

**Fayoum University
Faculty of Social Work
S-W Fields Department**



Tutor attitude towards mobile learning in developing country

**A- Professor: Ahmed Farouk Mohammed
S-W Educational field Department - S-W Faculty - Fayoum University
drahmedmail7@gmail.com**

- 2009-

Abstract:

The attitude to mobile learning consists of three components: the first affective component, cognitive and behavioral, research aimed at measuring the current m-learning attitude of tutor in the developing world, the final results of the research showed that the tutor's cognitive of the arrangement as one of the most important by mean rank (3.00), followed by behavioral components at mean rank (1.59), came in third most important components affective at mean rank (1.41), the results of the study revealed no significant differences in the attitude of tutors mobile learning according to the different type gender, years of experience and educational level.

Keywords: Mobile learning; m-Learning attitude, tutor, affective component, cognitive component, behavioral component.

5.1. Data analysis:

For the questionnaire, the statistical package for the social sciences (SPSS) was used to analyze the data. Its advantages include a PC friendly version and ability to deal with survey data in a variety of statistical programmers. Frequencies and percentages have been uses. The tests used were, the Kruskal- Wallis test, Friedman test, Mann- Whitney Test, and Reliability analysis as explained below.

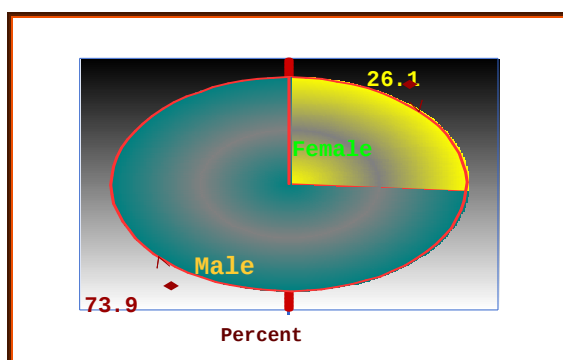


Fig (5.1) gender category.

Data in the figure show the distribution of respondents of tutor according to the gender variable, the data revealed that the percentage of the dominant male (73.9%), the least percentage (26.1%) were female.

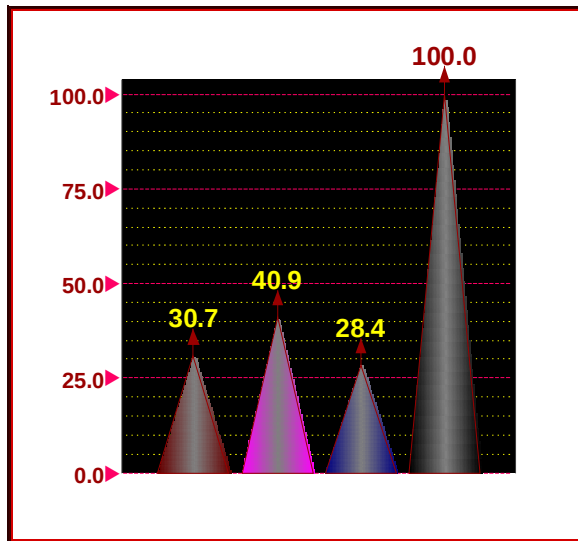


Fig (5.1) experience category.

The current figure refers to the distribution of the study sample according to the years of experience in university, the data indicate that the overwhelming percentage (40.9%) for category (5) to less than (10) years, followed by (30.7%) for less than the category (5) Years, and is the lowest (28.4%) for more than (10) years.

