



## **KNOWLEDGE OF MOBILE LEARNING AMONG STUDENT-TEACHERS**

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### **ABSTRACT**

*The global COVID-19 pandemic has brought about unprecedented times, and the education sector has been impacted just like other industries. Numerous educational institutions have closed or halted their traditional in-person classroom operations. The practice of teaching and learning has shifted to an online format known as "e-learning," which is a web-based digital system that uses cutting-edge information and communication technology to create interactive, learner-centered learning environments.*

*In this study, purposive sampling techniques were used to collect data from the population of student teachers (Male and Female). The major findings displayed that there was a moderate level of knowledge of mobile learning among student teachers. It indicated that mobile learning is essential for today's technological world for the teaching-learning process. So, the government and educational policymakers plan to take necessary action to incorporate online learning management systems for teaching-learning purposes.*

### **INTRODUCTION**

The instructor used to be the only source of knowledge. But, as of late, the curriculum, the teacher, and the student work together as a cohesive entity. The success of the educational process depends on this unit. As a result, the quality of the educational process is adversely affected by any weak or weak component. To fulfill the diverse requirements of pupils, teachers must employ a variety of instructional strategies in their new job. The instructor should also implement student-centered activities and real-world applications to help the pupils connect with their environment.

Digital technologies have replaced physical settings for student learning. To uncover insights about individual learning patterns and to provide a personalized and equitable learning experience that guarantees no student is left behind, administrators and institutions across schools, vocational training centers, and higher education institutions are turning to effective analytical methods as a result of increased learning data collection. There is a great deal of promise in AI and ML to help India overcome some of the major obstacles it confronts in reaching the SDGs. Growing numbers of people are subscribing to online learning, and they are moving away from Netflix and toward Google Maps. In the first case, data is analyzed to suggest products that other customers who are similar to you may have bought; in the second case, the platform offers a customized route based on the user's present location, the preferred mode of transportation, and the intended destination. With this method, students can have access to tailored learning pathways based on their unique interests, weaknesses, and above all qualities.

The concepts and methods of what has become known as "mobile learning" originated at the turn of the century, with a small group of researchers, developers, activists, and practitioners, as well as a few colleges and organizations. A few years later, as mobile phones gained power, functionality, coverage, and ownership, they became very appealing to international agencies, humanitarian foundations, policymakers, program managers, and workers in the global south who wanted to provide resources and educational opportunities to people, communities, and regions. The last part is a collection of freely available materials, some of which are especially pertinent to global learning. The expanding body of research on mobile learning, the increasing number of researchers focusing on this topic, and the appealing and safe potential of mobile learning point to the necessity for further study to support policy, capacity building, and raising awareness as well as any future investments.



Online learning is being used by educational institutions as a way to distribute course content. Educational institutions are increasingly sending students data, materials, or learning content via the Internet. It must be believed that there are considerable advantages to embracing online learning for educational institutions to take a big step forward. It was also discovered that educational colleges particularly need the availability of high-caliber online professors. Technological developments give at-risk students multiple ways to study and assess what they have learned, as well as numerous chances to obtain credit and graduate on schedule. One of the main ways that current online learning programs diverge from traditional schooling is the number of pupils they serve. Students of various ages, skill levels, and educational backgrounds can benefit from online learning programs.

“Mobile devices are widely used in the digital age. Social network sites, which are becoming indispensable with Web 2.0 technologies, facilitate the acceptance of mobile devices by teachers and students. The educational use of mobile devices in and outside of the classroom helps students develop positive attitudes towards courses”. (Özdamar Keskin, 2011). “The use of mobile devices in the learning environments encourages students to participate in learning activities. Therefore, it can be said that mobile devices may become a necessity for students and educators”. (Yılmaz and Akpınar, 2011). “One of the advantages of mobile learning is the ability to provide access to learning contents outside of the course time. Mobile learning management systems might be used to provide this. Additionally, mobile learning contents are produced based on design principles for qualified interactions”. Researchers suggest that the duration of access time should be increased. (Çelik, 2012).

### **NEED AND SIGNIFICANCE OF THE STUDY**

The most reliable cognitive resource created by humans for enlightenment purposes is education. This is true because receiving a high-quality education gives one the tools necessary to comprehend concepts accurately and apply learned knowledge to practical situations. Education's goal has always been to empower people and transfer knowledge and skills, therefore receiving a specific caliber of education is essential.

The greater use of the Internet in educational applications in this new trend era may indicate a rise in the use of technology by educators and students in open and flexible learning environments. Technology is essential to the development and improvement of our educational system. It is necessary to investigate both the anticipated and unexpected effects of utilizing mobile learning strategies for teacher professional development. Both teachers and students need to be able to use various mobile teaching tools with specific skills and abilities. As a result, we must get students ready for the era of mobile learning technologies. Due to the unique circumstances created by the global COVID-19 pandemic, numerous educational institutions have ceased operations and halted regular in-person classroom instruction. This layout of mobile learning strategies aids in the future development and successful use of e-learning methodologies. Certain e-learning competencies, along with the emerging trend in mobile learning capabilities through the use of various mobile learning technologies, are required on an individual basis and will be supervised by both teachers and students.

