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ATTITUDE TOWARDS MOBILE LEARNING OF SECONDARY LEVEL STUDENTS IN WEST BENGAL

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Abstract:

The aim of this study is to examine the attitudes of secondary school students toward mobile learning. The study sample consisted of 120 students from different schools in West Bengal who voluntarily participated in the research. The research was conducted using qualitative design. A semi-structured data collection tool developed by the researchers was used to explore students' attitudes toward mobile learning. The attitudes of the students were analyzed through the item analysis method.

The findings indicate that both male and female secondary students generally hold a positive attitude toward mobile learning. They appreciate its ability to make learning more engaging and, in some cases, more effective than traditional face-to-face instruction. Female students showed stronger agreement regarding the effectiveness of mobile learning and reported more frequent use of educational applications. However, they also perceived cost as a greater barrier compared to male students. Male students, on the other hand, viewed accessibility more positively. Overall, the results suggest that although students welcome mobile learning, issues such as cost, regular usage, and accessibility still present certain challenges.

Keywords: *mobile learning, attitudes, secondary students, West Bengal, education*

Introduction:

With rapid technological advancements, new concepts and approaches have emerged across various areas of education, particularly in distance education. These developments have introduced innovative terms that are now closely associated with modern learning processes. One such concept is mobile learning. Over the past decade, especially with the expansion and accessibility of the internet, mobile learning has been increasingly and effectively integrated into teaching and learning practices, particularly in distance education systems. Its swift and widespread adoption has led to more frequent use in internet-supported instructional environments, making mobile learning a prominent and extensively researched field (Rysbayeva et al., 2019; Berdaliyeva et al., 2022).

Mobile learning refers to a form of learning that enables individuals to access educational content and interact with others through mobile technologies, without limitations of time and location. It enhances efficiency and performance by offering immediate feedback tailored to learners' needs.

Review of related literature:

According to Kaur and Gupta (2021), one of the primary reasons Indian students demonstrate a favorable attitude toward mobile learning is the range of benefits they perceive it offers. Many students consider mobile learning as an effective way to access supplementary study materials, particularly in subjects they find challenging. Mobile learning platforms typically include interactive elements such as videos, quizzes, and educational games, which make complex concepts easier to understand in a more engaging and dynamic way.

Similarly, Bansal and Joshi (2020) observed that students value mobile learning for its capacity to deliver immediate feedback and encourage peer interaction. This aspect is particularly significant in the Indian context, where large class sizes often limit opportunities for personalized guidance from teachers.

However, not all perceptions are entirely positive. Pandey et al. (2018) noted that some students are reluctant to adopt mobile learning due to technical constraints, including unstable internet connections, limited device capabilities, and the absence of a well-structured mobile learning curriculum that aligns with formal educational programs. Although the overall attitude toward mobile learning remains largely positive, these challenges contribute to certain negative perceptions.

In another study, Mahat, Jazihan, Mohd Ayub, Ahmad Fauzi, and Wong (2012) examined the attitudes of Malaysian university students toward mobile learning. The study involved 210 trainee teachers from a Malaysian university, where mobile learning was implemented through the use of Short Messaging Service (SMS) for communication between students and lecturers. Data were gathered through questionnaires, and SMS messages were randomly sent to participants to assess their perceptions of mobile learning. The findings revealed that Malaysian students generally held positive attitudes toward mobile learning and supported its future implementation, believing that it could enhance their understanding of course content. Additionally, Confirmatory Factor Analysis (CFA) was applied to evaluate the factor structure of students' attitudes, and the results indicated that the measurement model demonstrated an acceptable level of fit.

2. Purpose of the research or Objectives of the study:

The objective of this study is to examine the attitudes of engineering faculty students toward mobile learning. In accordance with this objective, the research seeks to address the following questions:

I. How frequently do students use mobile learning applications?
II. What are the students' opinions regarding the benefits of mobile learning applications?
III. What are the students' perspectives on the drawbacks of mobile learning applications?

3. Method and Procedures of the Study:

This section presents detailed information about the research methodology formulated in line with the objectives of the study. It includes a description of the research design, the study group, the instruments used for data collection, the procedures followed during data gathering, and the techniques employed for data analysis.

4. Participants or Sample:

The study sample comprised 80 students enrolled in the engineering faculties of various universities in Kazakhstan who voluntarily participated in the research. The participants were selected using convenience sampling, which falls under the category of purposive sampling techniques. This sampling method is commonly used because it allows researchers to choose the most appropriate participants for administering semi-structured interview schedules or questionnaires effectively.

Table 1. Nature of Sample

Class	Gender		Sum
	Male	Female	
1. Class 9	**24**	**22**	**46**
2. Class 10	**40**	**34**	**74**
Sum	**64**	**56**	**120**

5. Data collection process:

In this research, the attitudes of engineering faculty students toward mobile learning were examined using the content analysis method. Content analysis involves collecting similar qualitative data under specific themes and concepts, transforming them into quantifiable categories, and interpreting the results in a clear and understandable manner for readers. It is one of the most commonly applied techniques in qualitative data analysis and is primarily used to analyze written and visual materials through a deductive approach.

