RESEARCH INTO THE IMPACT OF MOBILE LEARNING ENVIRONMENT ON STUDENTS' MOOD AND ACADEMIC ACHIEVEMENTS

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ABSTRACT

Mobile learning is a contemporary model that removes time and space limitations. It has been widely used to support traditional education or to provide distance education. In the past, the first mobile learning applications were realized with the widely used Personal Digital Assistances (PDA). Today, mobile learning activities are carried out on smart phones and tablet devices that are increasingly becoming popular. The aim of this study is to determine and evaluate the views of university students in various departments of Higher Education on mobile learning and its impact on students' mood and academic achievement. We asked two open ended question to the participant students to obtain the data: What are the most important effects of Mobile Learning Environment on your mood?" and "In what extent does mobile learning environment contribute your academic achievement?" We used a qualitative research method to evaluate and compare the views of the students over the impacts of Mobile Learning Environment on academic achievement and the moods of the students. The research was carried out with the participation of twenty-five students in various departments of the Faculty of Education in Erzincan University and the Faculty of Science and Letters in Namık Kemal University. The views of the students obtained through face-to-face interviews show that mobile learning environment has a significant effect on student's mood and academic achievement. We concluded from the study that mobile learning environments such as student hostel, private study room, private house, dormitory room and even desk in the canteen make the students feel comfortable, far away from stress of teacher, free movement, which contribute the students' well-being and their mood in positive way, thus resulting in their academic achievements.

Keywords: Mobile Learning, Personalized Learning, Academic Achievement

1. INTRODUCTION

It has been important throughout the history of humanity to use the new technology in order to have an effective and meaningful learning process. Technological developments are important discoveries that make life easier and more efficient. It is also known that the technology that evolves and develops according to the needs has been playing an important role in the educational system in recent years. Thus, both students and teachers benefit from the blessings of technology. The place of technology in the education system is getting more important day by day and especially it is gathering the great pleasure of the students. Traditional education methods are abandoned and the education system is developed by following different developments day by day in the light of science. In our country, as in many parts of the world, most of the educational technologies that have emerged as the result of the regulation of different information technologies as educational technology present the student educational content and keep student-information interaction at the level of communication.

Compared to the past applications, today the students are growing up as a more creative, dynamic, original and self-developing generation. They can develop themselves as original, creative and dynamic individuals through many applications presented in the field of educational technology. Today, as a result of the needs resulting from developing technology and changing student profile in order to increase student motivation, educational environments rapidly turn into virtual environments, thus the concepts of "virtual reality" and "virtual worlds" become important (Doğan et al, 2011). Virtual reality allows users to represent themselves visually, can be associated with different senses through user interaction (Mikropoulos & Bellou, 2006), can create a sense of presence in the environment, provides intuitive interaction with real-time natural manipulations (Huang et al, 2010), creates a safe environment (Noor, 2010) and thus making the virtual world more visual and realistic (Jung & Kang, 2010).

1.1. Mobile Learning Environments

Mobile learning environments refer to learning environments in order to enable the face-to-face education in the classroom environment to be done in the computer and internet environments in the same function. There are no physical spaces in the virtual learning environments as in the traditional learning environment. Teachers and learners do not meet in a learning environment but communicate remotely synchronously or asynchronously with the help of communication tools.

Mobile Learning is an innovative educational system in which the students are exposed to computer technology to follow up the lectures without any limitation of time and space and the lectures are processed live, the participant students in mobile learning environment can track the courses through video and audio systems and the participants can re-watch and re-view them at any time. In virtual learning, teachers and participants in different physical places interact with the help of various information communication technologies in order to provide education services to wider masses and to provide equal opportunity in education.

In the teaching area, the amount of information that needs to be taught and learned increases day by day, while the resources allocated for teaching are decreasing. In other words, more teaching costs are met with less budget. Distance education is a teaching method that needs to be studied to overcome this problem. Whatever the methods used, distance education is an ever-changing dimension. The function of distance education is to reduce distance from the centre to a minimum. To accomplish this function, the possibilities provided by the technology are utilized. In recent years, in which technology has been integrated with education, personalized learning environments associated with the applications related to web based learning, virtual learning, internet based distance learning environments have dominated on all aspects of education process.

