

DEVELOPMENT AND STANDARDIZATION OF ATTITUDE TOWARDS SMARTCLASSROOM TEACHING SCALE (ATSCRTS)

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ABSTRACT

Various multimedia's such as: Internet, CD, video, and etc. can be used in the smart classroom. There have been various endeavors that try to integrate smart devices and ICT into education to increase the effectiveness of education. Smart schools equipped with wireless networks and the latest digital devices (interactive whiteboard, smart pad, etc.) were implemented on a trial basis. Smart boards have all these information in memory which can be presented during the time of class lectures and thus, the time saved can be used in more important things. Hence the investigators decided to construct and validate the attitude towards smart classroom teaching scale (ATSCRTS) to measure attitude of the school students.

Key Words: Smart classroom, Attitude

INTRODUCTION:

With ICT (Information and Communications Technology) development, various smart devices and web services have been applied to classrooms. Interactive whiteboards (IWB) has appeared and many students have smart devices such as: smart phones and smart pads. Interactive whiteboards can display the computer screen as educational materials. It can be able to write on screen using an electronic pen and it can be connected with students' smart devices. Various multimedia's such as: Internet, CD, video, and etc. can be used on Interactive whiteboard. There have been various endeavors that try to integrate smart devices and ICT into education to increase the effectiveness of education. Smart schools equipped with wireless networks and the latest digital devices (interactive whiteboard, smart pad, etc.) were implemented on a trial basis. However, there is a shortage of optimum levels of systems for Smart Classrooms with interactive whiteboard.

NEED AND IMPORTANCE:

We all know how helpful it is to remember something that is taught visually to us rather than the one that is read through pages after pages. Just imagine, how beneficial would it be for students to understand a

chapter visually in class. The concept of smart class education is indeed a blessing to the students of the 21st Century. Technology is changing the way life functions and if it's for the good, then why not go for it. Smart classes use all interactive modules like videos and presentations and these visually attractive methods of teaching becomes appealing to students who are already struggling with the traditional method of teaching in a classroom. In fact, smart classes are almost like watching movies as sometimes, animated visuals are used to teach a point. This kind of visual is both eye-catching and young students can easily relate with them. This is because the audio-visual senses of students are targeted and it helps the students store the information fast and more effectively. And then, there is the advantage of utilizing much of the time wasted earlier in drawing or preparing diagrams on board. Smart boards have all these information in memory and can be presented during the time of class lectures and thus, the time saved can be used in more important things.

DEVELOPMENT OF THE SCALE:

As there is no suitable scale available to study students' attitude towards the smart classroom teaching the investigators has decided to construct and standardize a scale to measure the students' attitude towards the smart classroom teaching. As the first step the investigators collected varieties of information from various sources like website search, Journals, Books, experts in colleges and in universities. It is of 'Likert type scale' having as many as 36 statements. They were positively and negatively worded. The statements were categorized with the expert's opinion. Each statement is set against a five points scale of by five different responses of 'SA', 'A', 'UD', 'DA', and 'SD'. The scores in this scale range from 36 to 180.

PILOT STUDY OF THE SCALE:

This scale of 36 statements intended for the pilot study was administered to the sample of as many as 100 higher secondary students studying in the higher secondary schools. Then their responses have been scored carefully and arranged in the 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 smart classroom teaching scale after pilot study is to find out the 't' value of each statement, 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 statement on a five-point scale ranging from 'SA', 'A', 'UD', 'DA', and 'SD'. 100 students were found out and they were ranked from the highest to the lowest score. Then 25% of the subjects (High) with the highest total scores and 25% of the subjects (low) with the lowest total scores were sorted out for the purpose of item selection. The high and the low groups, thus selected, formed the criterion groups and each group was made up of 25 higher secondary students (Edward.L.Allen., 1957). It may be recalled that each statement is followed by five different responses of 'SA', 'A', 'UD', 'DA', and 'SD' in the attitude towards smart class room teaching

scale. As already indicated weights are given for the response category in respect of each statement. Then each statement was taken individually and the number of students who responded 'SA', 'A', 'UD', 'DA', and 'SD' was found out in both the high and low groups separately. Thus for all the 36 statements, the number of higher secondary students coming under each category was found out separately for both the high and the low group. The value of 't' is a measure of the extent to which a given statement differentiates between the high and low group. 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 a statement differs significantly, provided there are 25 or more subjects in the high group and also in the low group (Edward.L.Allen., 1957).

