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Mobile Learning: An Escalation to Inclusion and Academic Performance of Differently abled Students

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ABSTRACT

The present paper focuses on the application of mobile learning in teaching-learning process to enhance inclusion and academic performance of differently abled students. The use of Mobile devices in teaching-learning process is a relatively novel concept. These trendy devices have almost all the features of a computer with the additional competency that makes m-learning efficient, productive, and fruitful. As an educational tool, most essential characteristics of these popular devices are an annotation, wireless communication, real-time connectivity and flexibility. It permits the user to edit a document. One can share pieces of information fast. It keeps connected. It is a user-friendly device which can be used as an educational instrument anytime and anywhere. It is an excellent tool for them to learn well, interestingly and profoundly. It provides them a unique way to interact with one another. It eradicates rigid barriers of the education system. They do not get much social exposure in special schools. Thus inclusive education came into existence. It increases the speed of learning. It propels the new gateways of learning. It makes teaching-learning process entertaining, engaging and effective. It is essential for them to compete with the normal students. It upgrades the teaching-learning process, so it enhances their inclusion and academic performance.

1. Introduction

Education is a continuous process of refinement, purification, and modification of human minds. It prepares learners to face the practical challenges constructively. The special schools do not fulfil objectives of education effusively. The differently abled students receive education in special schools, so they do not get much exposure to social interaction to learn how to deal with real-life situations. Therefore inclusive education was introduced so that they can study, interact and learn with normal students. Mobile learning is the need of the era. The teachers can use m-learning to deal with various issues skillfully. It enhances experience and speed of learning. It has many dimensions of m-learning like learning apps, media apps, social apps, gaming apps, banking apps and educational apps. Learning apps for vocabulary building and foreign language learning. Media apps for audio-visual learning. There are social apps for real-time connectivity and collaborative education. Gaming apps assist the learners to learn while playing games such as crosswords and puzzles. Educational apps are trendy now. Various coachings offer offline and e-learning material. Students take much interest in apps and show curiosity in learning while playing that is why apps are useful, conducive and engaging in the teaching-learning process.

M-learning supports individual and group learning. Study apps, news sites, offline learning programmes and E-learning offer a broader world of knowledge and accessibility to the learners fast, so it becomes beneficial and useful for differently abled students. It is a student-centered. UNESCO (2010) recommends the use of mobile learning, "Mobile learning emphasizes integration of learning with life and work, so that education is no longer seen as a separate activity that has to take place in a school, university or other establishment". It unfolds education inexorably; anything at anywhere so they can expand their educational experience and improve their academic performance quickly. Davis (2014) describes mobile learning as an 'on demand learning'. According to him, m-learning enhances the personalised learning. It facilitates access to the latest pieces of information and data. It removes barriers from the collaborative teaching-learning process. Prensky (2001) termed students of today as "digital natives" emphasizing that they differ perspicuously from the students of previous generations qualitatively in that "today's students think and process information fundamentally differently from their predecessors (p.1)".

Inclusion in the classrooms essential for teaching-learning process. M-Learning encourages the inclusion of students significantly. It helps them to cope with stress and pressure of learning effectively. It accelerates the speed of learning. It is a boon for them to compete academically; it ignites them for perseverance. Agrawal & Parvez (2018) explained mobile technology as "It is an inexpensive, user-friendly, simple, productive, flexible, handy, compact, efficient and personal (p.261)". They can upgrade skills, knowledge, wisdom and academic excellence using it. Now it is perspicuous that it can improve inclusion as well as academic performance. Academic performance is an academic report card of a student; it evokes what a learner has learnt and performed in a given set of instructions timely. They face a severe challenge to maintain good academic performance. Thus it is beneficial for them to master instructions, skills and study course material

comfortably. It makes teaching-learning process feasible and smooth.

2. Definitions of Key Terms

Mobile Learning

According to Malley, C. O'. *et al.* (2003) "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 (p.7)".

Inclusion

The Oxford Dictionary defines Inclusion as "A person or thing that is included within a whole".

The Collins Dictionary explains Inclusion as "Inclusion is the act of making a person or thing part of a group or collection".

Academic Performance

Agrawal and Parvez (2018) define Academic Performance as "Academic Performance exhibits how much a learner has learnt and performed in a fixed set of teaching-learning curricula, activities and period (p.262)".

Crow and Crow (1969) define Academic Achievement as "the extent to which a learner is profiting from instructions in a given area of learning, i.e., achievement is reflected by the extent to which skill and knowledge has been imparted to him".

