CONSTRUCTION AND VALIDATION OF THE ATTITUDE TOWARDS MOBILE LEARNING SCALE (ATMLS)

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Mobile devices, especially smart phones, are the most frequently used technological devices for daily routines. Mobile devices can be used for various purposes to meet different needs. Since, education is a core requirement for human beings, smart phones are being integrated into education. However, it remains to be seen whether they have an impact on learning or not. Consequently, integration of these technologies, or "mobile learning", has become a popular research study in the field of instructional technology. It is important to investigate the impact of smart phones in language education since students today use them frequently. Hence the investigator has decided to construct and validate a scale to measure the attitude of the higher secondary school students towards m-learning and succeeded in it.

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INTRODUCTION

In the 21st century, human beings have developed themselves differently and the evolutionary trajectories have assumed a different form in terms of technological and intellectual rigour. Imagining a human life sustaining itself without a mobile (the range of mobile extends to varying dimensions) is impossible, to a large extent. We can study the psychological and the neural connection that a mobile has established over us in both the short as well as in the long term and the use of wireless, mobile, portable, and handheld devices is gradually increasing and diversifying across every sector of education, and across both the developed and developing worlds (Traxler, Defining, Discussing, and Evaluating Mobile Learning.

OBJECTIVE:

To construct and validate a new scale namely, attitude towards mobile learning scale (ATMLS) to measure the attitude of higher secondary school students towards the mobile learning.

SAMPLE:

Random sampling technique has been used in the process of data collection from the sample, the higher secondary school students.

METHOD OF THE STUDY:

Normative survey method has been used in the present study.

TOOL:

As there is no suitable tool available to measure the attitude towards mobile learning of the higher secondary school students the investigators decided to construct and validate a one. The first step in the construction of the likert-type scale is the collection of a large number of statements both positive and negative statements to the object under study. As many as "50" statements revealing the attitude towards mobile learning of higher secondary school Students were collected from the following sources:

(i)   As many as thirty (30) teacher educators

(ii)   As many as 15 professors from the faculty of education

(iii)   Related books and

(iv)   Web sources

This scale has 35 positive statements and 15 negative statements in respect of attitude towards mobile learning. This scale of (50) statements intended for the pilot study (vide: Appendix: A) was administered to the sample of as many as 100 higher secondary school students in the higher secondary schools of Perambalur taluk and district, Tamilnadu, India. The next step in the construction and validation of attitude towards mobile learning scale after pilot study is to find out 't' value of each statement which forms the basis for item selection in order to buildup the final scale.

The likert- type scale calls for graded response to each statement on a five-point scale ranging from "strongly agree" to "strongly disagree". The points are usually denoted by "Strongly Agree (SA)", "Agree (A)", "Undecided (UD)", "Disagree (DA)" and "strongly Disagree (SDA)". The different points on the scale are assigned different arbitrary weights. For example, 5,4,3,2 and 1 in the order of "Strongly Agree" response to "Strongly Disagree" response for the positive statements. Here the "Strongly Agree" response bears a weight of 5. The total scores for an individual can be obtained by adding his / her scores for all the individual items.

The individual attitude towards mobile learning scale scores for all the 100 higher secondary school students were found out. They were ranked from the highest to the lowest score.

Then 25% of the subjects (high) with the highest total scores and 25% of subjects (low) with the lowest total scores were sorted out for the purpose of item selection. The high and low groups thus selected formed the criterion groups and each group was made up of 25 higher secondary school students.

It may be recalled that each statement is followed by five different responses of "SA", "A", "UA", "DA" and "SDA", in the attitude towards mobile learning scale. As already indicated weightages are given for the response category in respect of each statement was taken individually and the number of teachers who responded "SA", "A", "UD", "DA", and "SDA" was found out in both the high and low groups separately. This for all the 50 statements the number of responses coming under each category was found out and the 't' values for all 50 statements were calculated (vide: Table 1).