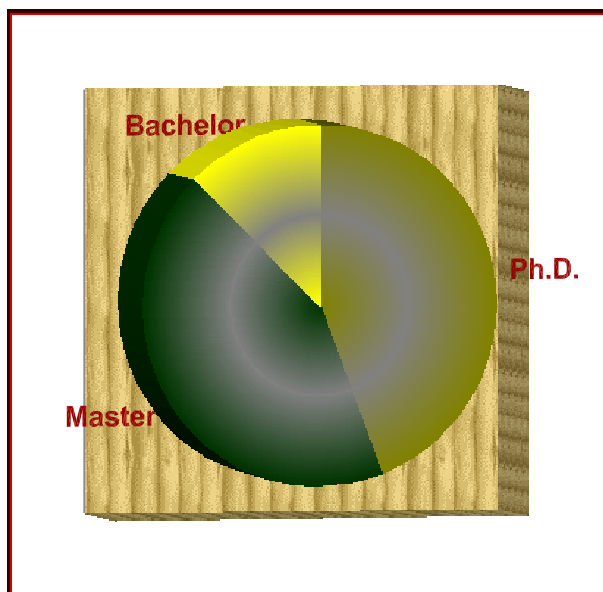


Fig (5.1) educational degree.

Percentages in the table refers to the current distribution of the sample in accordance with the educational level, table shows the percentage of dominant (44.3%) were Ph.D., followed by percentage (43.2%), which represented a master's degree, the least percentage (12.5%) accounted for bachelor

5.3. Descriptive statistics.

5.3.1. The ranking of the Cognitive Components.

Table 5 – 8 below shows the mean ranks of the cognitive components that consist of the tutor attitude of the m-learning.

	Cognitive Component	Mean Rank
First	M-learning Enables learning at any place	11.36
Second	M-learning develop the potential of learners.	11.31
Third	M-learning increases the quality of educational program.	11.00
Fourth	M-learning make more effective use of time.	10.76
Fifth	M-learning enable student to participate in universal program education.	10.64
Sixth	M-learning increases the educational chance.	8.95
Seventh	M-learning provides flexibilities for life-styles.	8.85
Eight	M-learning provides flexibilities for various since	5.99
Ninth	M-learning Reduced face to face contact between students	5.81
Ten	M-learning Makes learning away from institution easier	4.75
Eleventh	M-learning technique Clarify the course objectives	4.62
twelfth	M-learning is a supportive mode of education.	4.55
Thirteenth	M-learning is convenient for communication with other course students	3.82
fourteenth	M-learning provide student by skill and experience.	2.60
Chi – Square = 776.64		df =13
		Sig = 0.000

Table 5-8: The ranking of the Cognitive Components.

By using the Friedman test, a rank of from (1) to (13) was established for the cognitive component that consists of the tutor attitude of the m-learning. The mean rank of M-learning Enables learning at any place at (11.36), to M-learning provide student by skill and experience at (2.60) fourteenth. The significance level of (0.001) shows that there is a significant statistical difference in the ranks between these cognitive elements.

5.3.1. The ranking of the Affective Components.

	Affective Component	Mean Rank
First	I think that the M-learning Develops student independence	10.82
Second	I believe that the M-learning Needs time for tutors to create materials	9.93
Third	I think that the M-learning develop the skills and repertoire of teachers	8.63
Fourth	I think that the M-learning Course achieve learning objectives	7.08
Fifth	The cost of accessing the mobile course materials was acceptable	6.51
Sixth	I prefer M-learning to promote and support Innovation.	6.39
Seventh	M- learning is a necessary mode of educational program.	6.32
Eight	I believe that the M-learning Course is very useful for all number of students.	6.29
Ninth	I believe that the mobile learning experience was fun	5.94
Ten	I believe that the M-learning test (s) were accurate and fair	5.92
Eleventh	I believe that the M-learning course activities stimulated learning process.	5.75
twelfth	I think that the M- learning increases the interaction between students and tutor.	5.74
Thirteenth	I believe that the M- learning met the student educational need.	5.68

Chi – Square = 400.99 df =12 Sig = 0.000

Table 5-8: The ranking of the Affective Components.

Table shows the order of the questionnaire statements that is related to the description of the affective components the significance level of 0.001 shows that there is a significant statistical difference in the rank between these components, See the table details for an overall view of the situation, the mean rank of the factors ranges from " I think that the M-learning Develops student independence " at (10.82) the first to " I believe that the M- learning met the student educational need " at (5.68) the thirteenth. The graphical drawing of Figure. (5.21) Shows the ranking of all Factors.