3. Understanding Mobile Learning

Mobile learning is not merely the combination of two words 'mobile' and 'learning'. It is a natural and effective way to provide instructions, skills and knowledge anywhere and anytime using various kinds of devices including smart phones and tablets. These devices can be carried anywhere quickly and can provide learning material to widen the area of teaching-learning process as West (2013) considers the influence of mobile technology in the teaching-learning process. He accepts that m-learning shows the path to resolve educational problems and improves educational outcomes; he further admits that mobile devices provide easy accessibility to e-material of learning to the students as well as teachers and parents too.

At present, Mobile technology has taken a prominent place in the classroom because it acquaints the user with the latest piece of information whatever and whenever one wants, so it has become an essential part of the teaching-learning process. Bryant & Bryant (1998) considers technology as developing a sense of amiability and inspiration for collaborative learning among students with learning disability. Here an attempt is made to exhibit pellucid differences between e-learning and m-learning in this following way:

Differentiating e-learning from mobile learning*

e-learning	m-learning
lecture in classroom or internet labs	learning anywhere, anytime
e-mail-to-e-mail	instantaneous messaging
private location	no geographic boundaries
travel time to reach to internet site	no travel time with wireless internet connectivity

**Retrieved from http://www.mobl21.com/Basics_Of_Mobile_Learning.pdf*

4. Mobile Learning and Inclusion

Mobile learning has a relevant influence on inclusion as it is stress-free to arrange learning material anywhere and anytime, so the differently abled students enable to access resources anywhere and tackle their practical challenges. UNESCO (2011) states that differently abled group of population is the weakest minority group in the world regarding education as approximately 186 million children have not accomplished their primary education. The report admits that ICTs are helping to enhance the comprehensive experience in schools and personal learning should get more attention from programme developers and policy makers to match the different needs of all students at each level of education. The report suggests removing attitude barriers of those teachers who are not familiar enough with ICTs to promote mobile technology in schools and encouraging students towards self-accommodation and learning.

Hayhoe (2014) states that m-learning can enhance the learning experience of differently abled students and include them in the main stream of teaching-learning process. He concludes that mobile technology requires being developed to facilitate quick and efficient learning for students with special needs; the school should impart such education precisely as to make them feel included. Bahr, Nelson & Van Meter (1996) accept technology which can fasten instructional assignments and provide an initial motivation to hesitant learners to write.

5. Mobile Learning and Academic Performance

Many studies done in every part of the world have shown that mobile technology and academic performance are highly correlated. Students using m-learning perform better than others as Nasser (2014) conducted a study to examine the impact of mobile learning, the researcher has applied quantitative-experimental design over three groups of same aptitude learners, where investigator conducted a high-frequency assignment prompt on the first group, low-frequency assignment prompt on second group and an assignment to be handwritten on the third group.The investigator found that first group of learners performed better in particular subject, given in the assignment than other groups. This study favours mobile technology for teaching-learning process.

Vogel, Kennedy, Kuan, Kwok and Lai (2007) conducted a study on the effects of mobile device applications on learning. Mobile applications were developed to collect data through e-tip, crossword puzzle, free exercise and tattoos quiz; the results showed that motivation to utilise mobile applications positively correlated with students' performance. Admiraal, Raessens & Zeijt (n.d.) found a positive correlation between digital gaming and learning. Alqahtani and Mohammad (2015) studied the

influence of m-learning on the students' learning and satisfaction and found a positive impact of mobile applications on students' motivation, performance and satisfaction.

M-learning affects students' academic performance positively; it provides quick, easy and fast learning strategies and fruitful results. They enable to solve their problems to survive in this throat cutting world. They need less guidance to excel, compete and perform well. It offers individual, group studies and in-depth knowledge of any phenomena what a student wants to explore.

6. Use of Mobile Learning in Inclusive Classroom

Mobile learning is a contemporary trend of learning where mobile devices are used for educational purposes. Promoting m-learning is needed because it makes education valid and relevant. It is compatible with personal and group learning; it provides an excellent platform where students can study using different apps which include vocabulary building, instructional programmes and audio-visual learning. Students can initiate group learning on social networking sites, applications and websites especially developed for the educational purpose. Fister & McCarthy (2008) stated "The tablet PC has enhanced the learning environment for many mathematics students at MSU. Whether in a single tablet classroom or a multiple tablet classroom, the evidence suggests that the students are benefiting from the archived notes and the instructor's commitment to engage students with different learning styles through the use of tablet PCs (p.291)".