The virtual learning environment includes many tools that can help the student to learn at maximum level. For instance, the teacher can put the course material into the virtual learning environment as an electronic file. The student can also perform the task given to him by downloading the file. The students can upload assignments to the virtual learning environment for the teacher's assessment. Small exams and tests can be uploaded so that students can use in the virtual learning environment. The students can share what they do and work on a project, and they may send e-mail and message to other students and teacher, also they can access the virtual learning environment from their home or wherever they are. Social learning environments such as forums and wikis can be created, which allows students to complete their homework and projects at home. If they miss a lesson, they can access it from their home or dorm.

1.2. Student Mood

There is a serious relationship between students' psychological status and school achievement. Many students are not motivated enough to do their actual performance due to psychological problems such as fear of failure, feelings of inadequacy, adjustment problems, school phobia etc. In this respect, we can say that the psychological comfort of the student is a great necessity for the success of the school.

Students with psychological problems are often restless and frustrated, and their anxiety levels are high. They give extreme reaction and may experience anger bursts from time to time. They become reluctant to work. As they are so excited at the exams, they cannot even reply to the questions, the answers of

which they know well. They also hesitate to ask questions even when they cannot understand the topic because their self-confidence is weak.

There are four factors which affect the mood of the students. The first is wrong approach of the family; high expectations of the parents about the success of the course, being overly critical and having an oppressive attitude result in students having extreme anxiety. The second is the factors originating from the school; the lack of a suitable environment for school education, the lack of dialogue between the teacher and the students, and the excessive authoritarian and irrelevant behaviour of the teachers and administrators will cause the students to lose their motivation for learning. The third is negative effect of group of friends; not being able to find a close friends and being mocked by their peers is a major stress factor for many students. The student who is humiliated experiences intense feelings of worthlessness and introversion. He prefers to stay passive in lessons, and loses interest in courses. The fourth is the factors arising from the personal problems of the learners. It can be considered in this category that the student compares himself / herself with his / her friends and thinks that he / she is inadequate compared to them, He/she is overly cautious and sensitive, and has a personality trait that gives up quickly in the face of problems encountered in school.

2. LITERATURE

It is possible to find relevant studies to our study in literature. One of those on the subject was carried out by Powell et al (2008). They put forward collaboration and personalization while the application was being developed. The survey was carried out in the form of a research survey, using questionnaire, scale and face-to-face or telephone interviews as data collection tools. Their analysis of the data showed that the application provided a high level of personalization, positively influenced and contributed to the students' motivation. In addition, students who have increased the responsibilities of their students have also become active and actively involved in learning process. Thanks to virtual learning, the students who participated in the application were able to achieve life-work balance.

Kayalar and Güler Arı (2016) argued in their study that Interest-based learning can be delivered online and through small group instruction. This kind of approach is an applicable education system which can also be used both in individual courses in relevant to personalized learning and in the classroom environment.

According to Tuna (2015), with the influence of the learning-centered approach, learning features and needs in the design of learning environments have gained importance. She argued in her study that different personality traits, learning styles, learning histories, learning speeds, anticipations, and similar learners can cause the learners to be bored, to lose their knowledge and to be disconnected from the system. Adaptive Learning Environments, also referred to Personalized Learning Environment provide flexible learning environments for different learning styles and individual needs. These systems aim to present the appropriate content for each learner at the right time and with the right strategy.

Triantafillou et al. (2003) carried out a study and developed a cognitive-based application called Adaptive Educational System based on Cognitive Styles. Application includes the interest model, the student model, and the adaptation model. The application was conducted with the students who took the course of "Multimedia Technology Systems". The authors of the study concluded that the application could be used to make learning more effective, and motivate the learners. It was also emphasized by the students that the self-evaluation section was very useful.

Kayalar M.T. (2016) pointed out the advantages of virtual learning environments and its effect on personalized learning environments, and maintained that the learners can enjoy the comfort of their home, free movement and the repetition of the courses on their own computers instead of sitting on uncomfortable desks. According to him, learner may be slow or quick at learning, so he/she doesn't have the same competence for learning. However, virtual environments provide the chance of self-paced learning for slow learners, and reduce stress and increasing satisfaction. In addition to these advantageous, virtual learning environments facilitate the difficulties in physical accessibility for the learners who have limited mobility.