TABLE-1

RANK ORDER OF ITEMS IN ATTITUDE TOWARDS SMARTCLASSROOM TEACHING SCALE (ATSCRTS) BASED ON 't' VALUES

STATEMENT NUMBER	NATURE OF STATEMENT	"t" VALUE	ITEM SELECTED
1	Positive	4.147	SELECTED
2	Positive	4.106	SELECTED
3	Positive	7.736	SELECTED
4	Negative	1.398	NOT SELECTED
5	Positive	7.732	SELECTED
6	Positive	5.427	SELECTED
7	Negative	6.798	SELECTED
8	Negative	7.221	SELECTED
9	Positive	6.421	SELECTED
10	Positive	5.285	SELECTED
11	Positive	5.369	SELECTED
12	Positive	6.383	SELECTED
13	Positive	6.067	SELECTED
14	Negative	5.086	SELECTED

15	Positive	4.570	SELECTED
16	Positive	5.377	SELECTED
17	Positive	3.371	SELECTED
18	Negative	1.077	NOT SELECTED
19	Positive	4.825	SELECTED
20	Negative	2.713	SELECTED
21	Positive	2.083	SELECTED
22	Negative	5.296	SELECTED
23	Negative	2.569	SELECTED
24	Positive	5.418	SELECTED
25	Negative	2.403	SELECTED
26	Positive	1.349	NOT SELECTED
27	Negative	4.608	SELECTED
28	Positive	2.870	SELECTED
29	Negative	1.163	NOT SELECTED
30	Positive	1.171	NOT SELECTED
31	Negative	5.484	SELECTED
32	Positive	5.241	SELECTED
33	Negative	4.84	SELECTED
34	Positive	3.878	SELECTED
35	Positive	2.756	SELECTED
36	Positive	1.402	NOT SELECTED

In the present study there are 25 subjects each in the high and low groups, the total number of subjects involved in the pilot study being 100. As many as 30 statements having the highest 't' value have been chosen in order to form the final scale (Table-1).

SCORING PROCEDURE:

The scoring procedure is given in the table furnished below:

Nature of the Statement	Strongly disagree	disagree	Undecided	agree	Strongly agree
Positively Worded	5	4	3	2	1
Negatively Worded	1	2	3	4	5

The score ranges from 30 to 150. The maximum score that one can get in this is 150. The level of the scale was given below.

Level	Range of scores
Unfavorable attitude towards Smart classroom teaching	Upto 60
Neutral attitude towards Smart classroom teaching	Above 60 up to 120
Favorable attitude towards Smart classroom teaching	Above 120

VALIDITY:

Attitude towards Smart classroom teaching scale has construct validity as items were selected having the 't' values equal to or more than 1.75 (Edwards, 1975). Its intrinsic validity was found to be 0.91 which clearly states that the scale is valid.

RELIABILITY:

The reliability of this scale found using the test-retest method was found to be 0.84 and hence the scale is reliable.

CONCLUSION:

Thus the investigators constructed and validated a Attitude Towards Smart Classroom Teaching Scale (ATSCRS) and contributed it to the field of education.

REFERENCES:

- Best, John, W., and James Kahn.V., (1999) Research in education, Seventh Edition Prentice Hall of India Private Limited, New Delhi.
- Edwards. L. Allen, (1957), "Techniques of attitude scale Construction", Vakils Feiffer and Simons (P) Ltd, Bombay. India.