M-learning enhances inclusion of all students quickly because it provides easy accessibility of educational content. It is handy and compact for differently abled students; sometimes they are unable to access educational content because of their functional limitations, so mobile devices are crucial to them. It is also conducive to normal students from different cultures and languages; they find it useful to face their specific challenges.

It can reduce stress and pressure of special students to complete their tasks and compete with others. Students suffered from dysgraphia can write efficiently using keywords. There can be blogs for reading and writing skills. The teacher can create a wiki for asking queries online where students can answer quickly and hassle-free. They can use audiovisual software to learn well. A separate blog may be assigned to each student to make the teaching-learning process useful and relevant. They can solve long mathematical problems using the calculator available in mobile devices. They can learn new languages by heart using apps, websites and software. It plays a vital role in vocational courses. It makes these courses efficacious as it can provide pieces of information and contemporary evolutions at anytime and anywhere with the least cost. It lets teachers show their students real-life situations through videos. It provides more useful feedback and produces better results.

Agrawal and Parvez (2018) elaborated various vital functions of mobile technology:

1. **"Internet:** Internet plays a notably crucial role in the teaching-learning process. It keeps updated and connected with all the new pieces of information.
2. **YouTube:** YouTube is an excellent platform for audiovisual learning. It is conspicuously informative and enjoyable way to learn well and quickly.
3. **E-book reader:** There are many apps for mobile technology on E-book reading. The learners can study while enjoying.
4. **Recorder:** It is an excellent function of mobile technology. It is convenient; it is a boon for visually challenged learners.
5. **Calculator:** It is quite efficient for lengthy calculations. The student can learn and solve mathematical problems correctly and rapidly.
6. **Dictionary:** Now dictionaries are installed or available in mobile devices so that learning has been exciting and productive.
7. **Pronunciation and vocabulary apps:** There are many pronunciation and vocabulary apps. Students can improve their pronunciation, intonation, stress and rhythm. Vocabulary apps assist learners in increasing vocabulary, fluency and eloquence.
8. **Language apps:** Now the quest for learning foreign languages has been an easy task due to the availability of language apps.
9. **Scanner:** It is an essential requirement for students as well as teachers; they can scan their documents using apps.
10. **Collaborative learning:** Today it is the time of combined learning. Mobile technology encourages learners for collaboration so that they can expand their skills and knowledge.
11. **Real-time connectivity:** Mobile technology paves the path for real-time connectivity; the learners can discuss and ask queries.
12. **E-banking:** It is a surprising function of mobile technology. It saves time, paper and distance. Online payment and transfer of money are a fast and hassle-free feature.
13. **Wi-Fi and Wi-Fi hotspot:** Mobile devices are connected to Wi-Fi and Wi-Fi hotspot to access resources.
14. **Cloud computing:** It is relevant for storing and sharing files (p.263)".

7. Benefits and Challenges of M-Learning

Mobile learning is considerably flexible, inexpensive, user-friendly, and individual. The teachers can impart instructional skills adequately. It eradicates disparities. It generates a feeling of competence and inclusion. It provides the convenience of time and place. They become confident enough to face practical problems. They perform well as they find teaching-learning process engaging and favourable. Thus it is vivid that m-learning is a powerful and fruitful tool to resolve all these pressing issues to inculcate a sense of belongingness and improve academic performance.

Various educational institutions have to deal with different problems during implementation of technology in education. These confront challenges from the mindset of society. That big issue is to be resolved to fix the mindset of people who do not

consider M-learning beneficial to use in education. They concentrate solely on its drawbacks, so it becomes tough to use mobile devices as technology in education. They need to be acquainted with advantages of m-learning. The dearth of mobile learning material is also a temporary issue to use mobile devices in education. Small screen, battery life and download speed of mobile devices are a few challenges, but these will remain no longer.

Conclusion

The present paper focuses on mobile learning which offers a unique way to teaching-learning process. It has a high impact on students' academic performance. It increases the learning experiences of students with special needs and provides them with a broader horizon of knowledge. It is necessary to adopt mobile technology to utilise all advantages of mobile learning to the fullest in every school. The skilled trainers and teachers have to bring it into teaching-learning process. It can enable students with special needs to tackle with their functional limitations in a better way. It can increase the experience of inclusive learning. The researchers advise software developers to discuss with teachers as well as students to know about their needs and educational plans on specific programmes for differently abled students to stimulate personal learning and facilitate a learning-oriented environment. They do not get much exposure to social interaction with normal students in special schools, so they do not become competent enough to face practical issues proficiently. Thus inclusive education was initiated to provide real-life situations to the differently abled students. Mobile learning is a boon to raise inclusive education as well as academic performance.

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