

The use of mobile learning in elementary school: is it important?

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ABSTRACT

This study describes the use of mobile learning technology for students at the elementary school level. There are many educational applications, so researchers want to know whether these applications are needed for education. In this study, in order to understand how students, understand the use of educational applications that can be used on mobile devices, a qualitative method is used. Researchers in this case also use data collection techniques by conducting semi-structured interviews with students and elementary school students who use cellular technology in learning activities. The children said that using instructional apps had helped them improve their skills. When they work in groups, they develop relational and communication skills. On the other hand, there are some students who do not see the value or convenience of using educational apps on their mobile devices. The result of this research is the application of arithmetic and storytelling helps children improve their cognitive abilities. At the same time, when they interact with others, this activity stimulates them and offers emotional benefits. Use Study participants demonstrated a wide range of learning skills and capacities, as demonstrated by this study. Finally, this work offers new possibilities for future research in this exciting field.

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1. INTRODUCTION

In formal learning settings such as schools, mobile learning is implemented in a variety of ways. For example, mobile technology is being used to replace analogue media and technology. Students' options are expanded thanks to the use of various mobile device functions to students (Baek & Touati,

2017; Kumke, 2018; Prescott & Maher, 2018). Students can also use gadgets to create user-generated contexts and other things, depending on their circumstances and abilities. While mobile learning research focuses on activity-oriented use in practise and theoretical engagement with the topic primarily focuses on constructivist learning methods, the scientific process of discussing mobile learning has not been evaluated or regulated (Baek & Touati, 2017; Baek, Zhang, & Yun, 2017; Crompton, 2017; Kumke, 2018; Prescott & Maher, 2018; Sun & Looi, 2018; Willemse, Jooste, & Bozalek, 2019).

According to research, children in elementary school have different learning styles than adults (Al-Hunaiyyan, Al-Sharhan, & ..., 2017; Gabor & Péter, 2015; Wong, 2012). They process new information in different ways and have different learning characteristics, as well as innovative techniques and pedagogy that can be used to achieve various learning styles and approaches enabled by information and communication technology (ICT) and mobile technology in education (Oladele, 2014). In addition, "mobile technology is important and necessary in today's society due to its presence, flexibility, ease of access, and wide range of capabilities," according to the report (Valk, Rashid, & Elder, 2010). "As mobile connectivity spreads around the world, the benefits of incorporating mobile technology into learning and teaching appear to be clear and unavoidable," says the report (Yang & Wang, 2011).

1.1. M-Definition Education and History

Before evaluating the existing literature on the subject, a definition and history of mobile learning (M-learning) is required. Mobile learning (or m-learning) is the use of mobile and portable IT devices such as Personal Digital Assistants (PDAs), mobile phones, laptops, and tablet PC technology in the teaching and learning process (Erri, 2011). Mobile devices are small portable computers with display screens and touch keyboards or keyboard inputs (Kurilovas, 2014). "Mixed mobile apps" are software programmes that incorporate mobile technology into other technologies. Laptop computers and tablets are examples of this type of educational technology. Mixed mobile apps include media, gaming, nongame, and text messaging apps (Kopackova & Bilkova, 2014)

According to Pappas and friends' research, the main advantages of mobile learning are cost effectiveness, student attitude, utility, and simplicity of use, as well as the use of mobile learning devices in schools (Pappas et al., 2019). Furthermore, research shows that when mobile devices are incorporated into the curriculum, students are more engaged with the material, enjoy the learning experience, offer reciprocal support to their peers, and report less embarrassment and anxiety during the learning process (Kukulska-Hulme & Viberg, 2018). Despite the advantages of mobile learning, (Christensen & Knezek, 2018) explain that there are still several challenges and barriers to implementing it in elementary schools, including "a lack of self-efficacy to integrate technology, class management issues, attitudes toward technology, and a lack of pedagogical strategies." Security issues, student distractions, technology issues, and feelings of insecurity are some of the other challenges with mobile learning (Kukulska-Hulme & Viberg, 2018). Furthermore, parents are still concerned about their children's psychological effects of mobile device use and m-learning (Bano et al., 2018). As a result, given the current ambiguity with certain mobile device apps in the classroom, more research is needed to gain a better understanding of the efficacy of m-learning in elementary school settings.

Several similar studies have been conducted, such as research (Crompton et al., 2016, 2017; Passey, 2009; West, 2013). The findings of this study show the importance of using mobile applications for children and how they can improve learning motivation. Other studies (Crompton et al., 2017; Seppälä & Alamäki, 2003; Sharples, Arnedillo-Sánchez, Milrad, & Vavoula, 2009) found that using mobile learning makes learning enjoyable and not boring. The goal of this study was to examine mobile learning (m-learning) trends in primary education by providing descriptions and benefits of using mobile learning in the classroom (including tablet use).

