Impact of Mobile Learning Method on Student Teachers

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Abstract – As science and technology progresses, the world is changing all the time. The presence of technology now seems difficult to escape. It's impossible to keep up with the incredible rate of change and development in ICT. Every one of these tools has been tried out in educational settings before. A great number of academics have taken use of mobile devices' portability and accessibility in the digital age. These gadgets have a significant impact on the lives of their owners in a variety of ways. To date, digital technology development has been focused on social communication, and only a small number of people have seen m-learning as a primary educational activity at higher education institutions. An example of m-learning is using mobile devices such as smartphones, phablets, tablets, and netbooks to learn. Because students may learn anywhere and at any time with mobile learning, it's more adaptable than e-learning. Since smartphones and other mobile devices are already common household items, m-learning has emerged as a significant new approach to education. It's "more engaging with more individuals, communication and collaboration" with m-learning than with traditional learning. M-learning is casual, student-centered, self-directed, and collaborative. The usage of social media in education has advanced thanks to this new technology. Students are increasingly utilizing technology advancements to enhance their learning in order to achieve top academic results. When a student and teacher have a good working relationship, learning becomes enjoyable. Students will grasp a concept faster if the teacher presents it in the way they want. Most university students use their free time on social networks, mainly WhatsApp. It's a natural fit for university students' schedules.

Key Words – Impact, Mobile Learning, Student, Teachers, Digital Technology, Education

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INTRODUCTION

With all of the global innovation in science and technology, it's difficult to ignore the fact that people are constantly whistling the praises of the high-tech gadgets they use on a daily basis (Madeira, Sousa, Pires, Esteves & Dias, 2009). Sometimes, being a "non-tech-savvy" educator at a Higher Education Institution in this technologically advanced period is difficult (Bozalek et al., 2015). New technologies have had a major impact on how people learn and teach (Pavlik, 2015). Computer and associated technology's rapid development is to blame for ICT's widespread use in education and training. With today's technology, people can now communicate with one another over the internet. As a result, the inclusion of ICT in the classroom has given students and teachers alike more opportunities to experiment in the information age (Salehi & Salehi, 2012). In the process of transforming the educational system, ICT serves as a catalyst for new teaching and learning initiatives (Trucano, 2005).

Higher education institutions are paying more attention to social media sites. Young generations use social networks in a variety of ways, and these environments can be described as a matter of personal preference because they provide opportunities such as sharing content, having fun, communicating, building a community, and discovering new things with other young people from around the world (Robles, Guerrero, Llinas & Montero, 2017). In spite of their limited roles, teachers are showing students how to use social networking sites by communicating thoughts and feelings among themselves. The use of social media in higher education has had a positive impact on students' learning outcomes as more educators recognize its importance (Selwyn, 2009). When it comes to educational trends, WhatsApp has emerged as the frontrunner. 98% of mobile devices have the WhatsApp app installed (Conner, 2015). Facebook-owned WhatsApp creates individualized learning experiences for users. For them, being able to learn at their own pace is a source of comfort. The pace of learning is not dictated by the circumstances of the learner, and they are not penalized for moving slowly or quickly (Felder & Brent, 1996). The teacher's job is to act as a mentor

by offering advice and guidance to students. Students are expected to take ownership of their education. Students who take an active role in their education are those who keep tabs on and evaluate their own progress (MacHemer & Crawford, 2007).

REVIEW OF LITERATURE

Bouhnik and Deshen (2014) teachers and students used mobile instant messaging to communicate Twelve semi-structured interviews were conducted with teachers who communicate with their students through the application. Class WhatsApp groups serve four purposes: communicating with students, cultivating a social atmosphere, fostering dialogue and encouraging sharing among students, and serving as a learning platform, according to researchers. Participants talked about WhatsApp's technical advantages, such as its ease of use, low cost, and wide availability. Education had other benefits as well, like creating a pleasant environment and getting to know one's classmates well, which influenced one's conversational style positively. Academic advantages cited by participants included ease of access to learning materials, the availability of teachers, and the ability to continue learning outside of scheduled class times. Despite this, there are obstacles and issues to overcome. In the first place, there was the practical problem of not having a Smartphone among all high school students. For the second, a deluge of pointless and irrelevant messages was sure to irritate educators. There may also be difficulties in the classroom, such as a language barrier between students or the students' expectation that their teachers will be available round the clock.

