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Challenges Faced by Students towards Educational Mobile Apps

Dr. P.Jayanthi

Assistant Professor, PG Department of Commerce-CA, NGM College, Pollachi, Tamil Nadu, India

Abstract:

The research paper aims to examine the challenges faced by students towards educational mobile apps. Data for the study have been collected from 426 students in Pollachi Taluk through issue of well-structured questionnaire by adopting random sampling method. Simple percentage and chi-square test have been used to analyze the data. The study reveals that majority of the students are female residing in rural area and studying under graduate arts stream in private institutions. It also reveals that majority of the students face several major challenges while using educational apps. The most prominent issues are distractions, poor internet connectivity, Health issues (eye strain and stress), high cost of data followed by lack of interaction with teachers, apps that do not match course curriculum, technical issues, limited phone storage, lack of mobile data limits and difficulty in understanding content. It highlights that while educational apps are useful, students face technical, personal, and engagement-related issues, which can reduce their effectiveness in learning. Chi-square test shows that age, area of residence, streams and family income are significantly associated with the level of challenges towards educational mobile apps.

Keywords: Students –Education-Mobile Apps-Challenges-Technology

Introduction

The integration of mobile technology into education has profoundly altered conventional learning systems. Students can access learning materials whenever and wherever they want with educational mobile apps, which make education more flexible and focused on the student. The rapid growth of smartphone use has speed

up the use of mobile learning (m-learning) even more especially during the COVID-19 pandemic, when digital platforms became necessary for education to continue (Alshamaila et al., 2023). Mobile apps facilitate interactive learning, collaboration, and instantaneous feedback, thereby augmenting student engagement and academic achievement. Poongodi et al. (2025) found that students prefer e-learning for learn at any time, learn at your own place, certificates, convenience, easy accessibility, time saving , skill development and career advancement. However, despite these benefits, students face several challenges while using educational mobile apps. Problems like lack of digital skills, lack of technology, distractions, and being stressed out can all make learning less effective. (Gan & Balakrishnan, 2021) found that mobile learning is flexible, but it also has issues with usability, accessibility, and cognitive overload. Therefore, it is imperative to investigate these challenges to enhance the efficacy of mobile learning environments.

Review of Literature

Alshamaila et al. (2023) found that excessive use of mobile learning platforms can lead to mental fatigue, stress, and reduced academic motivation, which negatively influence students' learning outcomes. Gan and Balakrishnan (2021) discovered that issues to mobile learning can be grouped into technological limits, learner-related problems, and institutional constraints, highlighting the difficulty of mobile learning adoption. Crompton and Burke (2018) indicated that while mobile learning improves accessibility, it often experiences from inconsistent implementation and lack of pedagogical integration, making it less effective in formal education settings. O'Doherty et al. (2018) found technical difficulties, limited digital skills, and poor infrastructure as major barriers in online and mobile learning environments. Camilleri and Camilleri (2019) identified that students perceive some educational apps as difficult to use, reducing their engagement and satisfaction. Sung, Chang, and Liu (2016) found that device constrains can hinder deep learning and critical thinking. Kuznekoff and Titsworth (2013) noted that students using mobiles during learning are more likely to engage in non-academic activities, such as social media, which negatively affects academic performance. This highlights the dual nature of mobile devices as both learning tools and sources of distraction. Sheikhtaheri and Moghadam (2022) highlighted that the lack of localized content and language support limits the effectiveness of educational apps, especially in developing countries. Ally and Tsinakos (2014) found out that mobile learning content must be culturally relevant and adaptable to diverse learners. Mkpojiogu et al. (2021) noted that students are often worried about data privacy, unauthorized access, and misuse of personal information, which affects their trust in mobile

applications. (Traxler, 2018) found that economic factors such as high data costs and device affordability influence students' ability to use mobile apps effectively. These challenges are particularly prominent in rural and underdeveloped regions. (Lepp et al., 2015) identified that continuous use of mobile devices has been linked to eye strain, sleep disturbances, and reduced attention span, which negatively impact students' overall well-being.

Statement of the Problem

Despite the increasing use of mobile apps for education, their effective utilization remains a major concern. Students face several problems that affect their mobile learning outcomes. Some of these problems are inadequate internet connections, not having access to advanced devices, poor designed apps, and lack of digital skills. Also, students' are distracted by games and social media while using mobile this reduces concentration and academic performance. Another issue is continuous mobile device usage, which lead to tiredness, stress and less motivation to learners (Alshamaila et al., 2023). Moreover, the absence of high-quality educational resources and language barriers impede the accessibility of mobile learning for diverse student population. Although educational apps are often promoted as new ways to learn, these ongoing issues make them use less. Therefore, it is essential to systematically examine the challenges faced by students and suggest suitable measures to improve the usability and efficiency of educational mobile applications.

Objectives of the Study

The following are the objectives of the study:

- To know the socio-economic profile of the sample college students.
- To identify the challenges faced by students while using educational mobile apps
- To examine the variables associated with the level of challenges towards educational apps

Research Methodology

The study is based on primary data. The data is collected through a well structured questionnaire. It contains questions relating to socio-economic of students and challenges faced while using educational mobile apps. A sample of 426 students from higher education institutions in Pollachi Taluk has been selected by adopting random sampling method. Simple Percentage and Chi-Square test have been used to analyze the data.

