

# Smart Phones as a learning tool and teaching aid: An Analysis

**Kasira<sup>1</sup>,Zahida Yousuf<sup>2</sup>**

*<sup>1,2</sup>Assistant Proffessor, Amar Singh*

*College,Srinagar and Lecturer*

*Sociology,School Education Department, Kashmir(India)*

## ABSTRACT

*Information technology has changed the whole scenario of teaching and learning process. Revolution has occurred in the field of education with the introduction of smart phones. Smart phones are taking place of old teaching aids and learning tools. With the introduction of Bring Your Own Device policy (BYOD) in various schools and colleges, teachers and students are now allowed to use smart phones in classrooms for various educational propose. Now academicians and educationists have realized the importance of smart phones in education. Smart phones have a tremendous potential in the teaching & learning process. In this paper the main focus is to analyze the advantage and use of smart phones as a learning tool and a teaching aid i.e. how smart phones with the help of various educational apps can be used as an effective learning tool by students and a teaching aid by the teachers.*

**Keywords:- BYOD , Educational apps , Learning tool ,Smartphone , Teaching aid**

## I. INTRODUCTION

Among the most significant forces for change in recent years is the technological sophistication which not only affects our lives in profound ways but also seems to hold tantalizing promise for increasing efficiency in education. The technological escalation has bestowed upon proliferation of equipments and materials which can assist the reorganization & redefinition of educational experiences Agarwal.J.C, (2009). In old times when technology was not as well presented as it is today, it was difficult to conduct a lesson. In those days, children were taught by a teacher on a black board with a white chalk in his/her hand. But now a whole thing is changed, a great revolution has happened in the use of teaching aid and learning tools with the advancement of technology. This advancement of technology gives us tool, gadget called smartphone.

Smartphones are mobile phones with computer`s abilities and internet search, the only difference could be the size and its mobility. In another word, it has become a source of entertainment, a communication tool, a search engine and so much more Ha Ngoc Anh (2016).So, smart phone is a phone that performs many of the functions of a computer typically having a touch screen interface, internet access and an operating system capable of running downloaded apps. Due to its multiple functions and easy accessibility it can be used in various educational proposes mainly as learning and teaching tool. With easy access to internet it has become important

tool in learning process of students and teachers. Nowadays even middle class families can afford a smart phone. In these phones various educational apps can be downloaded, these educational apps are making things easier for students to understand. Due to easy access to internet mobile phones are now replacing the old teaching aids and learning tools. Any students can ask question to the teacher at any time through social media, e-mails etc. they can have a group discussions on various topics by themselves. In the mean time the teacher just need to remain involved & guide wherever necessary e.g. if the teacher is busy, he /she can just tell the students to read an article link or take an online test while he/she is away, all this becomes possible because of smart phones and internet.

## **II. CONCEPT OF BYOD IN EDUCATION**

Today is the trend of BYOD (Bring Your Own Device). BYOD was first introduced in 2009 by the courtesy of Intel. BYOD also known as BYOT (Bring Your Own technology), BYOP (Bring Your Own Phone). This was the strategy to cut down technology cost because of financial crises and improve productivity of employees. Now it is incorporated in all fields of our life, even in education. BYOD policy in education can be very fruitful for the student and teaching community. Allowing smart phones in classrooms can be very useful in effective teaching learning process. Smart phones can be used as learning tools by students in tremendous ways. With great BYOD strategies things are getting easier for the teacher to enhance learning through devices. BYOD policy has been already introduced in many schools and universities across U.S and Europe –the result from all these places have been much more than just satisfactory. The myth that technology will distract students, need to be broken in the minds of parents. Technology has always improved learning when used with a purpose & will continue to do so in coming eras. McQuiggan et al. (2015) noted that there could be four different levels of access to mobile devices inside the classrooms:

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

## **III. LITERATURE REVIEW**

Sanna Cedergren and Karin Hellman (2012) in their survey focused on how smartphone applications for vocabulary learning can be used, and what effects it can have on high school students' learning processes. The results from the survey showed that students are very positive towards the idea of practicing vocabulary on their smartphones. It was also found that the students practiced more and began earlier when using the application compared to traditional methods, due to the smartphone's portability and the possibility of more spontaneous learning opportunities.