According to Sampson et al. (2002), in the development of personalized learning environments, a learning environment should be considered for each individual in terms of individual differences, which

include learning styles, learning speeds, talents, anticipations, readiness, experiences and motivations. At this point, as Baylari and Montazer (2009) have stated, personalized learning environments offer a more flexible structure, a place for learners to access and adapt to their own speed and learning styles.

3. MATERIALS AND METHODS

3.1. Problem Statement and Purpose

The aim of the study on the Impact of Mobile Learning Environment on Students' Mood and Academic Achievements is to determine the similar and different views of the students in various departments of the Faculty of Education in Erzincan University, and the Faculty of Science and Arts in Namık Kemal University to appreciate the importance of Virtual learning environments and its effect on Student mood and achievement. We aimed to find out satisfying answers to our problem statement. To fulfil the purpose of the study we asked the students "What are the most important effects of Mobile Learning Environment on your mood?" and "To what extent does mobile learning environment contribute your academic achievement?"

3.2. Methods and Research Design

We used a qualitative research method to determine and evaluate the views of the instructors about virtual learning environments and its effect on student mood and achievement. This kind of methodological approach was chosen as it enables researchers to interpret and make judgement about immeasurable data (O'Tool and Beckett, 2010, p.28). We preferred and used easy accessible sample technique in the research, as it increases the speed of collecting data and enables researchers to access the sample easily (Yıldırım and Şimşek, 2006). We conducted this research with the views of the students at various departments of the Faculty of Education in Erzincan University, and the Faculty of Science and Arts in Namık Kemal University. For this reason we relied on case study design for the purpose of our enquiry.

3.3. Participants

We included twenty-five volunteer students in our study, who attend to the departments of Turkish Literature, History, Biology, Mathematics, Classroom Teaching and Social Sciences, in the Faculty of Education in Erzincan University, and the Faculty of Science and Arts in Namık Kemal University, Turkey. As shown in Table 1, the youngest student is seventeen years old, at the first grade of the department of Biology Department, while the eldest is twenty five years old, at the fourth grade of the department of Turkish Language and Literature. We obtained the data from twenty five students who admitted to be involved in the interview for the research. The participants were asked whether they were contented to answer to the questions, and then we applied the tool. The names of the students are coded with letters and numbers.

Table 1: Statistical Data as to Gender, Age, Academic Field and Grade

GENDER		AGE		ACADEMIC FIELD		GRADE	
Male	11	17-19 years	10	Turkish Literature	6	Grade 1	10
Female	14	20-22 years	8	History	4	Grade 2	7
		23-25 years	5	Biology	5	Grade 3	4
		Over 26 year	2	Mathematics	4	Grade 4	4
				Classroom Teaching	3		
				Social Sciences	3		

3.4. Research Instrument

In the study, we used semi structured interview form to gather data from the students at the departments of Mathematics, History, Turkish Language and Literature, and Biology in the Faculty of Education and the Faculty of Science and Arts. We asked two open ended questions to the participants. The questions were designed in accordance with the main characteristics of Mobile Learning Environments and Student mood and achievement. The questions of the interview were formed by the final judgement of three experts in the field.

3.5. Data Analysis

We obtained the data through one by one and face to face interview with the participants; the replies to the interview question were abstracted and made into pure data. The data were then transferred and digitalized into computer in order to form digital data.

4. FINDINGS

In order to get satisfying replies to our question "What are the most important effects of Mobile Learning Environment on your mood?" and "To what extent does mobile learning environment contribute to your academic achievement?", we abstracted and filtered the statements of the participant students in a way the statements could keep their deep and main meanings. The views of the students on mobile learning environments are as follows:

(A. Female Student at the Department of Turkish Literature, at the 1st Grade of the Faculty of Science and Arts) *".... I take two courses through online, which are Foreign Language and History of Turkish Republic. I find this kind of education very useful, as I can follow the course through my computer at dorm on my bed. If I have missed the course, I can follow it later at the same day. It is a big chance for me to get the course whenever I want. Also I can follow the course video many times, which enables me to understand the topic better. I feel very happy with some courses offered online ..."*

(B. Female Student at the Department of Classroom Teaching, at the 1st Grade of the Faculty of Education) *".... I take three courses through online education. I like the courses of Turkish Language and History of Turkish Republic through online and I find it very efficient for me, and I can get high marks at exams. I am very satisfied with these courses online, but the course of English language is not efficient and productive for me to get it online. This course needs face-to-face interaction at classroom environment..."*

Today's information is so intense and rapidly changing that the need for personalized knowledge of the business and education world and the environments that allow it to be transmitted has become evident. In recent years, many universities and many major trading companies around the world have been required to provide virtual learning environments to educate their students and their employees (De Bra, 1996; Ebner et al. 1999). The fact that individuals have different personality traits and different learning styles, processes the knowledge in different forms, and prefer to use different sources of information cause different learning needs when they use the same environment. In this context, virtual learning environment provides efficient opportunities for the students with different learning styles and capacities.

