

EFFECTS OF MOBILE LEARNING ON TODAY'S COMPETITIVE LEARNERS IN ACHIEVING THEIR DESIRED GOALS

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Abstract:

Till 2019, rather during pre-covid times, Mobile Learning was mainly confined to the students of a certain age group and a class of people and those who were financially sound in India. The condition of the depressed middle-class learners in India was disrupted. Mobile Learning has been only way to maintain the continuity of education and has saved quality education from collapse. Mobile Learning has become important for students of all age groups despite the drawbacks of digital divide. This survey-type methodological study shows that how competitive learners prepare themselves with the assistance of mobile learning to become successful in competitive examinations to get a job and achieve their desired goals. To conduct this study, a self-made questionnaire was applied through google form to collect data. The result of the study reveals Mobile learning has made competitive learners' efforts effective and helped them to pass examinations independently as well as it has increased the level of self-confidence of competitive learners.

Keywords: *Mobile Learning, Formal Education, Non-formal Education, Distance learning, Competitive Learners.*

Introduction

In this present context learning gradually becomes so dynamic. Mobile learning is a concept that starts with technological progress. More and more educational institutions are moving towards mobile learning therefore a way to take advantage of a new wave of electronic devices has emerged. Mobile learning refers to the use of the internet technologies and mobile to facilitate teaching and learning process both inside and outside of the classroom that deliver a broad layout of solutions that enhance knowledge and performance. Devices are increasingly becoming multi-functional and thus may be used to fulfil a variety of social and educational tasks. Mobile learning has many different names like M-learning, mobile E-learning, personalized learning, handheld learning.

Definitions of Key Terms

Formal Education: Formal learning is an organized, systematic, structured education system where students or learners follow specific laws, rules and curriculum of an institution. And administration also plays an important role in this process or educational system. The stakeholders of this educational system are interrelated with one another. So, formal education has been defined a set of features as well as pre-determined rules and regulations that students and teachers have to follow. Most importantly both teachers and learners have to be present physical the same learning environment and they also have a face-to-face interaction.

Non-formal Education: Non-formal education is a type of education that takes place outside of the formal education. The main purpose of the non-formal education is to develop some basic skills and aptitudes of individuals that are essential for their day-to-day existence. Non-formal education can be considered to be more flexible and learner oriented than traditional formal education. It is organised in such a manner that students can easily access it from anywhere and anytime without strict time scheduled according to their own needs. Learners have the opportunity to withdraw from non-formal education programme, if they do not feel motivated or interested or when they feel it is not beneficial to them. In general, non-formal education means a planned, organised and deliberate education system of which most of the features are designed based on the students' needs and objectives.

Distance learning: according to Holmberg "Distance study is learning supported by those teaching methods in which, because of the physical separateness of learners and teachers, the interactive, as well as the pre-active phase of teaching is conducted through print, mechanical or electronic devices".

Competitive Learners: Competitive learners are those who are preparing for any kind of competitive examinations for getting a job to achieve their desired goals. They are not confined to particular age and grade.

Objectives of the Study

- To elaborate the concept of mobile learning.
- To study the effectiveness of Mobile learning in the present education scenario.
- To study the learning procedure while using the mobile.
- To find out what extent the competitive learners can achieve their goals through Mobile learning.

Concept of Mobile Learning

Mobile learning is a new and innovative way to learn a learning content. If you have mobile devices connected to internet, you can access and learn any learning content from anywhere and in anytime according to your requirements without facing difficulties. Recently smartphones are at the centre of our lives, we cannot pass a day without using smartphone. So, the use of mobile has occupied an important place in our education system. Mobile learning can happen anytime and anywhere because it has no geographical boundaries. It gives freedom to students and teachers equally for communicating and delivering messages and contents instantly. With the power of mobile, learning can be more widely accessible and available. The term Mobile Learning or 'M-Learning' bears different meanings from different communities. And Mobile learning has many different definitions and is known by many different names like U-Learning, learning while mobile, personalised learning, M-Learning, anytime/anywhere learning and so on. A simple definition of mobile learning may be cited here in this context as "any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies" (*MOBIlearn.*, 2003).