2. METHODS

Researchers will use expansionist inductive reasoning to develop methodical theories of qualitative data in this study. In this study, the people who took part in it were looked at for how they thought and acted on their own. We were therefore able to collect interpretive data from face-to-face interviews with 54 children aged 6 to 8 years. This research was carried out in Pontianak, with samples taken from several elementary schools. Throughout their fieldwork, the researchers took note of the school's organisational culture and history, management methods, and instructors' perspectives on instructional technology. Both before and after the data is collected, these characteristics are clearly stated.

The interview generally takes much less than 30 minutes to complete. During faculty breaks, the researchers performed face-to-face, semi-structured interviews in classrooms. Nonverbal alerts helped the interviewer higher apprehend the participants' verbal responses in non-public interviews. Informants are influenced to discuss their experiences with instructional apps on their college pills in an open and truthful manner (Carvalho et al., 2015).

2.1. Data Analyze

Predetermined interview standards outline semi-structured interviews. After a short introduction, the college students had been invited to talk about how they used cellular studying applied sciences in their classes. The purpose of the interview is to see if serious video games in schooling can be used as a strategic device to pique students' hobby and motivation in educational topics (Wouters & Oostendorp, 2017). Simultaneously, interviews give students' viewpoints on instructional technology use. The researchers employed the Lincoln and Guba belief criteria to determine that these qualitative investigations' credibility, transferability, dependability, and confirmability could be duplicated in multiple situations. With the agreement of the interviewee and their parents, the individuals' perspectives and reviews were mentioned and/or recorded in the direction of the interview. college students are periodically required to explain and defend their perspectives on subjects. The statistics obtained has validated to be beneficial.

3. FINDINGS AND DISCUSSION

Respondents said that they use mobile apps while at home and on the go, playing a wide variety of fun games. They say that they love games like activity, experience, building, focus, analyst, retro, pretending, reproduction, sports, and procedure, among others. Many students say that they regularly play such video games without interacting with others. these respondents have been alluded to being hooked on this type of game. in addition, they apprehend that they and different game enthusiasts have several comparable hobbies. They went on to mention that multiplayer video games trigger participant competition due to the fact it's miles one of the criteria for progressing in the sport. in line with respondents, this entertainment app encourages greater engagement amongst online players. After that, the children were asked to explain the applications they used in Math and English classes at school. Most respondents said that they were "happy" to participate in Android-based games at school (Figure 1). As a result, students are asked to describe school activities.

When the students played instructional software on their tablets, they said that they were practicing their math skills. They are also encouraged to compete with their classmates (as in entertainment games) by receiving rewards (and results) while playing. In general, the students felt that sharing the results of the game with their peers helped them develop their social skills. The gamers indicate that they are driven and interested since the game gives relevant rewards and challenges. Students are placed into two or three small groups in which they must collaborate and solve issues together. Students have a sense of achievement as well as intellectual stimulation as they progress through the stages of the game.

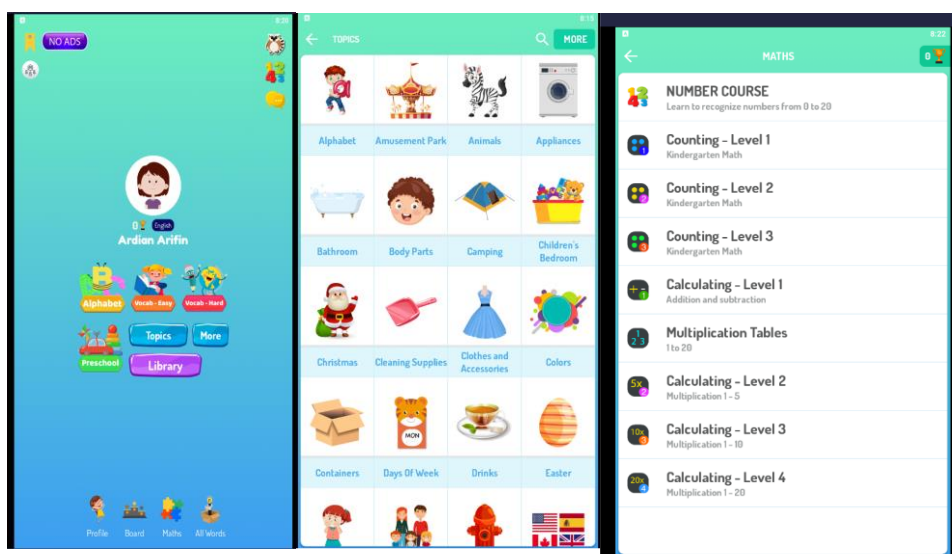


Figure 1. Mobile Learning App for Elementary School

They claim that the problems and their accompanying cognitive load are often adequately addressed. They claim that the coaching materials are designed in sync with their educational level. Some people think games have helped them improve their analytical skills. Many children seem to know that the original purpose of math games is to improve their knowledge and social skills. The students commented that their involvement in the educational application formative exercises had formed a cohesive classroom in which they interacted on the team to compete against their peers. Students ensure that they are using analytical skills or experimenting with different possibilities to achieve the original meaning and purpose of their mathematical activity. They also sometimes ask each other. They might as well solve their own problems.

