



Edtech Mobile Application: Panacea or Problem? Students' Attitude towards it

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Abstract:

Technology is the elegancy to the education sector. The Central Board of Education, Regulatory bodies like AICTE, UGC, NAAC have introduced several digital interventions in the last few years. Online platforms like EdTech Mobile Applications are also spreading rapidly. Its many types are available in India. The renowned application on learning, Byju's became one of the most valued companies of Edtech in 2019. Unacademy, Vedantu, UpGrad like EdTech platforms are getting popularity among students. They are getting involved with these applications for so many academic purposes which can be achieved in an ease and comfortable home environment. Artificial Intelligence has given this sector a new motion. These uses among students are growing fast especially after the disaster Covid-19 pandemic which has shaken and made lock down the whole globe. In this research paper, researchers explained the concept of EdTech Mobile Application, expressed the types of Online Mobile Applications and uses of it. This research paper also revealed attitude of students of UG level towards EdTech Mobile Application in West Bengal. Investigators also revealed advantages, disadvantages and suggestions for betterment of EdTech Mobile Application.

Keywords: Mobile Application, EdTech Mobile Application, EdTech startups, Artificial Intelligence, Covid-19

1.Introduction

Science is making advancement in all spheres of life as well as in society. Mobile Communication Technology has reached very high level by dint of success of modern science. In the age of ICT i.e. Information and Communication Technology, everybody wants to learn without restriction of fixed time and fixed place. To access the innovative learning environments, students must have access of current portable technologies with new educational modalities. Portable technologies include i-Phone, i-Pad, laptop, Smart phone, and some other portable devices as well. Through the portable technology, we can use many new mobile applications which are new and fast developing factor in ICT. Mobile Applications make us connected with others, solve many problems, and cater so many purposes of us. There exist so many mobile applications. Educational Technology uses these applications to serve students' academic purposes, making instructional process wider and more flexible. Mobile Applications which are used in academics, giving academic guidance to pupils, are called Edtech Mobile Application. In India these Edtech Mobile Applications are spreading rapidly. Byju's, Unacademy, Vedantu are very prominent examples in Edtech Mobile Application startups in India. In lockdown period of pandemic of Covid 19, the uses of Edtech mobile applications were increased. Dr. M.A. Sikandar Prof. P.F. Rahman have said in their research paper that the pandemic of covid 19 has accelerated online learning, e-learning and it has given birth the EdTech i.e. Educational Technology startups in India as well as all over the world (Sikandar, Rahman, 2021). There are so many reasons for attractiveness of students towards Edtech Mobile Application in India. These applications are 24*7 hours available to students. They can learn

from them in their flexible of time. Not only Edtech mobile applications serve students academic needs but those apps also take care of their marketing strategies which are also very attractive. After lot of advancements in Artificial Intelligence, Cloud computing system, Edtech mobile applications will grow more and more.

2. Objectives

This present research study was conducted to attain the objectives-

- 1.To explain the concept of Mobile Application.
- 2.To elaborate the concept and Utilization of Edtech Mobile Application.
- 3.To reveal the attitude of students of UG level towards EdTech Mobile Application in West Bengal.

3.Research Question

- What is the concept of Mobile Application?
- What is the concept and utilization of Edtech Mobile Application?
- What are the attitudes of students of UG level towards EdTech Mobile Application in West Bengal in respect of gender, locality and academic stream?

4.Research Hypothesis

Ho₁: There is no significant difference of students towards Edtech mobile application in terms of gender.

Ho₂: There is no significant difference of students towards Edtech mobile application in terms of locality.

Ho₃: There is no significant difference of students towards Edtech mobile application in terms of academic stream.

5.Concept of Mobile Application

Mobile application is a new and fast developing factor in ICT i.e. Information and Communication Technology over the globe. Md. Rashedul Islam, Md. Rofiqul Islam , Tohidul Arafhin Mazumder have said in their research paper named, 'Mobile Application and Its Global Impact' that mobile application is a type of application where there exist pre-build software or pre-build programme that runs on mobile devices and executes specific tasks for the EdTech application users (Islam, Islam, Mazumder,2010). These mobile applications are mostly friendly to use. These are not too expensive and also able to run easily in smart phones.

There are some mobile applications which are preinstalled in mobile and some are to be downloaded from internet and then have to install in mobile. From the technical point of view, different mobile applications are built for different platforms like iPhone, BlackBerry, Android, windows etc.

6.Types of Mobile Application

Harleen K. Flora, Dr. Xiaofeng Wang, Dr. Swati V. Chande have beautifully presented the types and categories of mobile application in their research paper named, 'An Investigation on the Characteristics of Mobile Applications: A Survey Study'. They said, types and categories of Mobile Application, both are not same. They have presented both in two tables (Flora, Wang, Chande, 2014). Those are presented below.

