

# Attitude Towards m-Learning usage in SEEU

MAJLINDA FETAJI, BEKIM FETAJI, DERYA BIRANT

Contemporary Sciences and Technologies

South Eastern European University

Ilindenska bb, 1200 Tetovo,

Macedonia

[m.fetaji@seeu.edu.mk](mailto:m.fetaji@seeu.edu.mk), [b.fetaji@seeu.edu.mk](mailto:b.fetaji@seeu.edu.mk), [d.birant@seeu.edu.mk](mailto:d.birant@seeu.edu.mk)

*Abstract:* - Mobile learning or m-learning is the last stage of e-learning development. As e-learning is known as anytime/anywhere learning, we can add that m-learning is ubiquitous or “on the go, mobile” e-learning. Today students’ life is too dynamic; they do work and study. Connecting to a certain location and time is a barrier to achieve all requirements, so the “learning on the go” is precious. Thus mobile learning is facilitating tool in education. The university’s management and learning in SEEU, is now realized through LMS libri, previously throw LMS Angel. A mobile learning field is a new and popular field of research, and there is a lack of research about the attitude of teachers and students towards using mobile learning. In this paper we want to investigate what is the attitude of teachers and students towards m-learning in SEE University, and what functionalities should one m-LMS support.

*Key-Words:* - Mobile Learning, E-Learning, M-Learning, m-LMS

## 1 Introduction

The rapid advantage of mobile technologies development imposes a new strategy of learning and education in universities. Being in step with the new wireless technologies usage itself requires accessing e-learning in being mobile.

In SEEU-Macedonia, the education management and learning itself is maintained using e-LMS. There is a research done on usage of the first used e-LMS Angel in our university to have migrated to in-house developed e-LMS libri. e-LMS completely supports management and learning services from outside the University, but still is limited to a location and/or computer device. We have developed a simple version of mobile LMS to support the elementary management and learning services named M-LEARN. Mobile devices are used to access the learning educational content and management services anytime /anywhere and even more being mobile. These features of mobile devices will possibly make m-learning the formal way of learning in universities in the near future. It is a promising way of learning

Our hypothesis is that major factors to affect learners’ willingness and attitude towards m-learning as an effective learning tool and what it should support is the use of e-learning, and type of learner, study background and gender.

We present the results of the investigation about “**would students like to use m-learning**” in the future and students’ attitude towards m-learning.

We also want to predict the usage of m-LMS, before a mobile version of e-LMS libri is developed.

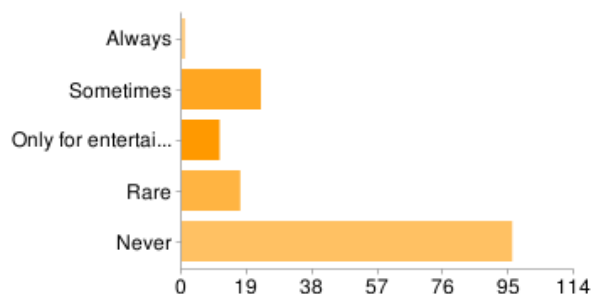
## 2 Methodology

The study is conducted through qualitative testing method using a questionnaire consisted of 24 questions about the academic background, computer skills and e-learning usage and opinion about m-learning [3]. Participants were students and teaching and administrative staff of SEE University, from all five faculties and all years of study of our university – South Eastern European University of Tetove (Republic of Macedonia). There are approximately about 6000 students currently studying in SEEU. 150 students filled-in an online questionnaire that contained multiple-choice questions. For some of the questions students had to denote their own attitude [2]. The questionnaire was alienated into four sections: “General information”, “Computer skills”, “Usage of E-Learning”, and “Usage of m-Learning”. The results are presented in percentage, graphics and diagrams.

## 3 Findings and results

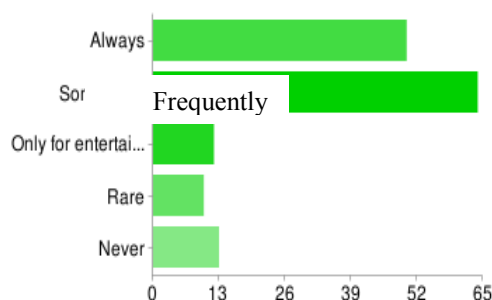
**In order to investigate the students’ attitude towards m-learning usage, we had specific questions dealing with that aspect:** Have the students used mobile learning (m-learning previously), Do they use mobile learning (m-learning); Would the students like to use mobile learning (m-learning)?; what should one mobile LMS support; What do they find useful mobile learning (m-learning) for; What skills do you have in mobile devices use; What do they think about the future of mobile learning (m-learning) etc. On the following figure 1 the results from

the students' answers of the question "Have you used mobile learning (m-learning) previously?" are presented. We can see that the percentage of students that have never used mobile learning is highest with 65 %, and rarely used with 11 %. Only 16 % have used frequently.



