

## International Journal of Innovative Research in Science, Engineering and Technology

*(A High Impact Factor, Monthly, Peer Reviewed Journal)*

Visit: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 3, March 2019

# Construction and Validation of Interest towards Smartclassroom Teaching Scale (ITSTS)

S.Sakthikumar, M.Sc.,M.A.,M.Ed., Dr. P.Vaiyapuri Raja, Ph.D.,

Ph.D., Research Scholar (EXT), Bharathiar University Coimbatore, Assistant Professor, Dept. of Physical Science,  
Duraimurugan College of Education, Katpadi, Vellore, Tamilnadu, India

PRINCIPAL, Sri Balaji College of Education, Arcot road, ACS Nagar, Irumbedu. Arni, Tiruvannamalai,  
Tamilnadu, India

**ABSTRACT:** Smart classrooms are basically technologically and electronically enhanced classrooms. The concept of smart classrooms does not completely match with the traditional method of teaching. Moderately it seeks to club the use of technology with conventional methods. For instance, the teacher while teaching a lesson on the topic bear will supplement the information given in books by showing a video of different types on bears. Thus it has been the trend of using these interactive tools for teaching. This study is an effort to construct and validate a tool on interest towards smart class rooms teaching. The study has been conducted by adopting normative survey method. The scope of the study consists of the opportunity and the opinion of the respondents' interest toward the smart class teaching.

**KEYWORDS:** Smart classroom, Interest, teaching.

### I. INTRODUCTION

Smart classrooms are basically technologically and electronically enhanced classrooms which is the tool used for teaching to the students. Smart classroom learning is networked, which makes it capable of instant updating, storage/retrieval, distribution and sharing of instruction or information. It is delivered to the end-user via a computer using standard smart classroom technology. It focuses on the broadest view a of Smart classroom learning solutions that go further than the paradigms of training.

Smart classroom can also be considered as describing a temporary or less optimal situation. It can become a self-fulfilling prophecy and set expectations that are not in line with the strategic direction. Furthermore, there's no particular reason that the goal of Smart classroom should be to simply emulate what could be done in the classroom.

### II. NEED AND IMPORTANCE

The smart classroom is a technology-rich, physical and virtual combined learning environment which has the ability of context awareness and interest can adjust their environmental parameters like light and temperature automatically. The smart classroom could provide the learning contents, interaction support, interest and constructive learning tools for all type of the teaching and learning activities, including personalized learning, group learning, inquiry learning, collaborative learning, mobile learning, and virtual learning. The smart classroom conducive to student-centered learning gives students the adaptive learning support for active learning and constructive learning activities. The smart classroom has the ability to store, collect, compute, and analyze the massive data of learners to do the optimized pedagogical decisions. The smart classroom is an open learning environment to bring the students to an authentic learning context. It can stimulate students' learning motivation, engage students' creation, and give students hands-on learning experience effectively. Hence the study has the need an importance.

## International Journal of Innovative Research in Science, Engineering and Technology

*(A High Impact Factor, Monthly, Peer Reviewed Journal)*

Visit: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 3, March 2019

### III. DEVELOPMENT OF THE SCALE

As there is no suitable scale available to study students' interest towards the smart classroom teaching the investigators has decided to construct and standardize a scale to measure the students' interest towards the smart classroom teaching. As the first step the investigators collected varieties of information from various sources like website, Journals, Books, experts in colleges and in universities. It is of 'Likert type scale' having as many as 30 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 30 to 150.

#### PILOT STUDY OF THE SCALE:

This scale of 30 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 interest 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 interest 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 30 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 INTEREST TOWARDS SMARTCLASSROOM TEACHING SCALE (ITSTS)**  
**BASED ON 't' VALUES**

STATEMENT NUMBER	"t" VALUE	ITEM SELECTED
1	3.632	SELECTED
2	4.151	SELECTED
3	3.132	SELECTED
4	3.597	<b>SELECTED</b>
5	3.205	SELECTED
6	2.388	SELECTED
7	3.016	SELECTED
8	2.259	SELECTED

## International Journal of Innovative Research in Science, Engineering and Technology

*(A High Impact Factor, Monthly, Peer Reviewed Journal)*

Visit: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 3, March 2019

9	1.916	SELECTED
10	1.012	<b>NOT SELECTED</b>
11	1.887	SELECTED
12	3.312	SELECTED
13	2.382	SELECTED
14	1.164	<b>NOT SELECTED</b>
15	3.242	SELECTED
16	2.892	SELECTED
17	1.953	SELECTED
18	3.370	<b>SELECTED</b>
19	3.354	SELECTED
20	0.946	<b>NOT SELECTED</b>
21	2.981	SELECTED
22	3.363	SELECTED
23	1.229	<b>NOT SELECTED</b>
24	3.984	SELECTED
25	2.847	SELECTED
26	1.155	<b>NOT SELECTED</b>
27	2.467	SELECTED
28	4.294	SELECTED
29	1.031	<b>NOT SELECTED</b>
30	4.225	<b>SELECTED</b>

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 24 statements having the highest 't' value have been chosen in order to form the final scale (Table-1).

The score ranges from 24 to 120. The maximum score that one can get in this is 120. The level of the scale was given below.

Level	Range of scores
Unfavorable interest towards Smart classroom teaching	Upto 48
Neutral interest towards Smart classroom teaching	Above 48 up to 96
Favorable interest towards Smart classroom teaching	Above 96

### VALIDITY:

Interest 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 0.90 which clearly states that the scale is valid.



ISSN(Online): 2319-8753  
ISSN (Print): 2347-6710

# International Journal of Innovative Research in Science, Engineering and Technology

*(A High Impact Factor, Monthly, Peer Reviewed Journal)*

Visit: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 3, March 2019

## **RELIABILITY:**

The reliability of this scale found using the test-retest method was found to be 0.81 and hence the scale is reliable.

## **IV. CONCLUSION**

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

## **REFERENCES**

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