From the statements of the students with whom we interviewed in the study, we can argue that virtual learning environments are needed for learners to understand the contents of the courses better, and if they have not understood the subject, they can watch and listen to the course again and again whenever or wherever they want. This possibility creates a big chance for them to be successful in learning process. But, not every course at virtual environment provides efficient learning for every student.

The other participants' views on virtual learning environment and its effect on student mood and academic achievement are as follows:

(C. Male Student at the Department of Mathematics, at the 2nd Grade of the Faculty of Science and Arts) *"... I am attending to the online courses of Open University. This is my second university at the same time. I have to follow all the courses online at anytime and anywhere. I prefer to follow my courses early in the morning, because the connection is not weak then and the environment is quiet enough to*

focus on lessons. If I have something difficult to understand, I re-listen the course later till I fully understand, which makes me successful. Distant courses eliminate time constraint, which gives me much more time for myself and leisure. I have course books and in my spare time I do the readings. My course scores are also satisfying. I am very delightful with virtual education."

Mobile learning provides the opportunity for the students to learn from the individual television, mobile phone, computer, and many more (Işık, 2016). Thus, it prevents the learner's daily life from being divided into time periods such as entertainment, studying, resting and limiting the learning to only the study time. Learning continues as mobile learning has also interacted with these tools during leisure and relaxation times. In this way, the time allocated to learning increases day by day, and this makes a great contribution to academic achievement.

From the statement of the participant student, with the advantages of virtual learning, he has much flexible time to study the courses and he can take time for himself. This makes the student's mood high and satisfied with the school life.

(D. Male Student at the Department of Biology, at the 2nd Grade of the Faculty of Science and Arts) *" … I have attended to the courses for the 3rd term this year, but I have to take some courses for the first term of my department, as I was not used to distant education last year. I tried to follow the courses on its time, so I had to do several tasks at the same time, such as getting up early, preparing for school, having breakfast, catching the bus and so on, as it was my first and apprentice year in the university. As a result I did not manage to get high mark and I have to repeat the course this term. This year I follow online courses whenever I want and wherever I am. I use my mobile phone or tablet to listen and follow the courses. I can do it as many times as I need. I get a maximum learning, and I am very happy to get high marks at mid-term exams…."*

In the nature of unlimited learning are independent of place, time and space, based on individual characteristics and needs (Işık, 2016). Necessary environments should be provided for the enthusiastic individuals to learn in and out of educational settings. It is argued that mobile learning will support unlimited learning through various aspects thanks to its features such as providing students with learning mobility, and learner-based learning environment. With the unavoidable integration of mobile technology in our lives, most of the people have become familiar with it as a part of their daily lives (Azar and Nasiri, 2014). Even walking down the street, sitting in a conference room, studying at the library, or even lying down on a bed, people tend to use their mobile phones or other portable computers like iPad and tablet. As a learning tool, a mobile phone can be one of those innovative and exciting ways of dealing with the needs of students. It seems that the E-learning plays an important role to justify the needs of the learners to learn what they should, especially during class time. The fulfilment of the learners' needs through mobile learning in a virtual environment leads to satisfaction with learning process, which brings a great way of academic achievement.

(E. Male Student at the Department of Social Sciences, at the 3rd Grade of the Faculty of Education) *"…. I like virtual learning environment, because I am not obliged to listen to the course in a fix time, at a fixed place. Whenever I need information or knowledge, I turn on my laptop and I follow the courses uploaded to the system. No matter where I am, I can access all the courses of Virtual education program as long as I have internet access. These kinds of facilities help me get academic achievement…."*

One of the main advantages of Virtual Learning is Learning-when-needed. When the learners are forced to learn something at classroom environment, it doesn't sound important and therefore it is not easy for them to learn. However, if this information is reached at the moment, when they need, it becomes both beneficial and easy for them to learn.