Mobile Learning is not only a combination of 'mobile' and 'learning' but also connected with e-learning that has a direct link with it positively. It is the 'mobile' aspect of mobile learning that differs from conventional learning. Over the past ten years, research works on mobile learning have increased by the researchers, institutions, school projects, and technical personnel.

Here some definitions included:

Both Quinn (2000) and Pinkwart, et al. (2003) defined mobile learning as "E-learning that uses mobile devices".

Mobile learning can perhaps be defined as "any educational provision where the sole or dominant technologies are handheld or palmtop devices".

Mobile learning is "learning across multiple contexts, through social and content interactions using personal electronic devices".

Effectiveness of mobile learning in the present education scenario

Mobile learning can be controlled by self or others and happened in formal, non-formal or informal setting also. Besides this facility, it can be provided with conventional face-to-face teaching-learning process simultaneously that is called blended learning. M-learning focuses on learner centred pedagogies and allows learners to learn any material according

to their pace and rate of learning maintaining time, location and physical proximity. This is a collaborative as well as blended approach where students can interact with one another and perform their exercise. It has removed the burden of books or other printed materials that learners have to carry wherever they go to learn. They can explore anything on a particular topic through mobile within a minute and share their thoughts or viewpoints with their peers. One of the best things of mobile learning is that it always keeps students active.

McQuiggan et al. (2015) noted that there could be four different levels of access to mobile devices inside the classroom:

1. A teacher in the class with a single mobile device where teacher can use the device to manage the class activities.
2. 1:1 where each student has a personal device.
3. Many: 1, where many students share a device.
4. BYOD (bring you own device), where students bring their own device from their homes

Mobile uses in classroom:

- A mobile has many useful, relevant and essential features like calendar, calculator, stopwatch, note book which are frequently used in classroom by the both teachers and students.
- The second most essential feature of a smart phone is its camera. Learners can take photocopies of notes, books and writings written on blackboard.
- Voice recorder in mobile also an emergent property of mobile. Learners can record lectures of teachers and listen to them when they desire for.
- Mobile contains many different learning applications used for individual purposes. Apps can be downloaded according their needs and used.

Outside the classroom:

- Learners who show individual interests in different topics outside of the available curriculum and desire to know things in depth can enrich and fulfil their special needs, skills and curiosity.
- Printed materials often demand high cost. Learners can download and read e-books in any time and from anywhere when they want.

- Teachers and learners can be connected through virtual classroom with the help of mobile connected with internet using different types of video-conferencing and tele conferencing apps without physically present in the same environment.
- They can assess what they learn whenever possible through online mock tests.

Uses of mobile in Distance education:

- A very important role is played by the application of new technologies and communication network in the field of distance education. In that case a vital role is played by the mobile learning.
 - “Distance Education is planned learning that normally occurs in a different place from teaching necessitating special techniques of course design. Instruction special method of communication by electronic and other media and special organization and administrative arrangements” (Moore and Kearsley).
 - Very new modern technologies like telephone tutoring, teleconferencing, multimedia, video conferencing, e-books etc. are in much use in the distance education field.
 - Much support using mobile learning is provided to the students of distance education.
 - Off-campus students far away from their institutions can be delivered course content easily.
 - In distance education the collaborative learning which is enhanced by mobile learning is regarded as the most efficient way of learning.
 - Learners of distance learning these days can always be aware of information, administrative activities, instructions informed by the institutions because of using mobile and communication network.
- According to Attewell (2005), in mobile learning there are several advantages that are the followings:
 - To improve literacy and numeric skills.
 - To recognize learners’ existing abilities.
 - May be used for independent and collaborative learning experiences.
 - To identify areas where learners need assistances and supports.
 - To overcome the digital divide.
 - To make learning much informal.
 - To raise self-esteem and self-confidence.

