

Research Article

Exploring The Transformative Role Of Mobile Phones In Education Of Rural India Students

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Abstract

Mobile phones have become game-changers in the educational scene, allowing students from all walks of life to study together. One solution to the long-standing problem of rural students' lack of access to quality educational materials is the widespread use of mobile devices to disseminate information. Opportunities for learning are expanding as a result of mobile devices' many features, such as internet, music, social networking, dictionaries, etc. With this information in hand, a survey was conducted with the assistance of 120 students. Data was collected using a questionnaire that was developed independently. The majority of students are using smartphones to access the internet, according to data. As a learning tool, mobile was deemed by the majority of pupils. Through the use of interactive and engaging information, mobile phones enable creative teaching approaches, elevating the learning experience.

Keywords: Mobile phones, Learning, Internet, Education, Rural

I. INTRODUCTION

There has been a dramatic shift in the modern educational scene, with mobile phones playing an increasingly important role in closing the achievement gap, especially in rural India. It is hard to exaggerate the revolutionary potential of mobile phones to improve rural students' educational experiences in this age of ever-increasing global connectivity. From their humble beginnings as simple means of communication, these gadgets have developed into complex tools with the potential to radically alter the ways in which knowledge is transmitted, accessed, and learned. Mobile phones have been a game-changer in rural India, where access to education is frequently severely restricted. They open up a world of information to pupils and help create a more welcoming classroom for all students.

The democratization of information is one of the main ways that mobile phones help students in rural areas with their education. Problems with enough funding, qualified educators, and current curriculum materials have long plagued rural places. With their mobile phones, kids may bypass these restrictions and get access to a treasure trove of instructional materials at their fingertips. With the use of educational applications and other Internet tools, even the most rural areas of India may have access to high-quality learning materials. The democratization of knowledge allows students to broaden their intellectual horizons by engaging in self-directed study, being informed about current events, and exploring a varied variety of topics. Moreover, mobile phones facilitate the dissemination of cutting-edge pedagogical practices in rural schools. Mobile apps, instructional games, and interactive learning platforms enable instructors to augment their teachings with technology, making them more dynamic and engaging. Not only can these technologies make learning more fun for children, but they also accommodate different learning styles, which helps to create a more inclusive classroom environment. Education may be more relevant and accessible to students in rural India via the use of multimedia features like films, animations, and interactive quizzes on mobile phones. This makes it easier for students to understand and remember complicated subjects.

One of the most important functions of mobile phones in the education system is the ease with which students, instructors, and parents can communicate and work together. The lack of adequate

school facilities and trained educators is a serious problem in many rural communities. By facilitating remote learning and virtual classrooms, mobile phones may alleviate these difficulties. Through the use of communication applications and educational platforms, students are able to meet virtually with their instructors for help, take part in class discussions, and work on group projects regardless of their physical location. Additionally, cell phones play an important role in connecting schools with parents by allowing for immediate information about children' academic performance, attendance, and individual learning requirements. Mobile phones have many uses in the classroom and beyond; they allow students to study constantly even when class is not in session. Thanks to mobile devices, students have the freedom to access educational information whenever and wherever they choose. This means they may revise courses, do research, and even follow their hobbies outside of class. Students in remote locations, who may face obstacles to their education such as lengthy commutes and a lack of educational resources, can greatly benefit from this adaptability in learning. Therefore, mobile phones may be seen as individualized study aids that empower kids to choose their own education and foster a passion for learning that will last a lifetime.

In addition, rural areas of India may greatly benefit from mobile phones in terms of vocational training and skill development. Numerous vocational training programs are available via online courses and mobile apps because educators understand the necessity of providing students with marketable skills. Students in remote locations may use mobile phones to gain practical skills that are in demand in the job market, whether it's agricultural practices, digital skills, or a specialized trade. As a result, rural areas see sustainable growth as people and communities gain economic power. It is critical, however, to recognize and handle the difficulties of incorporating mobile phones into rural schools. Disparities in computer and internet access, or the "digital divide," continue to be a major problem. Challenges such as spotty network coverage, insufficient power, and ignorance on the pedagogical possibilities of mobile phones are common in rural regions. To close this gap, leaders in government, schools, and tech companies must work together to fund infrastructure projects, raise awareness about the importance of digital literacy, and make sure everyone can afford a mobile device.

II. REVIEW OF LITERATURE

Fojtik, Rostislav (2017) More and more people are interested in finding ways to incorporate mobile technology into their schooling as its usage continues to rise globally. A lot of changes are happening in the timing and way that children study because of mobile technology. In today's classrooms, technology is playing a key role. It demonstrates that both instructors and students are prepared to work with mobile devices, and it discusses the potential of mobile technology in the classroom. The relationships between mobile technology and educators and their pupils were confirmed by aid surveys. The ways in which educators make use of their mobile devices to get ready to teach and study were also confirmed. A educational experiment, interviews, and questionnaires were used as research methodologies. Mobile devices have the potential to improve instruction, according to surveys and trials, but they also introduce new challenges and issues.