5.3.1. The ranking of the Behavior Components.

Table 5.11 shows the rank of the questionnaire statements - by the sample members' response - that is related to the behavior components for the tutor attitude to m-learning.

	Behavior Component	Mean Rank
First	Accessing graphical materials functioned well	11.60
Second	Downloading learning course content was easy	9.94
Third	Listening to sound materials functioned well	5.98
Fourth	Making notes on the mobile functioned well	5.93
Fifth	Questioning in the mobile learning course was effective	5.74
Fifth	Accessing and watching video materials functioned well	5.74
Sixth	Motion involving manipulation of graphical materials functioned well	5.70
Seventh	Writing messages to the Forum functioned well	5.69
Eight	Accessing and reading text on the mobile functioned well	5.69
Ninth	Navigation through the m- learning course was easy.	5.67
Ten	M-learning course Activities gave sufficient practice and feedback	5.59
Eleventh	Accessing course content was easy by mobile learning	4.73

Chi – Square = 625.6

df =11

Sig = 0.000

Table 5-8: The ranking of the Behavior Components.

The significance level of 0.001 shows that there is a significant statistical difference in the rank between these behavior components. See the table an overall view of the situation, the mean rank of the Accessing graphical materials functioned well at (11.60) (first) to Accessing course content was easy by mobile learning at (4.73) (eleventh).

5.3.1. The ranking of the m-learning attitude components.

By using, the Friedman test, a rank of from (1) to (3) was established the m-learning attitude. Table 5-12 details the results

	Altitude to m-leaning	Mean Rank
First	Cognitive Component	3.00
Second	Behavior Component	1.59
Third	Affective Component	1.41

Chi – Square = 400.99

df =12

Sig = 0.000

Table 5-8: The ranking of the m-learning attitude components.

Table 5.12 shows the order of the questionnaire statements - by the sample members' response - that is related to the tutor attitude to m-learning in the university, the significance level of 0.001 shows that there is a significant statistical difference in the rank between these sub-components. See the table details for an overall view of the situation, the mean rank of all components range from the components that related by the cognitive components at (3.00) (first) to The behavior components at (1.59) (second) and finally the mean rank of the affective components at (1.41) the third. The graphical drawing of Figure. (5.23) Shows the ranking of all Factors.

5.4.3. Position and the m-learning attitude.

		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig.
Cognitive Component	Tutor	77	44.03	3390.50	387.500	.647
	Learner	11	47.77	525.50		
	Total	88				
Affective Component	Tutor	77	43.23	3328.50	325.500	.210
	Learner	11	53.41	587.50		
	Total	88				
Behavior Component	Tutor	77	44.31	3411.50	408.500	.845
	Learner	11	45.86	504.50		
	Total	88				
attitude of m-learning	Tutor	77	43.66	3362.00	359.000	.416
	Learner	11	50.36	554.00		
	Total	88				

Table 5-18: position and the m-learning attitude.

5.4.3. Gender and the m-learning attitude.

		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig.
Cognitive Component	Female	23	42.61	980.00	704.000	.677
	male	65	45.17	2936.00		
	Total	88				
Affective Component	Female	23	41.89	963.50	687.500	.563
	male	65	45.42	2952.50		
	Total	88				
Behavior Component	Female	23	49.54	1139.50	631.500	.256
	male	65	42.72	2776.50		
	Total	88				
attitude of m-learning	Female	23	42.28	972.50	696.500	.628
	male	65	45.28	2943.50		
	Total	88				

Table 5-18: gender and the m-learning attitude.

Mann-Whitney U test was used to determine if there is significant statistical difference between the tutors gender (male - female) on the all main components of the, The significance probability column reveals to be more than 0.05 in the all main cases , meaning that we can accept the alternative hypotheses: there is no significance difference between respondents as two sub-groups.