Table 1: Showing Types of Mobile Application

Sr.	Type	Description
1	Browser Access Apps	These types of applications are not installed in the mobile device but anyone can access these apps through native browser by Uniform Resource Locator or the web. These apps' data are not stored in the device. Example: yahoo.com, www.google.com and so on.

Sr.	Type	Description
2	Native Apps	These applications are installed in the mobile. There is no need to transfer data to the server and these work in the mobile without the network. Example: Notes, Reminder of iPhone.
3	Hybrid Apps (Web)	These applications are installed in devices and require internet connection for running and do functions. Social Networking Applications like Facebook, Twitter, Messenger, Flipkart like E-Commerce , Speedtest like application for Internet Speed Testing are the examples of Hybrid Apps (Web) .
4	Hybrid Apps (Mixed)	Applications are installed in the device and always they do not require connection of internet for functioning. Some examples are Medical applications, games in phones etc.

Table 2. Showing Mobile Application Categories

Sr.	Categories	Examples
1	Communication	E-mail clients, Social networking clients, mobile or internet browsers, News or Information clients, on device portals (Java portals).
2	Games	Puzzle, Cards or Casino, Action or Adventure, Sports, Leisure Sports etc.
3	Multimedia	Graphics or Image viewers, Video players, Audio players, Streaming players etc.
4	Productivity	Calendar, Calculator, Notepad or Memo, Word Processors, Spreadsheet, Directory Service, Banking, Call recording, Mobile health monitoring etc.
5	Travel	City guides, Currency convertor, GPS, Maps, Translators, Weather forecasting apps etc.
6	Utility	Profile Manager, Screensaver, Address book, Task manager, Call manager, File manager etc.
7	Education	Education purposes related lie Numeric, alphabets etc.

7.Uses of Mobile Application

The scope of using mobile application is very wide. We use mobile applications for multiple purposes like,

- in communicating with others.
- for entertainment purposes by watching movies or videos, listening songs, spending time in mobile games.
- for digital banking,
- in using mobile apps in e-commerce system.
- for travel guide like GPS system.
- for teaching-learning and so on.

8.Concept of Edtech Mobile Application

The abbreviation of Edtech is Education Technology. Edtech Mobile Application has covered online learning or e-learning and it has also included the hardware, software, digital based tools and other managing allied services (Sikandar, Rahman,2021). Some of them include desktops, learning apps in mobile, management software for online programme, digitally based contents, and exchange of communication platform between stakeholders through platforms on cloud, learning management systems. Mobile applications which are catered to pupils for educational purposes and make learning easy, joyful to them, called Edtech Mobile Applications.

Edtech mobile applications are growing very fast all over the globe. In India, these are spreading in all levels of education i.e. from school level to higher education level. Sovik Mukherjee expressed in his

research paper 'Edtech Startups in India: Leveraging the New Normal' that India which was one of the top fifteen countries in the EdTech Global Index of 2020. In next five years the EdTech Market is projected to enlarge or expand 3.7 times (Mukherjee, 2021). There are so many Edtech Mobile Applications, available in India like;

- BYJU's
- Unacademy
- Vedantu
- Toppr
- Doubtnut and so on

Byju's, Unacademy, Vedantu, and others are the leaders Edtech startup industry in India. The most popular edtech startups in India are: Vedantu, BYJU'S, Unacademy, UpGrad, Toppr, Meritnation, Camp K12, Cuemath (Godha & Sharma, 2021). Edtech Start-ups are improving their applications tremendously. They provide good quality study materials, live doubt clearing sessions, online lectures etc. Sovik Mukherjee wrote in his research paper 'Edtech Startups in India: Leveraging the New Normal' that Edtech application like Byju's used the IPL platform for advertising purpose, spent almost INR 400-500 crore in advertising during the 2020 season (Mukherjee,2021). Those are reaching at a higher level. Investors are investing in these. With advancements of AI i.e. Artificial Intelligence and cloud computing, Edtech mobile application will develop more and more.

Edtech mobile apps industry's marketing strategies are very organized and attractive. Sponsorship of them in organizing programmes or events and publishing advertisements with eminent celebrities, plays one of key roles to attract students and parents towards them. Byju's has announced footballer Lionel Messi as the first global brand ambassador.

Vertika Mishra has written in the research paper named 'A Study on Perception of Indian Youth on Education through Edtech Application' that in present day, majority of people prefer to learn from Edtech mobile application. Not only that, there are lots of people who use smart phones. For them, it is convenient to learn from Edtech Mobile Application. Young people of India are large consumers of Edtech mobile Applications (Mishra, 2021).