The second one is Time and Place Independent Learning. It is difficult to say that today's distance education is conducted independently by computers and internet although it is independent of time and place. Because it is not possible to carry the computer everywhere. For this reason, full time and space independent learning is possible with mobile devices and wireless access technologies.

The third one is Learning Set Based on Location and Conditions. The information the learners need at any moment of the day, or in a particular season, may differ from one another. Where they are in the same place, they may need to have different information on the same topic.

(F. Male Student at the Department of History, at the 4th Grade of the Faculty of Science and Arts) *"... I had to take three courses, Foreign Language, History and Turkish Language through distant education. In the first year of the courses, I did not have my own computer and smart phone, so I had difficulty in following the courses, as a result I failed in the exams, and I repeated the courses in the next year. After I did have necessary devices, I managed to follow the courses wherever I was, say, at my home, at dorm, on weekend vacation. I could get my exam scores up to my expectations. This made me motivated and very happy, since it provided me with a perfect learning environment... "*

The developments and innovations that have taken place in the field of mobile technology have brought a new dimension to many activities from health to finance, entertainment to education. The mobile technology, which consists of devices that can be easily carried everywhere such as smart phones, game consoles, virtual reality tools, has become an indispensable part of everyday life, as it presents many opportunities to its users shortly after its emergence. In recent years, as a result of the integration of this technology with education, a new concept has emerged which is defined as mobile learning. This kind of learning provides effective, economical, practical and fast learning activities in addition to being effective in increasing the motivation and success of the people (Altuntaş, 2017; Chen et al, 2008; Hwang and Chang, 2011). Research in this area (Corbeil and Valdes-Corbeil, 2007; Goh and Kinshuk, 2004) points out that mobile learning, which offers many more advantages to its users, such as time and space independent learning opportunities, will have an important position in the near future.

From the statements of the participant student, it is clear that the facilities and the possibilities of the students to have devices for virtual learning environment are very important for them to be successful in the courses. The mood and the achievement of the learners in the courses depend on the availability of necessary equipment and devices suitable for virtual courses and virtual education.t

5. CONCLUSION AND SUGGESTIONS

Virtual Learning environments such as Mobile Learning, E-learning, and Distant Education allow learners to be educated through a mobile PC - PDA (personal digital assistant) or mobile phone without being dependent on the place outside the classroom (Çavuş and Ibrahim, 2009). When we consider the present conditions, it is an inconceivable fact that the importance of this feature is inevitable in human life. In mobile technology, such as Infrared, Bluetooth, RF technology, wireless in building or campus, long distance wireless communication between learners and instructors such as WAP, GPRS and SMS provide simultaneous communication, which gives great opportunity for learners to follow the courses at almost every environment. Mahat et al (2012) argue that Virtual Learning has a huge potential to transform and revolutionize the learning process. Mobile gadgets such as the hand phone, Personal Digital Assistant, Smart phone, Laptop, tablet and iPod not only allow the user to communicate or be entertained, but they also support mobile learning.

With the increasing use of computers and mobile devices, there is a growing interest in virtual learning environments such as mobile learning. The advantage of mobile learning over e-learning is that the use of mobile devices is widespread. Mobile learning is a distance education model in which learning is carried out with mobile devices. However, it is a form of learning that allows learner to access content without being tied to one place, and to communicate with other learners. The most important feature of virtual learning is that it can be possible to train without a fixed location with mobile devices. It is similar to e-learning in terms of being independent of time and space, providing equal opportunity in education and being student-centered. These advantages make virtual learning environment superior to classroom environment, thus keeping and enhancing learner's mood quite high.

In order to develop distance learning of foreign language, the materials used in this training model should contain current and multi-media elements. Using only text-based materials will greatly reduce the quality of the language taught in e-learning. Interactive exams, games, simulations, and materials containing video, picture and audio files must be integrated into the educational materials used in foreign language courses (Başal, 2013).

Learners should have a high level of confidence in using mobile technology as part of teaching and learning process; this is essential to ensure that Virtual Leaning would be successful, which in turn leads learner success. The students living far from university campus can utilize virtual learning applications at maximum level without spending training time on the way to courses, and without occupying classrooms. Therefore, the course hours should be scheduled suitable for the ones practiced in classroom environment.

Acknowledgement

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