The value of 't' is a measure of the extent to which a given statement differentiates between the high and low groups. If the 't' value is equal to or greater than 1.75 it indicates that the average response of the high and low groups to statement differs significantly, provided there are 21 (or) more subjects in the high group and also in the low group (Edwards,1957). In the present study, there are 28 subjects each in the high and low groups. The total number of subjects involved in the pilot study being 100. As many as 32 statements, having the highest 't' value were chosen in order to form the final scale. This has as many as 24 positive statements and 8 negative statements. An individual score ranges from 32 to 160.

The maximum score for the attitude towards mobile learning scale is 160. One who scores up to 32 are said to have a highly unfavorable attitude towards mobile learning, one scores above 32 up to 64 are said to have an unfavorable attitude towards mobile learning above 64 up to 96 are said to have an neutral attitude towards mobile learning above 96 up to 128 are said to have favorable attitude towards mobile learning and above 128 are said to have highly favorable attitude towards mobile learning.

Norms have been worked out for the attitude towards mobile learning scores for higher secondary school students. The percentile norms in respect of the entire sample have been computed for the attitude towards mobile learning scores.

TABLE 1

RANK ORDER OF ITEMS IN THE ATTITUDE TOWARDS MOBILE LEARNING SCALE BASED ON 't' VALUES

STATEMENT NO.	NATURE OF THE STATEMENT	't' VALUE	STATEMENT SELECTED / NOT SELECTED
1	POSITIVE	9.68	Selected
2	POSITIVE	6.58	Selected
3	POSITIVE	7.69	Selected
4	**NEGATIVE**	**1.56**	**Not Selected**
5	NEGATIVE	4.21	Selected
6	**POSITIVE**	**1.69**	**Not Selected**
7	NEGATIVE	8.23	Selected
8	**POSITIVE**	**0.53**	**Not Selected**
9	NEGATIVE	5.24	Selected
10	**POSITIVE**	**1.53**	**Not Selected**
11	**POSITIVE**	**1.21**	**Not Selected**
12	**POSITIVE**	**1.02**	**Not Selected**
13	**NEGATIVE**	**1.17**	**Not Selected**
14	NEGATIVE	8.26	Selected
15	NEGATIVE	4.56	Selected
16	POSITIVE	3.45	Selected

17	POSITIVE	5.67	Selected
18	NEGATIVE	2.34	Selected
19	POSITIVE	8.47	Selected
20	POSITIVE	5.81	Selected
21	POSITIVE	4.78	Selected
22	POSITIVE	7.01	Selected
23	**POSITIVE**	**0.99**	**Not Selected**
24	POSITIVE	2.69	Selected
25	NEGATIVE	5.65	Selected
26	POSITIVE	4.10	Selected
27	POSITIVE	5.79	Selected
28	POSITIVE	2.30	Selected
29	**POSITIVE**	**1.01**	**Not Selected**
30	POSITIVE	1.98	Selected
31	POSITIVE	5.25	Selected
32	**POSITIVE**	**0.78**	**Not Selected**
33	POSITIVE	3.21	Selected
34	POSITIVE	2.02	Selected
35	POSITIVE	5.41	Selected
36	NEGATIVE	0.06	Selected
37	POSITIVE	3.55	Selected
38	**NEGATIVE**	**0.89**	**Not Selected**
39	POSITIVE	2.63	Selected
40	**POSITIVE**	**0.72**	**Not Selected**
41	POSITIVE	2.39	Selected
42	POSITIVE	3.12	Selected

43	NEGATIVE	0.79	Not Selected
44	POSITIVE	1.69	Not Selected
45	POSITIVE	2.52	Selected
46	POSITIVE	3.55	Selected
47	POSITIVE	1.33	Not Selected
48	NEGATIVE	1.41	Not Selected
49	NEGATIVE	1.25	Not Selected
50	NEGATIVE	1.56	Not Selected

The attitude towards mobile learning scale has construct validity as the items were selected having the 't' value of more than 1.75 (Edwards,1957). Its intrinsic validity was found to be 0.85. The reliability of this scale by split half technique (consistency) followed by the use of spearman–brown prophecy formula is found to be 0.73. Thus, the attitude towards mobile learning scale has validity and reliability.

CONCLUSION:

The tool namely attitude towards mobile learning scale was hence constructed and also validated by the prescribed norms.

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