Halder, Ishita et al., (2015) Given that India has the second largest number of mobile phone users in the world (over 929.37 million users as of May 2011) and wireless communication is rapidly spreading, particularly among young people, it would be intriguing to investigate the opinions of undergraduate students regarding the use of mobile phones for educational purposes. It is well recognized that mobile phones provide a wide range of functions and services, to the extent that they have become an integral aspect of daily contemporary existence. Hence, the growing prevalence of cellular and intelligent devices in recent times has garnered the interest of researchers. The current study aims to investigate the level of satisfaction among students regarding their studies and determine if there are notable variations in their attitude towards using mobile phones for

educational purposes based on gender, medium of education, academic discipline, and residence. The study specifically focuses on three key aspects: usability, barriers, and preference for using mobile phones for educational purposes. The research examines a total of 100 samples, consisting of both boys and girls, from various colleges affiliated with the University of Calcutta. The data tools were a General Information Schedule and a questionnaire. The students' attitude varied significantly based on gender, medium of education, and location. However, there was no significant variation in the attitude of undergraduate students based on academic discipline.

Gábor, Kőrösi & Esztelecki, Peter (2015) According to a recent poll conducted by UNESCO, about six billion people use mobile phones on a daily basis. The magnitude of these numbers may prompt inquiries over their impact on schooling. What route will the evolution of educational methods take? A significant evolutionary shift became evident 10-15 years ago with the widespread introduction of the Internet in almost every educational institution. During that era, the significant advancement in technology had a profound influence, resulting in both beneficial and detrimental consequences, which continue to be present in modern-day classrooms. Currently, we are aware that the cause of this change in development is our lack of readiness for a significant change that is occurring right in front of us. The educational system in our area views the concept of pedagogy using mobile phones (M-learning) as an idealistic idea that is unlikely to be realized. Nevertheless, this deficiency may be turned into an advantage by gaining knowledge from errors and staying ahead of imminent and anticipated transformative shifts in education. Mobile phone use during lectures is widely seen as undesirable not only in several nations globally but also in Serbia. The Ministry of Education lacks the capacity to efficiently manage mobile phones, tablets, and other possible alternative educational methods or supplements. Consequently, the most straightforward resolution has gained popularity, which is to completely prohibit phones in schools. Only scratching the surface would not resolve the difficulties; it would only postpone them, considering that educational professionals in the northern region approach this matter with a more permissive attitude. An illustrative case is Denmark, which implemented the BYOT program (Bring Your Own Technology) and is resolute in ensuring that every school has Wi-Fi access. The objective of our study is to investigate the approach of instructors and learners towards this problem within the region of Vojvodina. We would want to rationalize our underlying assumptions that instructors harbor a certain degree of skepticism towards mobile phones in the classroom, particularly among those teachers who do not own a smartphone themselves. 455 young participants and 49 instructors from 9 towns in Vojvodina were surveyed using an online questionnaire to gather data.

Ott, Torbjörn et al., (2014) In this study, we offer the results of a survey that we administered to students in an upper-level Swedish secondary school class to find out how often they used their mobile phones for school-related purposes. The majority of pupils in a prior research did not see their cell phones as useful for schoolwork. Nevertheless, 56 percent of pupils admitted to using their mobile phones for homework on a weekly basis when they were at home. Building on the prior research, this paper investigates how students see and utilize their mobile phones for academic purposes both at school and at home. Mobile phones serve as a physical barrier between the pupils' home and school social lives, according to the findings. Students utilize their mobile phones for school-related duties when the format is appropriate, according to the results.

Ruohonen, Mikko et al., (2013) Opportunities for voice-based services are particularly high in emerging markets like Africa and India. The adoption of mobile phones is always on the rise in these regions. We investigate the implementation of mobile educational services that rely on spoken language for underdeveloped nations in this project. Our research is on the Bottom of the Pyramid (BoP) in India and is based on a Spoken Web technology created by IBM Research Labs. The development is proceeding as a service, utilizing the telecom infrastructure, much like the World Wide Web, which operates on the Internet. The idea behind Spoken online is to create a parallel online for the poor, who have not yet had access to the many advantages of the Internet. As part of

RuralVoice, we're looking at three different educational domains—agriculture, healthcare, and entrepreneurship education—to see how Finnish service and tech firms might collaborate to develop new services for this difficult demographic.

Keengwe, Jared et al., (2012) In order to stay in touch with loved ones, millennials use their phones constantly. Educators should carefully consider the use of mobile phones in the classroom before deciding to use them as learning tools. As a result, educational institutions will have to rethink their curricula and embrace the potential of digital tools to attract, engage, and support students from Generation M and iGen. Thus, administrators should establish standards for schools that intend to include mobile phones into their curricula; this article aims to accomplish just that. In addition, the goal of this post is to get people thinking about how they may use mobile phones to their advantage in the classroom..