Mingle and Adams (2015) paper looked at how students in Ghanaian senior high schools used social media and how well they performed academically. An analysis of student behavior on the internet found that students engaged in social networking and participation, spent time on social media networks, and were negatively affected by grammar and spelling errors. The paper also found that student participation in social media networks had a negative impact on academic performance in light of social learning and gratification theories. The paper employed a mixed-method approach, surveying students in four high schools and interviewing the high school principals who were part of the paper. A recent survey found that a large majority of people made friends and chatted on WhatsApp or Facebook. Most people who took part in social media said it had a negative impact on their academic performance, such as poor grammar and spelling, late submission of assignments, and less study time. Students also had a high level of addiction to social media networks. However, some people found that by participating in social media networks, their reading skills improved.

Jafari and Chalak (2016) studied the impact of WhatsApp on Iranian junior high school EFL students' vocabulary learning and retention. The paper involved 60 students from two Isfahan junior high schools, 30 of whom were male and 30 female, and used a mixed method design. There was a pre-test and a post-test. Students in both experimental and control groups learned vocabulary from their textbooks inside the classroom using the traditional method used in all Iranian schools to teach English to students. The experimental group received vocabulary instructions electronically four days a week for four weeks using WhatsApp. According to the findings, students' vocabulary acquisition was aided significantly by their use of WhatsApp. Additionally, the results showed no significant differences in vocabulary knowledge between male and female students after using WhatsApp.

Cetinkaya (2017) the effects of WhatsApp use in the classroom were examined, and the views of students on the subject were ascertained In a mixed research model, data from both qualitative and quantitative sources were used to create the study's findings. A quasi-experimental design with a pre- and post-test control group was used in the study's quantitative aspect. Data were analysed using a two-factor variance analysis for mixed measurements. According to the findings, the success of students differs depending on the learning environment, and using WhatsApp to support the traditional learning environment has proven to be more effective in raising student achievement. Content analysis techniques were used to analyze the data collected by open-ended question forms for the study's qualitative component. According to the findings, students grew fond of WhatsApp during their classes. They expected the same thing in all of their classes. They found that learning could occur both consciously and unconsciously, and that images in the messages helped them learn better. There have been some negative comments about the timing of some posts and the number of redundant posts within the group from some students.

Aharony and Zion (2017) researchers looked into the impact of WhatsApp use on youth working memory. To learn more about how teenagers use WhatsApp, the paper examines the impact of mobile instant messaging distractions on working memory. During the 2016 academic year, scientists conducted research in Israel. One half of the paper sample was assigned to a control group, while the other half was put into an experimental group. Six questionnaires were used by the researchers to collect personal information, an execution assessment questionnaire, and the Wechsler Intelligence Scale for Children-Working IV's Memory Index. Students' working memory performance was found to be negatively impacted by distractions such as WhatsApp messages sent via smartphones. Additionally, students are aware of the difficulties caused by WhatsApp while completing a learning task, as well as the resulting decrease in learning effectiveness. Distractions from the new technological platform WhatsApp have been shown to negatively impact

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young students' working memory, according to this paper.

INNOVATION IN TEACHING

To put it another way, the pedagogical features show how easily ICT can be used to deliver new knowledge while also creating new knowledge in the process. Overall, ICT will assist with the implementation of the Technology Enhanced Learning concept (TEL). Due to the widespread use of information and communication technologies (ICTs) and the internet, many aspects of education have undergone significant change (Kajornboon, 2013). With the advent of new technologies, students now have the opportunity to see and interact with educational content through multimedia and rich graphics (Willemse, 2015). The way we learn has evolved from rote memorization to interactive methods that involve us in the process (Shank, 2008). With the advent of mobile technologies, nearly everyone now has access to them, which opens up new opportunities for improving educational management and teaching quality (UNESCO, 2012). Looking at the disadvantages, students and teachers are unable to learn and share knowledge while traveling or in areas with poor Internet connectivity when using a desktop or laptop computer. But mobile technology now allows teachers and students to access up-to-date data at anytime, anywhere (Mockus et al., 2011). In turn, this is putting pressure on today's educators to modernize their methods of instructing millennial students. Teachers who have access to this technology have better engagement with students, better peer interaction and collaboration, better communication, lower computer costs, enhanced situated learning, and more time and space for learning. They also provide and receive feedback (Shuler, 2009; Allen, 2011; Kolb, 2011). Because of the positive learning outcomes, interactive instruction has been found to be crucial in promoting academic success (Picciano, 2002; Watkins, 2005) Since then, a wide range of technologies have been developed to encourage active participation in learning. According to the research, using mobile technology to enhance student engagement, interaction, and collaboration has been a success (Klopfer, Squire, & Jenkins, 2002; Allen, 2011; Hsieh, Jang, Hwang & Chen, 2011; Kolb, 2011; Chen, Chang & Yan, 2012).