Findings

The findings of the study are divided into three parts namely, socio-economic profile of college students, challenges faced while using educational mobile apps and variables associated with the level of challenges towards educational mobile apps are depicted in the following paragraphs.

(i) Socio - Economic Profile of Sample College Students

Socio-economic profile of sample students like area of residence, age, gender, marital status, number of members in the family, family income, type of institution, streams and level of education are disclosed below.

- Majority 264(62.0%) of the students are residing in rural area.
- Majority of the students, 298(70.0%) belong to the age group of 18 to 20 years.
- Majority 243(57.0%) of the students are female.
- Majority of the students, 411(96.5%) are unmarried.
- Majority of the students, 348(81.7%) have 3-4 members in the family
- Majority 264(62.0%) of the student's family income per month are Rs. 50,001-Rs.100000.
- Majority 339(79.6%) of the students are from private institution.
- Most 206(48.4%) of the students are from arts stream.
- Majority of the students, 312(73.2%) are studying under graduate.

(ii) Challenges Faced while using Educational Apps

The table below shows the classification of students based on their level of issues faced while using educational apps.

Table: 1

Challenges Faced while using Educational Apps

Challenges	Strongly Agree	Agree	Disagree
Poor Internet Connectivity	192 (45.07%)	156 (36.62%)	78 (18.31%)
Lack of Mobile Data Limits	138 (32.39%)	174 (40.85%)	114 (26.76%)
High Cost of Internet/ App Subscription	171 (40.14%)	159 (37.32%)	96 (22.54%)
Limited Phone Storage to Install Educational Apps	150 (35.21%)	168 (39.44%)	108 (25.35%)
Technical Problems (App Crashing or Slow loading Occur)	144 (33.80%)	180 (42.25%)	102 (23.94%)

Some Educational Mobile Apps are difficult to Operate or Understand	132 (30.99%)	177 (41.55%)	117 (27.46%)
Lack of Support from Teachers/Institutions	162 (38.03%)	168 (39.44%)	96 (22.54%)
Distraction by Social Media (Notifications from other apps)	201 (47.18%)	147 (34.51%)	78 (18.31%)
Some Educational Apps do not Match My Course Curriculum	168 (39.44%)	162 (38.03%)	96 (22.54%)
Health issues (Eye Strain, Stress)	186 (43.66%)	150 (35.21%)	90 (21.13%)

From the above table, it is found that students face several significant challenges while using educational apps. The most prominent issues are distractions while using apps and poor internet connectivity, with a high percentage of students strongly agreeing that these affect their learning. Health issues (eye strain and stress) and high cost of data are also major concerns, indicating both physical and financial barriers. Many students also report lack of interaction with teachers and apps that do not match course curriculum, suggesting that online platforms may not fully replicate classroom engagement. Moderate challenges include technical issues, limited phone storage, lack of mobile data limits and difficulty in understanding content, showing that usability and learning effectiveness are still concerns. Overall, it indicates that while educational apps are useful, students face technical, personal, and engagement-related challenges, which can reduce their effectiveness in learning.

(iii) Variables Associated with the Level of Challenges towards Educational Mobile Apps

To identify the association between the select variables and challenges faced by students towards educational mobile apps, the Chi-square test has been employed.

Table: 2

Variables Associated with the Level of Challenges towards Educational Mobile Apps

Variables	d.f	Calculated (χ^2) Chi-Square Value	Table Value 5% Level
Age	4	10.477	9.488
Gender	2	5.833	5.991
Area of Residence	2	7.820	5.991
Marital status	2	4.288	5.991
Number of members in the	4	6.574	9.488

family			
Streams	2	6.799	5.991
Family Income	4	9.933	9.488

Seven Variables have been taken to analyze the level of challenges faced by students towards educational mobile apps. Out of seven variables the following four variables have significant association with the level of challenges faced by students towards educational mobile apps (viz.) age, area of residence, streams, and family income while gender, marital status and number of members in the family does not have significant association with the level of challenges faced by students towards educational mobile apps.

Suggestions

Based on the findings of the study and the following suggestions are put forth.

- Increase internet facilities in rural and urban area.
- Institutions and faculties may guide students on effective usage of mobile apps for learning
- Providing offline access for learning materials in educational apps will support students to learn anywhere anytime.
- Encourage balance usage of mobile to reduce health issue
- Mobile learning aligned with curriculum may enhance sustainable learning.
- App developers may focus on reducing distractions through app design.

Conclusion

Educational mobile apps have changed the way we learn by making it more flexible, accessible, and tailored to each person. But this study shows that students have to deal with many problems that make these tools less useful. Learning outcomes are greatly affected by important problems like poor internet connections, distractions, usability issues, and a lack of good content. Psychological factors, including stress and less motivation, further complicate the integration of mobile learning technologies. These results align with prior studies, highlighting the necessity of tackling both technological and human-related obstacles in mobile learning contexts.

To increase the benefits of mobile apps for education, it's important to apply inclusive strategies that deal with these issues. Making the infrastructure better, increasing app design, and giving support to students can significantly increase learning much better. Future research may focus on developing innovative solutions

to overcome these issues and ensure inclusive and effective mobile education for all students.

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