In this method, the researcher systematically develops relevant categories related to the research problem in a clear and structured way so that other researchers can comprehend them. The data—such as words, sentences, or images—are then classified, counted, organized, and interpreted within these categories to derive meaningful conclusions.

Items or information framing of students			
Gender	Male ( )	Female ( )	
Class	IX ( )	X ( )	
Mobile Learning Related Questions			
1 Do you think mobile learning costs too much?		Yes( )	NO ( )
2 Do you think mobile learning makes studying more interesting for you?			

3. Do you use educational apps or websites on your mobile phone regularly?		
4. Do you believe that mobile learning better than face to face method?		
5. Do you think it is accessible anytime and anywhere?		

6. Results & Discussions of the study:

Table 4. Students' opinions on the mobile learning according to Male/Female

Item SL no	Item	Male (%) Yes	Female (%) No	Total (%)
1.	Do you think mobile learning costs too much?	65	35	100
2.	Do you think mobile learning makes studying more interesting for you?	61	39	100
3.	Do you use educational apps or websites on your mobile phone regularly?	52.75	47.25	100
4.	Do you believe that mobile learning better than face to face method?	62.5	37.5	100
5.	5. Do you think it is accessible anytime and anywhere?	75.75	24.25	100

Table 4 presents the views of the participating students regarding their attitudes toward mobile learning. The findings indicate that, overall, male students demonstrate a more positive attitude toward mobile learning than female students. Among male students, the highest level of agreement is related to accessibility (75.75%) and the perception that mobile learning involves high costs (65%). In contrast, the lowest level of agreement among male students is observed in relation to the regular use of educational apps and websites (52.75%).

- **Perceived Cost:**
  - A significant proportion of male students (**65%**) think mobile learning is expensive.
  - This shows that cost is recognized as a real concern despite its benefits.
- **Interest factor:**
  - **61%** males believe mobile learning makes studying more interesting.
  - Indicates a generally positive attitude about engagement, though not overwhelmingly high.
- **Regular Usage:**
  - Just over half (**52.75%**) of male students regularly use educational apps/sites.

- This gap suggests that while students see benefits, actual adoption into daily routine is lower.

➢ **Better than face-to-face:**

- **62.5%** of male students think mobile learning is better than traditional face-to-face learning.
- Shows openness to modern methods but still a sizeable portion (**37.5%**) are not convinced.

➢ **Accessibility:**

- Majority (**75.75%**) agree it's accessible anytime, anywhere.
- This is the strongest positive perception, highlighting mobile learning's flexibility as a key advantage.

➢ **Gender difference:**

- Female students' "No" responses are higher in all items, suggesting they might be less positive or face different barriers (e.g., access, familiarity, preference for traditional methods).
- Especially on items like cost and accessibility, the gap is large.

Table 5. Students' views on mobile learning in details

Item SL no	Items	Male (%) Yes	Male (%) No	Female (%) Yes	Female (%) No
1.	Do you think mobile learning costs too much?	45.5	54.5	68.75	31.25
2.	Do you think mobile learning makes studying more interesting for you?	65	35	75.5	24.5
3.	Do you use educational apps or websites on your mobile phone regularly?	49.5	49.5	63.5	36.5
4.	Do you believe that mobile learning better than face to face method?	55.75	44.25	75.5	24.5
5.	5. Do you think it is accessible anytime and anywhere?	60.5	39.5	49.75	50.25

The findings indicate that secondary students generally perceive mobile learning as engaging and more effective than traditional methods of instruction. Overall, female students display a more positive attitude toward mobile learning; however, they express greater concern regarding its cost.

Male students tend to view mobile learning as more accessible at any time and place, but they report less consistent use and exhibit more varied opinions across certain aspects.

Key insights:

✅ Females are **more positive** in most areas (interest, better than face-to-face, regular use) except for accessibility, where males perceive it as more accessible.

✅ Females perceive cost as a bigger barrier.

✅ Males show more balanced or divided responses, suggesting more cautious attitudes.

8. Conclusion:

The results indicate that both male and female secondary students tend to hold favorable attitudes toward mobile learning, valuing its capacity to make learning more engaging and, in some cases, more effective than conventional face-to-face instruction. Female students, in particular, express stronger agreement regarding its usefulness and report more frequent use of educational applications. However, they also consider cost to be a more significant obstacle. In contrast, male students perceive mobile learning as more accessible. Overall, although students generally embrace mobile learning, concerns related to affordability, regular usage, and accessibility continue to pose certain challenges.

9. Recommendations:

a) **Reduce cost barriers:**
Schools and policymakers can collaborate with telecom providers and educational platforms to offer affordable or subsidized data plans and apps for students.

b) **Promote awareness and training:**
Organize workshops to guide students, especially those less confident—on how to use mobile learning tools effectively.

c) **Enhance accessibility:**

d) Improve infrastructure such as internet connectivity in rural and underprivileged areas to ensure that mobile learning truly becomes accessible anytime and anywhere.

e) **Encourage balanced integration:**
Blend mobile learning with face-to-face teaching to cater to diverse learning preferences and ensure that students benefit from both methods.

f) **Monitor usage and impact:**
Regular surveys and feedback from students can help identify evolving challenges and improve mobile learning strategies accordingly.

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