When asked how the game had enhanced their understanding of the issue, pupils gave a wide range of opinions. However, when they complete the stages of the game, students feel a feeling of achievement as well as intellectual stimulation. Some players, on the other hand, say that arithmetic games are challenging for them. Others said that they didn't find it interesting.

The students usually agree that mathematics sport layout is suitable for their level of education. for the duration of math games, a few students comprehend that they're the usage of their theoretical information. furthermore, some college students declare that cooperation aids them in finishing the sport (due to the fact there are college students with mixed abilities within the school room).

The identical children who play math video games additionally utilize virtual storytelling equipment in English classrooms. Respondents confirmed that generating and conveying their very own studies the use of visible storytelling has benefits and disadvantages. students document that their professors have created quick memories for them (as demos) by using combining recorded narration with transferring visuals that include easy-to-examine fonts, hues, magazine-fashion graphics, tune, and/or sound. individuals, locations, occasions, and other subject matters are frequently protected on this tale, which is commonly stated in less than 10 minutes.

Children are instructed to paintings in small agencies and provide remarks on how to decorate and enlarge their stories. They should create a clean narrative for their work and use digital tools to create animation and sound (like their trainer). The kids indicated that their narrative become divided into three sections: the introduction, the center, and the belief. They appoint metaphors, characters, adverbs, and adjectives to depict the setting in their tale. sooner or later, all individuals of the organization have been requested to share their digital narratives with different college students. Following the group presentation of the fairy tale, the target audience engages in a vital conversation (college students).

The goal of the virtual narrative is to inspire scholars to connect to friends who have been chosen at random. in this pastime, students have been challenged to apply hints from the virtual story as well as

their personal lifestyles insights and stories. a few scholars voiced reservations approximately attractive with strangers. these college students declare that virtual storytelling is hard for them since it requires them to step outside in their consolation area and deliver their memories to a target market. 3 students said that they did now not need to work with youngsters they had never met. kids are imagined talking their private and emotional stories with others, in line with them. After conducting this exercise, children claim they recognize how their peers see, listen, and understand the world in special methods. those are some of the problems that responders are involved about. in keeping with some students, workshops that accompany digital storytelling are useful to both storytellers and their viewers.

In general, the students stated that this activity taught them the importance of paying close attention to one another. Narrative activities, they claim, help children deepen their bonds with their classmates. Some participants stated that taking part in this exercise helped them practice public speaking. According to one responder, digital narrative games helped him enhance his critical and introspective talents by teaching him how to appraise high-quality information.

A few responders, then again, cited technological difficulties. They claim that it's miles hard to end up familiar with the era of these video games. other scholars said that they did no longer see the usefulness or comfort of playing laptop games at school. Researchers located that those youngsters had awesome studying capability while compared to different respondents. these youngsters admitted that they couldn't preserve up with their peers.

4. CONCLUSIONS

The look at supplied a crucial evaluate of the current research literature at the increasingly enormous utilization of cellular packages in basic training. Math games and digital storytelling applications are used to teach and interest students in games. According to the findings of this qualitative study, rather than being "spoon-fed" by their professors, students learn how to solve issues for themselves. These findings are also compatible with constructivist approaches to learning, such as discovery-based learning.

According to the research, math and narrative applications can assist children develop their cognitive ability. Simultaneously, when they connect with others, these activities energies them and provide emotional benefits. According to this study, students are expected to work with their peers, thus they must utilize their connection abilities to their advantage. Because of the serious activities played here, the children's communication abilities have improved. These items are seen to be significant by students to improve their learning experience. As a result, administrators and policymakers now have the chance to design and use mobile learning technology in addition to traditional teaching techniques to deliver inclusive, student-centered, and high-quality education to all children (Camilleri & Camilleri, 2019)

If teachers do not embrace disruptive technology such as digital games and fairy tales available through smartphone applications, they risk losing touch with modern cultural realities. As a result, today's primary school teachers should be aware of the usage of mobile technology, as it has the potential to dramatically improve our children's educational journey. They should urge their children to use educational applications designed for mobile devices. According to the findings, mobile learning apps for youngsters should be appealing and user-friendly. Furthermore, these educational apps can be developed to promote students' real-time engagement with one another and with their professors. The motivation of the teacher to employ this instructional technology most likely influences students' readiness to interact with them. As a result, the student's learning experience will improve. As a result, educators must provide essential instructional content in a format that matches the look of the mobile device. Teachers should give compelling content that includes a good range of photographs and videos to encourage their pupils to utilise their mobile phones for instructional reasons.

With the advent of mobile technology and its different applications, teachers' ability to engage students' desire and preparedness to study in new and engaging ways has improved. Finally, elementary schools are encouraged to perform quantitative and qualitative research on their students'

attitudes and perspectives on using application-based learning materials on a regular basis in order to identify areas for learning and growth. Teachers may require technical training and development in order to produce and deliver application-based learning resources suited to their students' requirements.

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