The investigator's primary goal is to ascertain the kind of issues that student-teachers encounter when attempting to teach online and how to integrate mobile learning with authentic online resources for students in the classroom from home and in everyday life. Additionally to comprehend the issues with their pedagogical approaches and to discover how to apply learning outcomes strategies to make use of online learning activities outside of the classroom. The investigator is aware of the significance of the issues surrounding students' use of mobile devices for learning through both online and in-person classroom settings. They also know how to keep an eye on the students and provide them with ongoing support via online learning environments. Thus, the researcher made an effort to discover more about the survey concerning students' knowledge of mobile learning from colleges of education in the Dindigul District.

### **OPERATIONAL DEFINITION OF THE KEY TERM**

#### **Mobile Learning**

Mobile learning, also known as M-learning, is a new way to access learning content using mobile devices. It's possible to learn whenever and wherever you want, as long as you have a modern mobile device connected to the Internet.

### **RESEARCH METHODOLOGY**

#### **Method**

For the present study, the investigator decided to adopt the descriptive survey method. To accomplish the objectives of the present study, the descriptive survey method was considered appropriate for gathering data about knowledge on mobile learning among student teachers.



### **Population of the Study**

In the present study, student teachers studying bachelor of education courses in colleges of education from the Dindigul district constituted the population of the study.

### **Sample of the Study**

In the present study, the investigator decided to collect data from the Dindigul district. As such 200 student teachers of male and female (100 male and 100 female student teachers) constituted the sample of the present study. As the sample has been selected purposively, it comes under purposive sampling.

### **Tools Used for the Study**

1. Mobile Learning inventory developed and validated by the investigators.

### **Statistical Techniques Used for the Study**

For the present study, the Investigator used the following statistical techniques.

1. Level
2. 't' Test
3. ANOVA

### **OBJECTIVES OF THE STUDY**

The objectives of the study are as follows:

1. To study knowledge on mobile learning among student teachers.
2. To find out if there is any significant difference between male and female student teachers in their knowledge of mobile learning.
3. To find out if there is any significant difference between married and unmarried student teachers in their knowledge of mobile learning.
4. To find out if there is any significant difference among student teachers' parental education in their knowledge of mobile learning.
5. To find out if there is any significant difference among student teachers having the age of below 25 years, 26-30 years, and 31 years and above in their knowledge of mobile learning.
6. To find out if there is any significant difference between co-education and women college student teachers in their knowledge of mobile learning.
7. To find out if there is any significant difference between rural and urban student teachers in their knowledge of mobile learning.

### **HYPOTHESES OF THE STUDY**

The hypotheses of the study are as follows:

1. There is no significant difference between male and female student teachers in their knowledge of mobile learning.
2. There is no significant difference between married and unmarried student teachers in their knowledge of mobile learning.
3. There is no significant difference among student teachers' parental education in their knowledge of mobile learning.
4. There is no significant difference among student teachers having the age of below 25 years, 26-30 years, and 31 years and above in their knowledge of mobile learning.
5. There is no significant difference between co-education and women college student teachers in their knowledge of mobile learning.
6. There is no significant difference between rural and urban student teachers in their knowledge of mobile learning.



**ANALYSIS OF THE STUDY**

**Percentage Analysis**

**Table-1**  
*Level of Knowledge of Mobile Learning of Student Teachers*

Variable	Low		Moderate		High	
	N	%	N	%	N	%
<b>Knowledge of Mobile Learning</b>	38	27.8	138	51.7	24	20.5

It is inferred from Table 4.2.1 that 27.8% of student teachers have low, 51.7% of them have moderate and 20.5% of them have high levels of knowledge of mobile learning.

**Differential Analysis**

**Null Hypothesis - 1**

There is no significant difference between male and female student teachers in their knowledge of mobile learning.

**Table – 2**  
*Mean Score Difference between Male and Female Student Teachers in their Knowledge of Mobile Learning*

Variable	Gender	Mean	SD	't' value	Remarks at 5% Level
Knowledge of Mobile Learning	Men	102.18	9.65	3.52	Significance
	Women	97.53	7.73		

*(At 5% level of significance, the table value is 1.96)*

The above table shows that there is a significant difference between male and female student teachers in their knowledge of mobile learning as the calculated 't' value of 3.52 is greater than the table value of 1.96 at a 5% level of significance. While comparing the mean scores, male student teachers are higher in their knowledge of mobile learning than female student teachers. Hence the null hypothesis is rejected.

**Null Hypothesis - 2**

There is no significant difference between married and unmarried student teachers in their knowledge of mobile learning.