Stephen Abram (2010) in P-Books vs. e-Books: Are there education issues? explored the nature of the e-books in school libraries, discussed the pros and cons of the print and electronic formats for books in general. Author

highlighted that the e-book experience is quite different on a laptop or PC versus one where an e-reader or smartphone is involved. Biswajit Boity (2015), in his study on Mobile Learning in India- Scope, Impact And Implications, discussed how mobile learning can aid in learning, its strengths and current challenges. The author presents the case of India, which has immense potential due to its increasing mobile market size and internet user base. Also analyzed the current policy catering to mobile learning in the Indian education system. Kam et al. (2008) proposed mobile games on cellphones to be effective for learning ESL (English as a second language) in a rural under-resourced setting. Such games had to be educational as well as pleasurable for the target users, who have limited exposure to technology.

McQuiggan et al. (2015) found through interviews with classroom teachers that mobile technologies added a level of engagement to any activity in the classroom and students enjoyed and were engaged in their interaction with mobile devices. Dede (2008) noted that learning was a human activity that was quite diverse in its manifestations from person to person. Mobile phones offer a platform to personalize learning for every individual and simultaneously offer a wide range of resources at the right level of the individual. Bachmair and Pachler (2015) argued that the learning space for mobile technology is being reconstructed by its learners. They noted that the spaces, in which young people take photos, use text messages, share their learning and investigate further through specialized apps, are losing their traditional forms and functions. Instead, they are becoming contextual environments. Clearly, mobile phones have the potential to redefine the learning space in novel and exciting ways never possible before, provided they are used in the right way.

#### **IV. OBJECTIVES OF STUDY**

- To analyze the advantage of smart phones as learning tool and a teaching aid by students and teachers.
- To highlight the significance of educational apps in teaching learning process

#### **V. METHODOLOGY**

The paper is theoretical; it is an analytical study of smart phones as a teaching and learning tool, so we chose the literature study in the relevant field. Secondary sources of data such as books, research papers, thesis ,etc., were used for this study, besides this some literature was also found on the internet . On the Internet we have searched Google scholar, Wikipedia which offers a great range of journal publications and articles from unique world conferences related to smart phone based teaching & learning .

#### **VI. EDUCATIONAL APPS AND THEIR ANALYSIS**

Today in this technological world we can see students using various gadgets and equipments without any difficulty.

Some of us may have already experienced a teenage student teaching us how to play different games and how to run or operate a particular app on a smartphone .The need to use smart phones in teaching and learning is evident from such examples. It is psychologically proved that children learn quickly through games and sporting

activities and smart phones provide them the same. Today smart phones are the way to go, there are hundreds of educational apps that can help students in better learning and understanding and also helps teachers in effective teaching. There are apps that are beneficial to educators. These apps help educators to organize course materials, grade assignments, reinforce learning objectives, and better interact with students.

By using smart phones we can have an easy access to E- books, these E-books are easily available on internet, these are definitely lighter than the textbooks and we can hardly forget them at home. Students can take notes, search for various links similar to the topic, then & there.

Some famous and widely used educational applications by teachers and students to make teaching and learning effective and interesting.

**KHAN ACADEMY:-** The founder of this app is an American educator and entrepreneur Salman Khan. It is a free app, can be downloaded from play store. Actually this app is an extension of the Khan Academy website, which provides a free world-class education for anyone at anywhere. Students and teachers by using this app can watch more than 4300 video lessons on various topics including Mathematics, Sciences, Humanities, etc. either by streaming them from site or by simply downloading them for later viewing. The videos on different topics are organized in mini lessons of almost 10 minutes. This app provides accessibility of lectures at home. It can be a boon to those who struggle to focus in the classroom, they can catch up quickly with rest of the class by attending and exploring mini lessons at home according to their own pace. The lessons available on this app are easy to understand, accurate and varied, thus making it a good resource for both teachers and students.