Kumar, Anuj et al., (2010) Cellphones possess the capacity to enhance education for the vast number of disadvantaged individuals in the developing globe. Nevertheless, there is a lack of research on mobile learning in underdeveloped nations. This study asserts that smartphones are an ideal medium for providing educational opportunities to rural children in a manner that is more convenient than traditional schools, both in terms of location and timing. We conducted participant observations to ascertain the potential instances in their daily routines for engaging in mobile learning. Subsequently, we ran a 26-week research to examine the degree to which adolescents living in rural areas may willingly utilize cellphones to obtain instructional material. The findings indicate a satisfactory degree of academic acquisition and drive. In addition, we provide an analysis of the social circumstances behind these findings. The objective of our study is to assess the practicality of mobile learning in rural, impoverished areas outside of educational settings. Additionally, we aim to provide guidance to other researchers on conducting challenging studies related to mobile computing in developing regions.

Balasubramanian, K. et al., (2010) This paper aims to examine the function of mobile phones in the non-formal and informal settings among rural women from economically disadvantaged groups. Specifically, it examines how women exert authority over mobile phones as educational tools by incorporating them into their everyday lives. An analysis has been conducted on the relationship between distance learning, gender aspects, and the usage of technology in relation to the idea of social capital. The essay illustrates that it is feasible to go from a state of powerlessness to empowerment in informal learning environments, and low-cost technologies provide a way to expedite this process within the framework of social capital.

III. RESEARCH METHODOLOGY

The inquiry utilized the descriptive survey approach, and the data was analyzed using the descriptive analysis methodology to provide a relevant presentation. A sample of 120 pupils from rural areas was selected using the random sampling approach. A customized questionnaire was developed for the inquiry following collaboration with specialists and colleagues.

IV. DATA ANALYSIS AND INTERPRETATION

Table 1 Gender

Gender	Frequency	Percentage
Male	72	60.0
Female	48	40.0
Total	120	100

The table shows that there are 72 persons categorized as male, making up 60.0% of the overall

sample. Additionally, there are 48 individuals categorized as female, representing 40.0% of the sample. These percentages indicate the ratio of each gender type in relation to the total population being examined.

Table 2 Uses on the basis of types of mobile phone or device

Variable	Male (%)	Female (%)
Phone with Internet	36.0	38.0
Smart Phone	61.0	55.0
Tablet	3.0	7.0

The previous table makes it very evident that the majority of pupils possess a smart phone. Pupils that have access to a basic phone that also has internet access are on the second number, whereas just a small percentage of pupils have tablets..

Table 3 Purpose of using Internet on mobile phone

Variable	Male	Female
Social Networking	35.0	22.0
Online Dictionary	15.0	8.0
Search engine	35.0	48.0
All of above	15.0	22.0

At the same time as 15.0% of men and 8.0% of females use online dictionaries, 35.0% of males and 22.0% of females are part of the social networking community. Thirty-five percent of males and forty-eight percent of girls are involved in the Search Engine competition. Last but not least, all three of the activities described are participated in by 15.0% of males and 22.0% of females.

Table 4 Mobile phones increases the interest in education

Variable	Male	Female
Always	55.0	50.0
Never	17.0	10.0
Sometimes	26.0	40.0
Can't say	2.0	0

While 17.0% of males say using a phone never affects their interest in school, 55.0% say it does. Furthermore, 26.0% of males say that mobile phones occasionally pique their curiosity, while 2.0% are unsure. 50% of females report a heightened interest in school on a regular basis, 10% says it never happens, and forty percent say it occasionally. Curiously, not a single female responder chose "Can't say" under these circumstances.

Table 5 Mobile phones used as tool of learning

Variable	Male	Female
Always	78.0	84.0
Sometimes	10.0	5.0
Can't say	9.0	10.0
Never	3.0	1.0

Males report using their phones for study purposes on a daily basis at a rate of 78.0%, with 10% reporting occasional use. Only 3.0% of males say they never use their phones for schoolwork, while 9.0% are unsure. However, among females, 84.0 percent report constant phone usage for studying, 5.0 percent report occasional use, and 1.0 percent report never use their phones for studying. Not only that, 10% of men and 10% of females are confused about the appropriate response.

V. CONCLUSION

As a new technology in the field of education, mobile learning will revolutionize the way students study. Research reveals that students will have a fresh and exciting learning experience when they use digital mobile devices for schoolwork. Mobile learning will have a significant influence on the educational system in India, which is a rapidly developing market for mobile phones and associated services. The technical options for distributing digital information via mobile phones should also get greater attention, as the forms and quality play a significant role in mobile learning. To guarantee that all parts of rural India get the advantages of mobile phone integration, it is essential to recognize and tackle the current digital gap.

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