9. Advantages of Edtech Mobile Application

Edtech mobile applications are easily accessible to students. These are affordable too. These can serve academic needs of students to rural and remote areas also. There are so many advantages of Ed-Tech Mobile Application in education. Those advantages are discussed below:

- **24/7 hours Availability**

There is limited time for learning in tutorial classes in coaching centers but the EdTech apps provide students learning in asynchronous mode. That means they can access the given instruction in their flexible time. There is no restriction for attending online lectures of the apps in real time.

- **Quality Content**

EdTech apps deliver good quality study materials, made by expert teachers to students. There are many competitive exams in India. Frequently syllabuses of the exams got change. These types of apps provide study material to pupils.

- **One Platform for Many**

Edtech Application provides students many courses in one platform. It provides academic guidance in degree courses to competitive exam preparation.

- **Doubt clearing sessions**

Sometimes, there remain some doubts among students on the learned content. Edtech Mobile Apps provide students the opportunity to ask queries to the teachers of there and solve the problem.

- **Unpaid classes**

There are some apps which provide paid, unpaid classes both. Those students, who cannot take part in paid classes, can participate in unpaid classes.

- **Language development**

Some students have fear of English language. Through using those applications, the fear of using English language in communication decrease among students.

- **Enhancing Technical Knowledge**

Present day's education is not restricted only to pencil-pen-paper works but is developing towards technological world. Edtech industry provides the students the platforms to enhance technical knowledge.

- **The Anywhere-Anytime feature**

Students can learn from the edtech mobile applications at anywhere in anytime in network accessible areas. There does not remain any restricted location. It was also beneficial in pandemic also.

- **Immediate feedback**

Students can give test at some edtech mobile applications. After giving tests, applications show the marks as well as wrong answers that the students gave and also show the correct answer of the question.

- **Productive work in leisure time**

The edtech mobile applications are effectively used in leisure times in productive work. Because these mobile applications have extended their desirable features and cater students' needs (Shahjad, Mustafa, K. 2019).

- **Catering to wide students**

Byju's, Unacademy like edtech mobile applications have spread all over India. It provides school level, higher education level academic guidance to wide students.

- **Benefits in Covid-19**

There was sudden lock down in pandemic. Institutions' doors were closed. Edtech apps helped students very much in that hard time. In that time, uses of Edtech applications increased rapidly among students. In this crisis time, online learning served academic needs of students just like panacea (Dhawan, 2020).

In India there are so many places where people cannot afford coaching classes because of problems in communication, travelling, distance between coaching centre and them. Edtech Mobile Application serves in this aspect also. Students from remote places can use Edtech Mobile Application and get benefits in study.

10. Disadvantages of Edtech Mobile Application

Every coin has two sides. Edtech Mobile Application is not an exception one. There exist some disadvantages of Edtech Mobile Application in education for students. Those disadvantages are discussed below:

- **Digital divide**

Digital divide is the existing gap between people who have access of digital device and who do not have. There exists a wide digital divide in India. Hence, Edtech Mobile Applications have not reached to every people of India.

- **Poor internet connection**

There are so many areas of India where exists lack of internet facilities. People of those areas, are deprive of these technological developments including mobile applications.

- **Technical Difficulties**

There sometimes remain some technical issues in the Edtech Mobile Applications. That hinders and makes slow-down the online instructional process among students and teachers.

- **Financial problem**

There are many students who do not have good financial backgrounds. So they cannot afford digital device and as well as regular internet connection also.

- **Negative Attitude of Parents**

Students are dependent financially on parents. Many parents have negative attitude towards Edtech mobile application for their children's learning as they prefer traditional way of learning more for regular face to face interaction and communication.

- **Lack of personal attention**

It hampers direct face to face communication between students and teachers. We know online education cannot replace offline face to face learning where a teacher can solve problem of student by direct observation and interaction.

- **Affects students' health**

For using Edtech mobile application continuously, students' health especially health of eyes, shoulders, back-bone got affected.

- **Social Isolation**

As Edtech Mobile Application provides instruction personally to every student, it makes barriers between students and their social development.

11. Suggestions for Betterment of Edtech Mobile Application

Edtech mobile applications can be developed more by following some ways. Those are stated below:

- Duration of class: The duration of the class can be taken 45 minutes to 1 hour. It will decrease the tendency of headache, eye problems, monotonousness etc (Pugalendhi & Mary,2022).
- Provide eye protection glass- If students are given eye protection glasses while using Edtech mobile application, eye strain problem, headache of students will decrease.
- Hardcopy study material- Students feel more attached with hardcopy study material. Reading hard copy, feels more comfortable. If edtech companies give students hardcopy study materials, students will get benefits.
- Higher education leveled programme in television- There are so many people who do not have mobile phones in their home. If higher educational guidance programme, competitive exam preparation programmes, entrance exam preparation programmes are telecasted through television, then economically poor background students will be benefited.
- Solution for language problem: There are so many edtech apps which deliver academic content in English language. If it is possible to deliver the content lectures in regional languages, a wide area of students will be benefited.

