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Review Of Research

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Development , Standardization , Mobile Technology Scale , code division multiple access (CDMA) .

Abstract:

This Article deals with the development and standardization of an attitude towards mobile technology scale. Mobile technology is the technology used for cellular communication. Mobile code division multiple access (CDMA) technology has evolved rapidly over the past few years. The study of mobile technology is a significant one and for which the investigator has decided to develop and standardize a scale to measure it.

DEVELOPMENT AND STANDARDIZATION OF AN ATTITUDE TOWARDS MOBILE TECHNOLOGY SCALE

INTRODUCTION

Nowadays, it is commonly thought that new technologies can strongly help in education. In young ages especially, children can use the huge interactivity of new media, and develop their skills, knowledge, perception of the world, under their parents monitoring, of course. In no way traditional education can be replaced, but in this era of fast technological advance and minimization of distance through the use of the Internet, everyone must be equipped with basic knowledge in technology, as well as use it as a medium to reach a particular goal. Researches confirm that mobile technology can drive to positive impact on student and teachers learning. As there is no suitable tool available to study the school and college teacher's attitude towards mobile technology scale', the investigator have decided to construct and standardize a scale to measure the students and teachers attitude towards mobile technology. This Likert type scale is a five- point scale of "Strongly Agree", "Agree ", "Un Decided", "Disagree ", and "Strongly Disagree". 49 items have been collected from the various sources like Experts in Educational Technology, Teacher Educators, Books, Journals, Internet and so on.

PILOT STUDY

This scale with 49 items has been administered to the sample of 300 students and teachers (150 Higher secondary school students and 150 Higher secondary, College teachers) studying in different higher secondary schools and working in different higher secondary schools and different colleges of Cuddalore District, Tamil Nadu, India, in order to carry out the pilot study. Then their responses have been scored carefully and their marks secured by all the samples have been arranged in the descending order from the highest scorer to the lowest scorer. Then they were subjected to item analysis.

ITEM ANALYSIS

The next step in the standardization of an attitude towards mobile technology scale after pilot study is to find out the t-value of each item, which forms the basis for item selection in order to build up the final scale. The Likert type scale calls for a graded response to each item on a five-point scale ranging from "Strongly Agree", to "Strongly Disagree". The individual score for all the 300 students and teachers were ranked from the highest to the lowest score. Then 25% of the subjects with the highest total scores and 25% of the subjects with the lowest total scores were sorted out for the purpose of item selection. The high and low groups, were selected, formed the criterion groups and each group was made up of 75 students (Edward. L. Allen, 1957).

It may be recalled that each item is followed by five different responses of "Strongly Agree", "Agree ", "Un Decided", "Disagree ", and "Strongly Disagree" in the attitude towards mobile technology scale. Then each item was taken individually and the number of teachers who responded "Strongly Agree", "Agree ", "Un Decided", "Disagree ", and "Strongly Disagree" was found out both the high and low groups separately. Thus for all the 49 items, the number of students and teachers coming under each category was found out separately for both the high and low groups and the t-values for all the 49 items have been calculated with the formula suggested by Allen Edwards(1957). As many as 40 items having the t-value greater than or equal to 1.75 (Edward. L. Allen, 1957) have been chosen in order to form the final scale (vide: Table-I). Then this final scale has been administered to 300 students and teachers studying in different higher secondary schools and working in different higher secondary schools and different colleges of Cuddalore District, Tamil Nadu, India, in order to establish the scoring procedure, validity and reliability of this scale.

TABLE – I
ITEM SELECTED FOR ATMTS

Item Number	't' Value	Item selected
1	7.08	S
2	1.52	NS
3	6.93	S
4	6.08	S
5	3.52	S
6	6.52	S
7	5.82	S
8	4.29	S
9	5.62	S
10	5.46	S
11	1.12	NS
12	5.98	S
13	5.42	S
14	1.36	NS
15	4.86	S

16	4.02	S
17	3.98	S
18	3.06	S
19	5.06	S
20	4.94	S
21	6.24	S
22	6.08	S
23	1.44	NS
24	5.06	S
25	1.50	NS
26	4.02	S
27	3.98	S
28	2.96	S
29	5.60	S
30	4.32	S
31	5.94	S
32	4.82	S
33	4.62	S
34	3.96	S
35	3.08	S
36	4.96	S
37	6.02	S
38	5.26	S
39	1.26	NS
40	1.24	NS
41	5.06	S
42	4.94	S
43	1.02	NS
44	3.98	S
45	2.96	S
46	5.60	S
47	4.32	S
48	5.94	S
49	1.43	NS

S – Selected NS – Not selected

SCORING PROCEDURE

The attitude towards mobile technology scale has 40 items, out of which 24 items are positively worded and the remaining 16 items are negatively worded. An individual score is the sum of the scores of all the 40 items. The scores range from 40 to 200. Higher score indicates the positive attitude towards mobile technology and the details of scoring are given in the following table.

The scoring to the response given by the respondents should be like the following

TABLE – II

Response	Positive	Negative
Strongly Agree	5	1
Agree	4	2
Un Decided	3	3
Disagree	2	4
Strongly Disagree	1	5

RELIABILITY:

Reliability refers to the consistency with which a test measures, whatever it measures. The concept of reliability suggests both stability and consistency of measurement. The investigator calculated the reliability analysis and it was given in the following table.

TABLE – III
TABLE SHOWING THE RELIABILITY METHOD AND CO-EFFICIENT VALUES

METHOD OF RELIABILITY ANALYSIS	RELIABILITY CO-EFFICIENTS
Correlation between forms	0.621
Equal-length Spearman-Brown	0.652
Guttman Split-half	0.636
Unequal-length Spearman-Brown	0.612

VALIDITY:

Validity reveals the merits of our measurement. This attitude towards mobile technology scale was given to the experts (20 members) in order to find out its content validity. The experts agreed that the items in the scale provided adequate coverage of the concept. This attitude towards mobile technology scale also has construct validity.

PERCENTILE NORM:

The following table represents the percentile norm for this attitude scale.

PERCENTILE	SCORE RANGE	NORM
Below P25 (Q1)	Below 80	Negative attitude
P25 To P75 (Q1 to Q3)	Between 80 and 160	Average
Above P75 (Q3)	Above 160	Positive attitude

CONCLUSION

The investigator believe that this scale would be a contribution to the field of mobile technology in Educational Technology and those who want to measure the attitude towards mobile technology anywhere in this country will find this scale very useful.

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