5.4.3. Experience and the m-learning attitude.

Table 5-23 below shows the results of Kruskal-Wallis test to determine if there is significant statistical difference between the sub-groups of experience of respondents that contain three categories (less than (5) years – from (5) to (10) years – more than (10) years) and the components of the tutors attitude to m-learning.

		N	Mean Rank	Kruskal Wallis Test-Chi-Square	Sig.
Cognitive Component	less than 5	27	47.89	1.852	.396
	from (5) to (10)	36	45.90		
	more than (10)	25	38.82		
	Total	88			
Affective Component	less than 5	27	41.63	4.833	.089
	from (5) to (10)	36	51.36		
	more than (10)	25	37.72		
	Total	88			
Behavior Component	less than 5	27	45.19	1.181	.554
	from (5) to (10)	36	41.36		
	more than (10)	25	48.28		
	Total	88			
attitude of m-learning	less than 5	27	41.98	4.489	.106
	from (5) to (10)	36	51.14		
	more than (10)	25	37.66		
	Total	88			

Table 5-18: experience and the m-learning attitude.

Using Kruskal-Wallis test to test the occurrence of significant differences between the experience and the all three attitude components (cognitive- affective- behavior). In all cases the results indicates that there was no significant differences between the three sub- groups (less than (5) years – from (5) to (10) years – more than (10) years), because the significance probability above (0.05) threshold. This result enable use to accept the null hypothesis that main there is no significant statistical

difference between the experience at work categories on the all main dimension of the m-learning attitude.

5.4.3. Gender and the m-learning attitude.

Table 5-21 below shows the results of Kruskal-Wallis test to determine if there is significant statistical difference between the educational degree of respondents that contain three categories and the m-learning attitude.

		N	Mean Rank	Kruskal Wallis Test-Chi-Square	Sig.
Cognitive Component	phd	39	55.79	2.399	.039
	master degree	38	45.30		
	Other	11	47.77		
	Total	88			
Affective Component	phd	39	43.05	1.577	.455
	master degree	38	43.41		
	Other	11	53.41		
	Total	88			
Behavior Component	phd	39	44.41	.040	.980
	master degree	38	44.20		
	Other	11	45.86		
	Total	88			
attitude of m-learning	phd	39	43.06	.706	.703
	master degree	38	44.28		
	Other	11	50.36		
	Total	88			

Table 5-18: gender and the m-learning attitude.

Using Kruskal-Wallis test to test the occurrence of significant differences between the educational degree and the all three dimensions (cognitive-affective- behavior) the result shows that there was significance probability by the (0.01). Which is considerably less than (0.05) threshold. In this case the main rank inducted that differences for the phd degree but in all components the results indicates that there was no significant differences between the three sub-groups (phd – master degree - other), because the significance probability above (0.05) threshold. This result enable use to accept the null hypothesis that main there is no significant statistical difference between the educational degree of the tutors categories on the all main dimension of the mobile learning attitude.

Conclusion:

The current study applied to the sample of (88) of tutors in the e- learning department at the University of Fayoum south Cairo- Egypt, the study aimed to measure attitude in mobile learning about tutor, the results showed that tutors have not consistent attitude towards mobile learning, it was found that the cognitive components of the attitude has been Ranked first of the importance mean rank (3.00), and came second behavioral components at mean rank (1.59), and came on the third most important affective components at mean rank (1.41), the results showed there was no significance difference in the attitude components: Cognitive components affective, behavioral component, according to the different demographical and organizational variables: the educational level and years of experience in the field of education, this results led us to refuse the alternative hypothesis and accept the null hypothesis that there is no significant difference at the level of (0.5) in affective cognitive and behavioral according this sub-variables, the study recommended that tutor need To revitalize the attitude towards mobile learning by increasing practices that support the use of Mobile in the educational field.