**AMAZON KINDLE:-** This app is available on Amazon for both android and iphone. This app has an untold number of reference guides and more. Both students and teachers can simply buy them, download them, and read them. Smart Phones having this app can store number of books without running out of space. With the help of this app teachers and students do not have to carry load of books, they can access book or reference at anytime anywhere.

**PHOTOMATH:-** PhotoMath gives student answers to complicated questions of Algebra, Trigonometry etc, by taking a picture of the problem or question. It uses cellphone camera and OCR technology to read equation written and gives a student answer of that equation. It shows the student step by step procedure on how to solve the problem or equation. This app can help a lot to the students who struggles with Math.

**COURSERA:-** Coursera is an type of online school. It provides an opportunity to students to complete different online courses available in this app. It boasts over 1000 courses ranging from Math to Science, Humanities and even technology stuff. It provides variety of lessons and classes to the students. The classes have lectures, reading assignments, and video content. After finishing a course students can earn a certificate of completion. Some of the courses are free and some are paid. Students can complete course while sitting at home. It is one of the learning app worth checking out.

**DUOLINGO:-** Duolingo is an language learning app first introduced in 2014. It supports over a dozen of languages like, Spanish, French, Portugese, German, Italian etc. It teaches languages in bite sized chunks through little mini games. The lesson gets harder the further student go, but it is always fun to learn a language

through this app. It is completely free to use. It is one of the great language learning app for both adults and kids with the help of this app students and teachers can learn a various languages without any difficulty.

**YOU TUBE:-** You tube is one of the most popular app used today . YouTube is usually for viral videos, music videos, news, and entertainment. However, we can find instructions on how to do virtually anything on YouTube. There are numerous educational channels with tutorials on virtually on anything we can think of. Students can learn anything they want just by one touch, by clicking the particular channel related to what they want to learn. Teachers can also use it for various educational purposes, they can make their own channel and thus can upload their lectures on it, making it easy for students to have access to their lectures anytime, anywhere.

**SKYPE :-** Skype is actually a communication app , But because of its communication features like chat , voice chat , video sharing , video chat , file sharing etc , it can also be used as a study app . Students can share notes with one another, can discuss various topics through video chat with their teachers and friends. Can share an important documents with the help of this app. It can help teachers to communicate with their students freely, thus solving various study related problems. Besides Skype students and teachers can also use other communication apps like facebook , whatsapp , wechat etc for learning purposes .

**Dictionary. Com:-** It is a very useful app for both students and teachers , it let them know the meaning of different words and phrases . It also provides synonyms and antonyms of word. It helps in pronouncing the word correctly with proper phonetics. For using this app internet connection is must. Students can also download various offline dictionaries from play store also.

**TED:-** TED is a media organization which posts talks online . This app is very useful for teachers and students as open source lectures are available on TED which can supplement their classroom lessons . With the help of this app students and teachers can see the latest TED Talks videos, user can download videos and audio for offline viewing , Talk videos can also be shared over Facebook , Twitter , email etc . This app is available on Google play store and the Amazon Appstore for Andriod.

## VIII.CONCLUSION

From the above analysis of various educational apps, it can be concluded that smart phones with the help of these apps can be a blessings for both students as well as teachers. It makes teaching and learning easy and interesting .It saves time and energy. Access to these apps is easy, students and teachers can use them anytime and anywhere. It minimizes the distance between teacher and taught. Now teacher can taught his/her students without being physically present there. Learning with mobile apps has made this generation more interactive and spontaneous. Smartphone helps the students to solve any doubt or queries. This can cater to student absenteeism, school shut downs due to unforeseen circumstances and provide students with disabilities a chance to learn at their own pace in their own comfortable space. These apps help to enhance communication skills, critical thinking, problem solving and literary skills. Students while learning through these apps feel self confident and proud of their abilities and hope for a spectacular future develops in them .

In the end, we can say that proper awareness and counseling should be given to the students by the teachers, how to use these apps. So that they can take full benefit of these apps through smartphones. Guidance is must for the students how to choose a right educational app which will give them optimum help and advantage.

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