**Figure 1. Have you used mobile learning (m-learning) previously?**

The answers of the second question "Would you like to use mobile learning (m-Learning)?" are shown in the following Figure 2.



**Figure 2. Would you like to use mobile learning (m-Learning)?**

We can see that the students are willing and show high interest to use m-Learning in 77%, and only 9% would never like to use m-learning.

As one of the independent variables of our investigation is the type of learner of the participants, and how this variable is relevant to the willingness of use of m-learning. Dependence of willingness to use m-learning on the type of learner is shown in the following Table 1.

	Type of learner	
	Reflective	Active
Like to use m-learning		
Never	3%	4%
Rare	9%	1%
Only for entert.	3%	1%
Frequently	40%	38%
Always	45%	56%

**Table 1. „Like to use of m-learning” versus “type of learner”**

The results of the answers show that **different types of learner** do not show significant differences on the willingness to use m-learning. The percentages of students that would like to use m-learning always and frequently between two groups are slightly differing and are very high, with lowest 40%.

Another independent variable of our investigation is the study background of the participants, and its influence in the willingness of use of m-learning. It is interesting that the answers show that the background study does not have any influence in the interest to use m-learning. This is shown in the Figure 2 below. We can see that the percentage of interest to use m-learning is very high among all faculties with slight differences.

	Study Background			
	BA	CST	Law	PA
like m-learning				
Never	0%	4%	11%	0%
Rare	0%	3%	0%	9%
Only for entert.	7%	0%	0%	0%
Frequently	35%	42%	33%	18%
Always	58%	51%	56%	73%

**Table 2. „Like to use of m-learning” versus “study background”**

The influence of the independent variable gender of learner in the willingness to use m-learning is shown in the following Table 3.

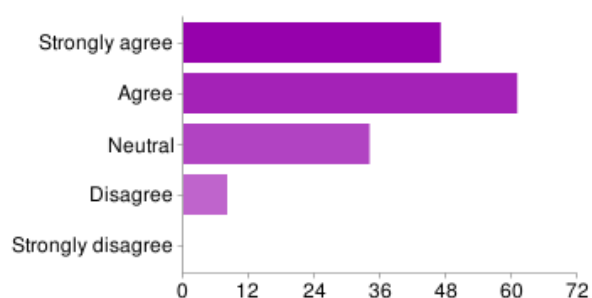
It is interesting and unexpected that the answers show that the gender does not have any influence in the interest to use m-learning. We can see that the percentage of interest to use m-learning is very high for both genders.

	Gender	
	Male	Female
like m-learning		
Never	5%	0%
Rare	3%	3%
Only for entert.	3%	0%
Frequently	36%	42%
Always	53%	55%

**Table 3. „Like to use of m-learning” versus “gender”**

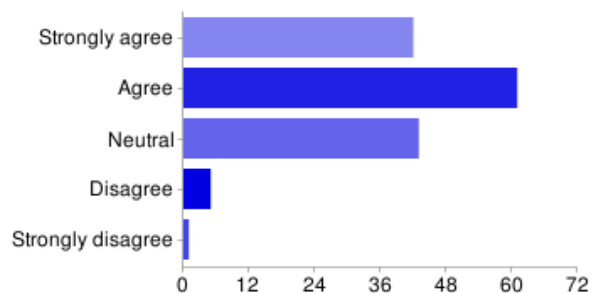
The influence of the level of skills to use mobile devices in the willingness to use m-learning showed to be not significant. It is unexpected that the answers show that interest to use m-learning is very high among all groups with different skills, but always depends on the percentage of students which identified themselves with excellent and very good skills which was the highest.

The answers of the question “The possibility to access university education materials via wireless mobile technologies is useful in learning”, showed a high percentage of 72% of agreement, and 23% being neutral on these question. This is showed in the following figure 5.



**Figure 5. Usefulness of wireless mobile technologies in learning**

On the following figure 4 the results from the students' answers of the question “The usage of m-Learning will increase the quality of the education” are presented and showed a high percentage of 68% of agreement, and 28% being neutral about this question. The students and teachers consider that the use of mobile learning will increase the quality of education.



**Figure 3. The usage of m-Learning will increase the quality of the education**

Related to these answers is the question:” What do you find useful mobile learning (m-learning) for” and “What do you think m-learning system should support”. The results of both questions are very similar, and are shown in the following table 4 below and table 5 in dependence of different e-learning aspects of usage. The answers show that students find m-learning useful mostly to get informed (news, announcements, results) with 53%, and

only 16% to get educational materials and 14 % to learn which is disappointing. The results are shown in the following table 4.

Why do you find useful m-learning?	# of Students	Percentage
a) To get informed ( news, announcements, results )	75	53%
b) To get education material	22	16%
c) To learn	20	14%
d) To communic. and collaborate with students and teachers	17	12%
e) To do your assessment online	1	1%
Other	6	4%

**Table 4. What for do you find useful mobile learning (m-learning)**

The results of the answers of the question “What should m- learning system support?” among students which use e-learning in different aspects are shown in the Table 5.