Scale reliability:

Reliability of the benchmark scale was determined by computation of chronbach,s alpha. The standardized alpha for (38) items was (0.81), indicating a high degree of internal consistency. (thorndike, 1996) As depicted in table (???) individual scale item statistics confirmed this finding, with all items exhibiting both high item –to- scale correlation and high mutiplier. Moreover, because deleting any item would have lowered overall scale reliability all (38) items were justified for retention.

	Mean	Std. Deviation	Corrected Item- Total Correlation	Alpha if Item Deleted
I think that the M-learning Develops student independence	2.07	.83	.49	.80
I believe that the M-learning Needs time for tutors to create materials	1.81	.62	.50	.80
I think that the M-learning Course achieve learning objectives	1.44	.92	.42	.80
M- learning is a necessary mode of educational program.	1.18	.58	.70	.80
M- learning increases the interaction between students and tutor.	1.07	.40	.35	.81
I believe that the M- learning met the student educational need.	1.06	.38	.49	.81
I believe that the mobile learning experience was fun	1.11	.51	.55	.80
I prefer M-learning to promote and support Innovation.	1.25	.78	.41	.80
I believe that the M-learning course activities stimulated learning process.	1.07	.40	.57	.80
I think that the M-learning develop the skills and repertoire of teachers	1.90	1.15	.40	.80
I believe that the M-learning Course is very useful for all number of students.	1.22	.65	.40	.81
I believe that the M-learning test (s) were accurate and fair	1.11	.49	.49	.80
The cost of accessing the mobile course materials was acceptable	1.27	.72	.40	.80
Downloading learning course content was easy	1.97	.75	.49	.81
Accessing graphical materials functioned well	3.73	.83	.40	.80
Listening to sound materials functioned well	1.14	.66	.38	.81
Navigation through the m- learning course was easy.	1.01	.28	.82	.80
Motion involving manipulation of graphical materials functioned well	1.02	.37	.76	.80
M-learning course Activities gave sufficient practice and feedback	1.03	.24	.76	.81
Accessing course content was easy by mobile learning	1.05	1.33	.49	.82
Questioning in the mobile learning course was effective	1.02	.26	.73	.80
Writing messages to the Forum functioned well	1.02	.40	.36	.81
Accessing and reading text on the mobile functioned well	1.02	.37	.40	.81
Making notes on the mobile functioned well	1.11	.61	.55	.80
Accessing and watching video materials functioned well	1.03	.35	.65	.80
M-learning is convenient for communication with other course students	1.88	.62	.55	.81
M-learning Enables learning at any place	3.97	.44	.55	.81
M-learning make more effective use of time.	3.80	.73	.55	.82
M-learning develop the potential of learners.	3.95	.45	.06	.81
M-learning Reduced face to face contact between students	2.44	.87	.29	.81
M-learning technique Clarify the course objectives	2.14	.57	.45	.80
M-learning Makes learning away from institution easier	2.17	.53	.55	.81
M-learning is a supportive mode of education.	2.09	.69	.55	.82
<i>M-learning provides flexibilities for various since</i>	2.49	.87	.40	.83
<i>M-learning provides flexibilities for life-styles.</i>	3.33	.72	.40	.81
<i>M-learning increases the educational chance.</i>	3.34	.84	.40	.81
<i>M-learning increases the quality of educational program.</i>	3.88	.62	.40	.82
<i>M-learning provide student by skill and experience.</i>	1.41	.95	.23	.81
<i>M-lear enable student to participate in universal program education.</i>	3.78	.76	-.03	.82
Alpha = .8126				

Thorndike, R.M. (1996) Measurement and evaluation in psychology and education, 6th ed. Upper Saddle River, nj: prentice Hall.



Biography

Dr. Ahmed farouk is an associate professor in the faculty of social work – social work education department and director of the community service and environment developing center (CeC) at University of Fayoum, ARE. Dr. Farouk's current research inter-ests are in the areas of e-learning, mobile learning, mobile research and e- training in social work.

E-mail : Drahmedmail7@gmail.com