Learning procedure in mobile

Every person has his own learning style. He can learn, understand and practice learning materials depending on his nature of learning. In a traditional classroom a teacher delivers subject materials to all the students who are diverse in nature. This diversity does not allow all students to acquire same amount of delivered content by the teacher. Mobile learning has removed this drawback by introducing its personalised learning property. By using mobile connected with strong internet, a student has the power of controlling over his learning. Mobile has made learning style more personalised or individualised.

Readiness to learn and be concentrated are two of the first category psychological conditions of learning. Each and every instruction from maintaining time to evaluation procedure is controlled by the formal institution. Students have to follow all the instructions and lead themselves according to institutional timetable even if they are not ready or motivated. Mobile learning has been able to manage time table, a student can learn or access e-content when he is ready to learn.

➤ **Benefits of Mobile Learning**

McQuiggan et al. (2015) note the following as the general benefits seen in mobile learning:

- M-learning does not restrict the learners in a specific context or in a particular classroom. It connects classroom teaching with the knowledge outside of the classroom and makes learning independent of the time and location.
- The price of the mobile and mobile devices is relatively low and within the reach of common people in the various part of the world. This accessibility of M-learning creates the bridge of digital divide among the learners in the current generation.
- Skills like communication, problem solving, searching, collaboration etc. are being developed by using mobile devices connected with internet in the 21st century.
- By the support of mobile learning, many new ways and concepts such as flipped classrooms, blended learning, home schooling of learning are being invented and implemented in teaching learning field in a rapid speed.

- Having the power of controlling over devices in hand allows learners to direct their own learning and can lead to higher engagement in the interaction. Learners can always stay active and focused on their learning.

(Elias, 2011, Crescente and Lee, 2011):

- As the cost of mobile devices is less than that of PCs or laptops, it creates more space and opportunities to learners.
- Mobile learning has options to use multimedia content.
- Reduces training costs.
- More rewarding learning experiences can be gained.
- Increases levels of literacy, numeracy and participation in education.

Barriers and challenges of M-learning:

- Creates digital divide among the learners.
- Has no restrictions on learning timetable.
- Makes Distractions in the classroom.
- Facility like multitasking has negative impact on learning.
- There are no assessment procedures outside the classroom.
- Authenticity of information and reliability of content.
- Over access of mobile devices occur several health-related issues of learners.
- Cost of equipment, technical support and teacher training is almost high.
- Still policy makers are sceptical to implement M-learning at grass root level.

Methodology

Basically, this investigation is quantitative in approach. Specifically, survey method has been used to conduct the study. Here purposive sampling technique has been followed to collect the data. Researcher developed questionnaire by using five-point Likert Scale. This questionnaire comprises of five dimensions, each one consists of eight items. Responses of 108 samples have been collected through email by dint of this questionnaire.

Sources of data: Primary data are collected by applying questionnaire through google form. The paper is also based on the secondary information collected from different sources like research journals, books, websites etc.

Data Analysis:

The data, collected for this study, have been analysed by Percentage method. Five types of response have been allotted in this Questionnaire. The Research tool used on the Five-point

Likert Scale has been grouped into five types of responses. These are: Strongly disagree, disagree, neutral, agree, strongly agree.

The collected data is discussed on the basis of the five dimensions of the Questionnaire:

Items on the basis of dimensions	SD (%)	D (%)	N (%)	A (%)	SA (%)
Interest in Mobile Learning					
1. I use mobile for self-study	01.90	00.90	15.70	65.7	15.70
2. I feel distracted while using mobile in learning	02.70	26.90	22.20	38.00	10.20
3. It slows down my study hours.	02.70	26.90	25.00	39.80	05.60
4. I learn best from printed materials (hard copies).	00.90	11.10	13.00	50.90	24.10
5. I feel less focused while I use mobile for studying.	06.50	23.10	12.00	47.20	11.101
6. Mobile learning helps me to do multitask.	00.90	04.60	20.40	63.90	10.20
7. I am being attracted by mobile learning day by day.	03.70	12.00	30.60	43.50	10.20
8. Mobile learning makes my study more interesting	02.80	09.30	25.00	56.50	06.50
Motivational aspect in learning					
1. Mobile learning has given me a new way and strategy to enrich my knowledge.	01.90	01.90	14.80	64.80	16.70
2. Mobile learning helps me to eradicate my boredom in my study routine.	03.70	12.00	25.00	52.80	06.50
3. Mobile learning makes my study mechanical.	00.90	15.70	27.80	46.30	09.30
4. Mobile learning attracts me as it has multitasking opportunities.	00.90	05.60	29.60	58.30	05.60
5. Mobile learning helps me to stay active for searching anything.	00.90	02.80	17.60	64.80	13.90
6. Mobile learning provides self-support as it is always on my hand.	01.90	06.50	15.70	63.00	13.00
7. Mobile gives me instant answers of my any type of queries. It makes my study fast.	00.00	08.30	12.00	62.00	17.60

8. Mobile learning has made a proper study habit of mine.	07.40	25.00	26.90	30.6	10.20
Content in mobile learning					
1. Mobile learning gives me different sources for collecting any content.	01.90	01.90	08.30	62.00	25.90
2. Different content formats (audio, video, pdf, pictures etc.) of mobile learning simplify a topic much better.	02.80	07.40	15.70	54.60	19.40
3. There is a little scope for interacting on a given topic in mobile learning.	00.00	15.70	26.90	53.70	03.70
4. A good deal of content from web mugs up my learning.	00.90	07.40	31.50	54.60	05.60
5. Through mobile learning, I can choose content according to my own ability.	01.90	03.70	17.60	63.90	13.00
6. The content of mobile learning keeps me updated.	00.90	02.80	09.30	63.00	24.10
7. Mobile learning provides me exact material what I need.	00.00	13.00	23.10	50.90	13.00
8. I get sufficient information for my study through mobile learning.	01.90	07.40	19.40	61.10	10.20
Accessibility					
1. Mobile learning is easy to access.	02.80	05.60	20.40	57.40	13.90
2. Getting stuck on the mobile for learning kills most of my time.	00.90	19.40	27.80	40.70	11.10
3. Using mobile learning is affordable to me.	01.90	10.20	32.40	44.40	11.10
4. I am not comfortable with mobile learning.	08.30	36.10	16.70	32.40	06.50
5. Mobile learning is flexible according to my time, places and situations.	00.00	04.60	14.80	58.30	22.20
6. Mobile learning reduces my quality time	00.90	27.80	24.10	39.80	07.40

of my study.					
7. By using high speed information access, I am satisfied with mobile learning.	03.07	07.40	17.60	63.00	08.30
8. I can manage my reading schedule properly with mobile learning.	04.60	23.10	20.40	46.30	05.60
Assessment					
1. My exam phobia could be killed practicing the online mock tests.	02.80	16.70	28.70	39.80	12.00
2. Here, I can get immediate feedback.	02.80	09.30	14.80	66.70	06.50
3. Mobile learning creates a better platform to practice my learned knowledge.	01.90	08.30	21.30	60.20	08.30
4. I enjoy online assessment through mobile learning.	07.40	14.80	23.10	47.20	07.40
5. Mobile learning gives easy explanations on the basis of every mistake made by me.	00.90	20.40	14.08	55.60	08.30
6. I identify my weak and strong points by exercising online assessment before taking a final examination.	00.00	06.50	29.60	51.90	12.00
7. Taking online examination in the mobile learning is easy to me.	06.50	13.00	17.60	50.90	12.00
8. My traditional offline examination habits hinder to take online examination.	01.90	13.90	40.70	34.30	09.30

Interest in Mobile Learning

On analysing the responses of the items in these dimensions, we find that the learners have responded positively against the negative statements. Hence, responses for “agree” is more than any other options. For instance, the percentage of “agree” in the statement: I feel distracted while using mobile in learning, is 38% which is more than any other options. Options such as: It slows down my study hours, or I feel less focused while I use mobile for studying – holds the maximum percentage of agreement of the learners.

