advised that bigger samples and more portable apps be used in future investigations. Tablet PCs using the smartphone operating system were utilised in this investigation. It is possible to use differentiated instruction in subjects that bore or uninterest pupils to help them build a positive attitude. Future studies should look towards encouraging students to create animations using mobile devices.

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