By following the above said ways, Edtech mobile application can be catered to a large area of students and this will help the startups to enlarge their companies.

12. Research Methodology

Researcher adopted the following methodology to execute the research:

- Method Used: In the present study the researcher used survey method. It is a descriptive type of research.
- Tools: Researcher was used Questionnaire for this Study.
- Statistical Measure:
 - Descriptive Statistic: Out of the several methods of descriptive Statistic, the researcher selected here only mean and standard deviation for the study.
 - Inferential Statistic: Out of the several methods of inferential statistic, the researcher selected here only t-test of this study.
- Population of the Study-The population of the study is all undergraduate students including male and female of rural and urban areas of West Bengal
- Delimitation of the Study: Researcher conducted the study into East Burdwan district. It is the delimitation of the study.

- Sample and Sampling Procedure-Researcher takes 200 undergraduate students including equal numbers of male and female students of rural and urban area of East Burdwan district as sample by purposive sampling procedure. The sampling framework is present below:

Table 3. Showing sampling framework

	Area	Gender	Academic Stream	Number of Students	Total Student
UG students In East Burdwan district	Rural	Male	Arts	25	100
			Non-Arts	25	
		Female	Arts	25	
			Non-Arts	25	
	Urban	Male	Arts	25	100
			Non-Arts	25	
		Female	Arts	25	
			Non-Arts	25	
Total			200	200	

13. Analysis and Interpretation of Data

In this study analysis has been done hypothesis wise.

Ho₁: There is no significant difference of students' attitude towards Edtech Mobile Application in terms of locality.

Table. 4 Showing difference of students' attitude towards edtech mobile application in terms of locality

Variable	Category	No	Mean	SD	df	t-Value	Result
Attitude towards Edtech mobile Application	Rural	100	103.76	23.94	198	3.296	Significant
	Urban	100	114.26	21.01			

*= Significant at 0.01 level of Significance

The table no.4 shows that the 't' values for the attitude of students towards Edtech Mobile Application is 3.296 (df=198), which is found significant at 0.01 level of significance. It means that there is a highly significant difference between rural and urban students' attitude towards Edtech Mobile Application. Mean value indicates that urban students have more favorable attitude towards edtech mobile application in comparison with rural students.

Ho₂: There is no significant difference of students' attitude towards Edtech Mobile Application in terms of gender.

Table. 5 Showing difference of students' attitude towards Edtech Mobile Application in terms of gender

Variable	Category	No	Mean	SD	df	t-Value	Result
Attitude towards Edtech mobile	Male	100	124.20	17.00	198	2.53	Significant
	Female	100	106.20	18.85			

*= Significant at 0.01 level of Significance

The table.no-5 shows that the 't' values for the attitude of students towards Edtech Mobile Application is 2.53 (df= 198), which is found significant at 0.01 level of significance. It means that there is a highly significant difference between male and female students towards Edtech Mobile Application. Mean value indicates that male students have more favorable attitude towards edtech mobile application in comparison with female students.

H₀₃: There is no significant difference of students' attitude towards Edtech Mobile Application in terms of academic stream.

Table. 6 Showing difference of students' attitude towards Edtech Mobile Application in terms of academic stream

Variable	Category	No	Mean	SD	df	t-Value	Result
Attitude towards Edtech mobile	Arts	100	106.40	20.00	198	6.417	Significant
	Non-Arts	100	123.23	17.00			

*= Significant at 0.01 level of Significance

The table. No-6 shows that the 't' values for the attitude of students towards Edtech Mobile Application is 6.417 (df= 198), which is found significant at 0.01 level of significance. It means that there is a highly significant difference between arts and non-arts students towards Edtech Mobile Application. Mean value indicates that non-arts students have more favorable attitude towards Edtech Mobile Application in comparison with arts students.

14. Conclusion

The demand of Edtech application among young people is growing very rapidly. There are lots of causes for rapidly growing market of this. There exist so many edtech mobile applications which not only guide them in academic programmes, but also facilitate them in competitive exams as well. Students can learn from these in their flexible of time. Not only Edtech Mobile Applications serve students academic needs but those apps also take care of their marketing strategies which are also very attractive. Everything has pros and cons in both two sides. These Edtech applications should be more economic and convenient, so that students from poor economic background can afford it. We have to make solutions or remedies for the cons of Edtech Mobile Application and have to move forward for better learning strategies. India has lot of scope to flourish its development and students will be benefited from it. After lot of advancements in Artificial Intelligence, Cloud computing system, Edtech Mobile Applications will grow more and more.

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