THE NET GENERATION

Today's faculty and administrators in higher education face a challenge with their students, many of whom are part of what is known as the Net Generation, according to Worley (2011) and others. As a result of being raised in the digital age, the Net Generation or Digital Natives have developed cognitively in a way that previous generations have not (Evans, 1995; Rovai, Ponton, & Baker, 2008; Zayed, 2017). Today's students, according to Prensky (2001), are digital natives, fluent in computer, video game, and Internet

languages. The use of technology in education will be a major obstacle for Net Gen learning. Faculty in today's technologically advanced era must be prepared to meet the needs of today's students. In a society where "a paradigm shift from emphasizing teaching to emphasizing learning" has occurred, traditional teaching methods will no longer be effective (Wilson, 2004). The mission and purpose of education in the new learning paradigm are to emphasize learning rather than to deliver instruction. Faculty members should not limit their responsibilities to merely serving as lecturers; rather, they should focus on developing new methods of instruction and learning environments. It is crucial for professors to be aware of these differences and to be ready to adapt their teaching strategies to accommodate a new generation of students (Worley, 2011). Net Generation students, according to Jeff and Zane (2008), have distinct personalities that become learning processes in school. They prefer to work in groups, don't do well in lectures, and don't always communicate well.

ADVANCEMENT IN THE DOMAIN OF LEARNING

Laptops, PDAs, and mobile phones have all evolved into powerful learning tools that can be used in the classroom as well as on the go (Sung, Chang & Liu, 2016 in Baek, Zhang & Yun, 2017). Students' deep learning capabilities can be enhanced and their ability to construct their own knowledge can be enhanced by providing them with access to learning resources at anytime, anywhere, and in various formats. M-learning investigates the learning potential of mobile devices such as smartphones, tablets, and MP3 players, as well as future smart watches and smart glasses. There has been so much use of the slogan "everywhere, anytime" (Attewell & Savill-Smith, 2005). Mobile technologies' value lies in their ubiquity, which is best described as omnipresence. Their most striking feature is also the more pernicious challenge of mobile learning from a pedagogical perspective (Simone, 2016).

MOBILE LEARNING

The term "m-learning," which refers to the use of mobile computing devices in teaching and learning, has evolved into the term "mobile learning" (Grant, 2017). If you think about it, mobile learning is just an upgraded version of electronic learning, with the addition of mobile devices. There is, according to Mehdipour and Zerehkafi (2013), a close relationship between digital learning and mobile learning. M-learning is included in e-learning, according to this theory. As with e-learning, modern digital learning incorporates it. It's possible to see m-learning as a paradigm shift in e-learning. When people think of e-learning, they typically think of learning on a desktop computer that is connected to

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the internet. A distinction was made by Mehdipour and Zerehkafi (2013) between the two types of learning: electronic and mobile. Asynchronous and synchronous learning are other terms for the same thing: e-learning can be done in real time or at your own pace. e-learning is also regarded as being tied down and presented in a structured manner. When compared to traditional learning methods, mobile learning tends to be more self-paced, untethered, and casual in nature. To a large extent, Traxler (2007) asserts that the line between electronic learning and mobile learning (m-learning) has been blurred thanks to advancements in mobile technology (Parajuli, 2016).

There has been a recent surge in interest in mobile learning, which utilizes mobile devices for communication, collaboration, and instruction (Stowe, 2013). The use of M-learning activities in online learning and teaching courses has advanced higher education training technology (Amry, 2014). Today's students are all fluent in the digital dialect spoken by computers, video games, and the Internet themselves. University students frequently use new instructional technologies to learn and build their knowledge. They make use of computers, video games, digital music players, videocameras, mobile phones, and a wide range of other digital-age devices and tools (Prensky, 2001). Universities, colleges, and other postsecondary institutions increasingly use mobile technologies to disseminate general information. In m-learning, a variety of learning approaches and tactics are used with personal electronic devices in various contexts and social interactions (Vygotsky, 1978). (Crompton, 2013). M-learning is primarily concerned with the ways in which society, universities, and other institutions can support an ever-more mobile population. M-learning enables online instructors to be more mobile and interactive with their students by bringing them into the classroom via mobile devices. Using mobile devices for M-learning is an essential part of self-paced education (Trentin & Repetto, 2013). Several researchers have examined the applicability of mobile learning as cutting-edge approaches to teaching and learning (Naismith, Sharples, Vavoula & Lonsdale, 2004). Most modern students must study anywhere and anytime, which necessitates the use of portable technologies (Evans, 2008).