On the other hand, 65.7 % of learners use mobile for self-study, whereas, 50.9% of learners are able to learn by dint of printed materials or hard copies. Analysing these data, it can be said that although the learners are more comfortable in using the traditional methods of

learning, the aptitude for using mobile devices in self-study is noticeable among the learners these days.

The keen interest of the learners to use mobile in their studies is fast increasing in spite of the growing disadvantages of mobile learning. Besides helping the learners in Multitasking, mobile learning also makes the learning process exciting.

Motivational aspect in learning

From the responses of the dimensions obtained, it can be said that mobile learning has mechanized the process of learning. 46.3% of learners responded to “agree”, 27.8% neutral, 15.7% disagree, 9.3% strongly agree. In spite of this, analysing the recorded responses for the positive items, it is clear that mobile learning is a new and effective method of acquiring knowledge among the learners. The learners are able to expand their arena of knowledge using mobile learning. Learners are being able to solve out their doubts by dint of internet without having to depend on anyone else which is a useful way of mobile learning. Thus, they are able to know instant answers regarding factual knowledge. Moreover, mobile learning has enabled multitasking which motivates the learners greatly. For instance, the learners are able to take the screenshots of the required notes while attending classes online and later on make a PDF of those screenshots and make his/her required notes which saves the time needed to make a manual note. As a result, he/she is being able to be active in other works in that time.

Content in Mobile Learning

In this context, it is noted that multiple contents on one particular topic confuse the learners very often. The data collected from different contents regarding one particular topic may vary in different sites. These dissimilarities in contents pose an obstacle in the way of learning. The item allotted in this regard has the maximum response on “agree” (54.60%) and very less response on “strongly agree” (5.6%). Another drawback of mobile learning is that there is almost negligible scope of human interaction (interaction among the teachers and the peer group) even if there is a scope of maximum content in mobile learning. The teachers, in YouTube tutorial classes, keep delivering lectures throughout the class without the students getting to interact with the teacher which makes it a One-way classroom communication system. The traditional form of two-way classroom communication system is not prevalent here. Hence mobile learning through the medium of online apps like Google meet is not a very effective method for the learners.

In spite of the above-mentioned limitations, mobile learning has enabled the learners to choose their content-related material as per their ability (63.9% agree, 13% strongly agree).

Mobile learning helps in keeping the learners updated in order to expand their arena of knowledge (63% agree, 24.1% strongly agree). The learners are thus able to collect quality data by dint of mobile learning (61% agree). Mobile learning also enables a learner in studying an information on a particular topic well from different format of e-contents and also analysing it better.

Accessibility

On analysing the responses regarding the items in this dimension it can be said that mobile learning has reduced quality time of the students in studies (89.8% agree, 27.8% disagree). But mobile learning is vast increasing amongst the learners due to its accessibility. Moreover, the learners are being able to access their lessons anytime and anywhere according to their needs and accessibility. This flexibility in mobile learning has made it even more approachable to the learners.

Assessment

On assessing the responses, it can positively be said that competitive learners have got a new scope of pre assessing and prepare themselves for competitive examinations through various learning apps and online mock tests which help them in reducing the exam phobia and managing the time during the main examination course. The learners also have the scope of getting back their results as soon as they complete their mock tests. As a result, immediate feedback of the examinations helps the learners to know their positions better before they approach the main examination. In accordance with their positions in the mock tests, they can modify their learning strategies as well.

Significance of the study

On completion of this survey type study, it is clear that the students are wholly dependent on mobile learning these days. The institutions providing online courses will also be rampant and take necessary steps in increasing their quality of infrastructure. The students will also be vigorous and excited in learning in these new and advanced forms of mobile learning.