The results of the answers show that **different aspects of e-learning use** do not show significant differences on what the students think the mobile learning is useful for and what should support. The highest percentage of students consider that an m-learning system should support “educational materials” and “To get informed (news, announcements, results)” and are not significantly different and are varying among 30%-45% for the first one and 35%-45% for the second one, no matter if they do or not use e-learning in different aspects. The same time these functionalities have the highest percentage of chosen ones. The functionality “Collaboration and Communication among students and teachers” is chosen within among 17-27% students, excluding 38% and 29% students which rare use university libri and other LMS considering that an m-learning system should support. It's unsatisfactory and unexpected that the percentage of the students which always use e-learning and university e-LMS libri, don't consider that m-learning system should support “New anytime/anywhere self paced learning strategy”. It is very low in all other groups. Though is very low, this perspective is strongest for the groups of students which use e-learning and other universities e-LMS (highest which use only for entertainment). The answer of these might be the students' answers specified at other: “the use of wireless technology in our SEEU campus supports only notebook usage”, “mobile wireless is weakly spread”, “mobile wireless should be without certificate and code”, “let some sites be visible like libri (university's e-LMS), webmail, eservice (university's e-service system), and let other sites be restricted”, etc.

The results of the answers of the question “What do you think about the future of mobile learning (m-learning)?” are given in Table 6.

**The percentage** of the students which think that mobile learning has no future is very low (only 2%) and even though, is mostly supported by the students which never use e-learning and university’s libri. These groups of students show highest percentage of answers “I don’t know” (42% and 43%), and “Skeptic” (44% and 46% respectively). Without significant differences, the groups of students which use e-learning “always” and “frequently” in all aspects, showed highest percentage of optimism of the future of m-learning as “very successful future”, and almost same optimism for “Might have successful future”. These results are shown in the following table 6. From these results we might conclude that students which are more familiar and use computer technologies and the new e-learning technologies and e-learning strategies for learning and education are more optimistic and have positive attitude about the future of mobile learning.

#### 4 Conclusion

The first round conclusions of the experiments are that mobile devices are a good choice as a tool for accessing the most used activities with a mobile LMS.

As people have different learning styles, study background, gender, and skills to use mobile devices the experiment showed that all students no matter of belonging have very positive attitude towards using m-learning, accessing university education materials via wireless mobile technologies to be useful in learning, it’s usefulness in increasing the quality of the education and its’ future. According to the experiments results we can conclude that the most useful functionalities that a mobile LMS should support are: getting information on time, getting educational materials and communication and collaboration with students and teachers. A negative outcome is that students don’t think that m-learning could be used as a new anytime/ anywhere/self paced learning strategy.

We can conclude that developing a mobile LMS would be a good step forward and positively accepted supporting mainly the above determined functionalities. The results showed that students use more easily mobile devices for the basic activities with m-LMS.

	Use e-learning					Use libri e-LMS					Use other e-LMS				
	Never	Rare	Only for entert.	Frequently	Always	Never	Rare	Only for entert.	Frequently	Always	Never	Rare	Only for entert.	Frequently	Always
a) Educational material	0%	33%	31%	36%	33%	23%	36%	44%	36%	26%	33%	19%	33%	32%	43%
b) Administrative management	18%	0%	0%	2%	6%	22%	0%	0%	2%	5%	6%	0%	0%	4%	7%
c) Informing	45%	33%	38%	39%	31%	44%	13%	43%	40%	33%	36%	28%	50%	38%	35%
d) Collaboration and communication	27%	17%	23%	16%	16%	11%	38%	13%	11%	23%	17%	29%	0%	17%	14%
f) New anytime/ anywhere learning strat.	10%	17%	8%	5%	12%	0%	13%	0%	9%	10%	8%	10%	17%	9%	1%
All of the above	0%	0%	0%	2%	2%	0%	0%	0%	2%	3%	0%	14%	0%	0%	0%

Table 5. Functionalities that an m-LMS should support

Future of m-learning	Do you use e-learning?					Do you use University e-LMS					Do you use other LMS?				
	Never	Rare	Only for entert.	Frequently	Always	Never	Rare	Only for entert.	Frequently	Always	Never	Rare	Only for entert.	Frequently	Always
a) Very successful future	19%	0%	30%	44%	54%	0%	50%	38%	45%	47%	42%	34%	17%	45%	58%
b) Might have success future	27%	66%	54%	44%	36%	34%	25%	56%	40%	46%	39%	52%	50%	45%	21%
c) Skeptic	27%	17%	8%	8%	6%	33%	13%	6%	11%	3%	13%	0%	16%	6%	14%
d) I don't know	25%	17%	8%	4%	4%	31%	12%	0%	4%	4%	6%	14%	17%	4%	7%
e) No future	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 6. Future of m-learning

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