Naismith and Corlett (2006) suggest the following considerations when creating mobile learning content.

- Create quick and simple interactions

- Prepare flexible materials that can change according to the needs of learner

- Design access of device and interaction by considering the different devices and standards

- Contribute to the learning experience using the characteristics and constraints of mobile devices

- Use mobile technologies as a learning facilitator not a tool for only distributes learning contents

- Design materials with learner-centered approach (Demir& Akpinar, 2018).

As well as social and emotional presence, using mobile technologies in higher education leads to pedagogical change because students can learn whenever and wherever they want thanks to m-learning, an innovative learning approach. Because learners are no longer immobile due to the limitations of desktop computer technology or traditional classroom settings, m-learning makes learning more enjoyable, flexible, and interactive (Conole, 2007; Kukulska-Hulme & Traxler, 2007 & Kaliisa & Picard, 2017).

Perspectives of m-learning

Many early m-learning perspectives were technology-driven, with devices like smartphones, PDAs, digital audio players, digital cameras, and voice recorders being used to deliver training. Teaching and learning can be facilitated, supported, enhanced, and extended by using ubiquitous handheld technologies and wireless and mobile phone networks, according to MoLoNET (2007). Mobility is a key component of m-learning, according to this viewpoint. m-learning, according to Keagen (2005), should only be used for learning on small, portable devices. M-learning is now considered a paradigm shift by some. An alternative viewpoint is the learner-centered one, which states that if a learner is not in a fixed, predetermined location or taking advantage of mobile technology-based learning opportunities, they are engaging in m-learning. m-learning is defined by individualism as any activity that makes people more productive when consuming, interacting with, or creating information and mediating through a compact digital portable device that the individual regularly carries and has dependable connectivity that fits in a pocket or a bag (Wexler, Brown, Metcalf, Rogers & Wagner, 2008).

M- learning design for higher education

When it comes to instructional design in this context, identifying the technology, learner, and content, along with mobile technology such as portable devices, are crucial yet sophisticated concepts. Identification of learners who are mobile and capable of decoding learning materials is also required (Alexander, 2004). This generation's first prototypes of mobile devices were never intended to deliver higher education instruction in a way that was previously unimaginable. By using a technology that is specifically tailored for its own personal (mostly social) purposes, designers can deliver successful higher education products for today's learners. The use of technology to deliver and reinforce content that would otherwise be associated with the

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"establishment" in higher education has never been more effective.

The younger generation's self-developed communication modes have been repurposed for the transmission of higher education. Changes in the structure of higher educational instruction delivery give educators a powerful new tool for making delivery more efficient, personal, and culturally acceptable to those who pioneered these new modes of text delivery (Fullan, 2007). Usability, collaboration, context, control, connectivity, mobility, content, blending, technical support, and cost are all common characteristics of m-learning (Imtinan, Chang & Issa, 2013).

CONCLUSION

A control group and an experimental group, each with forty students, were used to examine the effectiveness of WhatsApp-based education over the traditional form of education on academic achievement and learner engagement of student teachers in learning theories. In terms of intelligence, the two sample groups were systematized as equal and homogeneous. The experimental group outperformed the control group in learning theories when comparing the variance in their post-test and pre-test scores. It's also been established that WhatsApp teaching has improved retention and student involvement in learning theories. The study's findings indicated that the achievement gain scores of the control group taught using the standard technique and the experimental group taught using WhatsApp were significantly different. It's clear that using WhatsApp as a teaching tool helped the experimental group perform better. According to this research, WhatsApp aids in content engagement and WhatsApp teaching aids academic accomplishment. A comparison of delayed posttest results revealed that the experimental group's retention capacity was much higher than that of the control group. This method outperformed more traditional ones in terms of learning objectives as well as intelligence. As a result, it's been shown that using WhatsApp as a teaching tool aids long-term memory of learning notions. There were no peer-reviewed research that looked at how well this WhatsApp teaching approach retained information. According to the examination of post-interest scores, the WhatsApp teaching approach boosted student teachers' level of involvement. Students' perspectives and involvement in their learning experiences in the classroom and their learning gains benefit from current research on the teaching approach based on WhatsApp. Depending on their level of contextual knowledge, students will be able to finish the process. Students can pause and clarify their doubts using voice messages and discussions while sharing movies, GIF files, PDFs, and PPT documents. Members of the WhatsApp group can also take notes, rewind, and fast-forward through the conversation. As a result of the teacher's scaffolding act, students achieve a higher level of knowledge in class.

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