Furthermore, the organisations which constitute various policies, principles, recommendations for these online courses will also be benefitted through this study. They will get to know about future investments, changes to be made in infrastructure and policies, and refine and enrich their ways of organising. NAAC and NIRF may also be sensible in affiliating such small institutions providing online courses. It would also help those apex institutions like NAAC, NIRF to be sensible, which provide affiliation to small online academies offering online courses.

Conclusion

Therefore, it can be concluded that mobile learning is not confined to distance education only in the present days. During the COVID 19 pandemic situation prevailing, mobile learning has made a paradigm shift in the living standards of people beside education in the last few years.

Before the COVID 19 situation started, mobile learning had widely been limited to non-formal setting of education or Open and Distance education. It was used as an aid of instructional design in open and distance education. Now, mobile learning is no longer considered as an alternative system rather it is extended as the sole medium in all spheres of education.

In the prevailing pandemic situation, the traditional way of learning was greatly disrupted and the system of learning lost its continuity. In order to regain the losses, mobile learning became important and effective way of studying. Keeping in mind the advantages and the disadvantages of mobile learning it can be said that, mobile learning has helped the learners, especially competitive learners in achieving their desired goals.

Learning apps like Grade up, Testbook, Exam prep: Mock and live classes, Upgrade, Unacademy, NCERT Books & Solutions have helped the learners in preparing for competitive examinations by taking online mock tests. They can easily know their scores and they are also provided with the solutions of every question in the practice set itself. With the help of this, the students are being able to rectify their wrongs and modify their way of studying. Taking these tests multiple times also helps the students in developing time management. Furthermore, individual YouTube channels have also helped the learners to follow the classes as per their ability.

Another reason for attraction to mobile learning is its less learning cost. With the amount to be paid to an offline teacher a month, a student can easily access internet data for three months. For example: a private tutor has to be paid 400 to 500 rupees monthly as fees thereby amounting to 1200 to 1500 rupees in three months. Whereas recharging data for three months costs Rs. 600. So, the students, especially the less privileged will prefer the latter option more. The students can get sufficient contents and be beneficial by doing quality classes without paying any fees.

References

- B. Holmberg, "Status and Trends of Distance Education" (Kogan Page, London, 1981) p11.
- Boity, B. (2015, December 18). Mobile Learning in India: Scope, Impact and Implication.
- Dib, C. Z. (1988). Formal, Non-Formal and Informal Education: Concepts/Applicability. *Cooperative Networks in Physics Education - Conference proceedings 173*", (pp. 300-315). New York.
- Klimova, B. (2019, April 26). Impact of Mobile Learning on Students' Achievement Results. *Education Science*. doi:10.3390/educsci9020090
- Laouris, Y., & Eteokleous, N. (n.d.). We Need an Educationally Relevant Definition of Mobile Learning.
- McQuiggan, S. (2015). In Kosturko L., McQuiggan, J. and Sabourin J. (Eds.), *Mobile learning : A handbook for developers, educators and learners* John Wiley & Sons, Inc.
- Mehdipour, Y., & Zerehkafi, H. (2013, June). Mobile Learning for Education: Benefits and Challenges. *International Journal of Computational Engineering Research*, 3(6), 93-101.
- Miller, H. B., & Cuevas, J. A. (2017). Mobile Learning and Its Effects on Academic Achievement and Students Motivation in Middle Grades Students. *International Journal for the Scholarship of Technology Enhanced Learning*, 1(2), 91-110.
- Pedro, L. F., & Barbosa, C. M. (2018). A Critical Review of Mobile Learning Integration in Formal Educational Context. *International Journal of Educational Technology in Higher Education*. doi:10.1186/s41239-018-009-4
- Rahman, H. (2014, October). The Role of ICT in Open and Distance Education. *Turkish Online Journal of Distance Education*, 15(4), 162.
- Traxler, J. (2005). Defining Mobile Learning. *IADIS International Conference Mobile Learning 2005*, (pp. 261-266).
- YOUSUF, M. I. (2007, October). Effectiveness of Mobile Learning in Distance Education. *Turkish Online Journal of Distance Education*, 8(4), 114-124.