**Table – 3**  
*Mean Score Difference between Married and Unmarried Student Teachers in Their Knowledge of Mobile Learning*

Variable	Marital Status	Mean	SD	't' value	Remarks at 5% Level
Knowledge of Mobile Learning	Married	104.63	10.58	2.73	Significance
	Unmarried	98.42	8.20		

*(At 5% level of significance, the table value is 1.96)*

The above table shows that there is a significant difference between married and unmarried student teachers in their knowledge of mobile learning as the calculated 't' value of 2.73 is greater than the table value of 1.96 at a 5% level of significance. While comparing the mean scores, married student teachers are higher in their knowledge of mobile learning than unmarried teachers. Hence the null hypothesis is rejected.

**Null Hypothesis - 3**

There is no significant difference among student teachers' parental education in their knowledge of mobile learning.

**Table - 4**  
*Differences among Student Teachers Having Illiterate, School Education, and Higher Education Parents in their Knowledge of Mobile Learning*

Variable	Source of Variation	Sum of Square	Mean Square	Calculated 'F' Value	Remarks at 5% level
Knowledge of Mobile Learning	Between	318.941	156.471	8.46	Significance
	Within	10641.004	10.666		

*(At a 5% level of Significance, for the df (197) the table value of 'F' is 3.00)*



It is understood that there was a significant difference among student teachers having illiterate, school education and higher education studied parents in their knowledge of mobile learning as the calculated 'F' value of 8.46 was greater than the table value of 3.00 at a 5% level of significance. Hence the null hypothesis was rejected.

**Null Hypothesis - 4**

There is no significant difference among student teachers having the age of below 25 years, 26-30 years, and 31 years and above in their knowledge of mobile learning.

**Table - 5**

**Differences among Student Teachers Having the Age of Below 25 Years, 26-30 Years, and 31 Years and Above in their Knowledge of Mobile Learning**

Variable	Source of Variation	Sum of Square	Mean Square	Calculated 'F' Value	Remarks at 5% level
Knowledge of Mobile Learning	Between	104.460	121.980	5.29	Significance
	Within	10148.230	49.861		

(At a 5% level of Significance, for the df (197) the table value of 'F' is 3.00)

It is understood that there was a significant difference among student teachers aged below 25 years, 26-30 years, and 31 years and above in their knowledge of mobile learning as the calculated 'F' value of 5.29 was greater than the table value of 3.00 at 5% level of significance. Hence the null hypothesis was rejected.

**Null Hypothesis - 5**

There is no significant difference between co-education and women college student teachers in their knowledge of mobile learning.

**Table - 6**

**Mean Score Difference between Co-education and Women College Student Teachers in Their Knowledge of Mobile Learning**

Variable	Type of College	Mean	SD	t value	Remarks at 5% Level
Knowledge of Mobile Learning	Co-Education	100.58	9.82	3.82	Significance
	Women	107.36	10.43		

(At 5% level of significance, the table value is 1.96)

The above table shows that there is a significant difference between co-education and women college student teachers in their knowledge of mobile learning as the calculated 't' value of 3.82 is greater than the table value of 1.96 at a 5% level of significance. While comparing the mean scores, student teachers of women's colleges are higher in their knowledge of mobile learning than co-education college student teachers. Hence the null hypothesis is rejected.

**Null Hypothesis - 6**

There is no significant difference between rural and urban student teachers in their knowledge of mobile learning.

**Table - 7**

**Mean Score Difference between Rural and Urban Student Teachers in their Knowledge of Mobile Learning**

Variable	Locality of the School	Mean	SD	't' value	Remarks at 5% Level
Knowledge of Mobile Learning	Rural	99.49	10.63	2.99	Significance
	Urban	103.56	12.27		

(At 5% level of significance, the table value is 1.96)

The above table shows that there is no significant difference between rural and urban student teachers in their knowledge of mobile learning as the calculated 't' value of 2.99 is greater than the table value of 1.96 at a 5% level of significance. While comparing the mean scores, urban student teachers are higher in their knowledge of mobile learning than rural student teachers. Hence the null hypothesis is rejected.

**MAJOR FINDINGS OF THE STUDY**

1. The knowledge of mobile learning is moderate and above.



2. There is a significant difference between male and female student teachers in their knowledge of mobile learning.
3. There is a significant difference between married and unmarried student teachers in their knowledge of mobile learning.
4. There is a significant difference among student teachers having illiterate, school education and higher education studied parents in their knowledge of mobile learning.
5. There is a significant difference among student teachers having the ages below 25 years, 26-30 years, and 31 years and above in their knowledge of mobile learning.
6. There is a significant difference between co-education and women college student teachers in their knowledge of mobile learning.
7. There is a significant difference between rural and urban student teachers in their knowledge of mobile learning.

## CONCLUSION

Based on the above findings, the following ends have been drawn by the investigators;

The results show that the mobile learning knowledge of student teachers is at a moderate level. Through the use of mobile learning techniques, students can now take part in global learning community activities. Through cooperative activities and information sharing, they can engage in virtual learning communities and learn jointly. The teaching and learning process is facilitated more effectively by mobile learning technologies. To comply with international standards, mobile learning involves reorganizing the teaching-learning process at the external layer.

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