



EFFECTIVENESS OF SMART CLASSROOM LEARNING IN RURAL SCHOOL STUDENTS

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Abstract:

Education is a process which revolves around teacher, student and curriculum where teacher has to play a very important role. The content and techniques of teaching depend to a great extent on what we want to achieve. With the changing scenario of education, it is supposed to find ways and means to improve the teaching techniques to cope with the need of the times. Technology benefited us in every aspect of life from communication to education. The new revolutionary programme in school education system "smart class" has changed the concept of learning. It is an innovative technology that has aimed to revolutionize the way of teaching learning process. Smart classroom learning scale by constructed and standardized by Senthilraja and Pandian (2021) The SPSS Program was used to analyze the data that were obtained from the study. Smart classroom schools have randomly selected by the investigator in the same district and the size of the sample is 300 standard IX and X rural school students from high schools. The result of the study showed, there is significant difference in smart classroom learning in rural students in terms of gender, and medium of instruction. Further the result of the study showed, there is no significant difference in smart classroom learning in rural students in terms of location of student, type of school, father's education, mother's education, parents occupation and type of family.

Introduction:

The smart classroom learning approach provides learner of all ages of life with a higher level of understanding. Smart class is an innovative concept in education. Now days we are living in the age of internet so our education system is also going to be online. Smart classroom foster creativity and an interactive environment which would help in bringing in more innovative ideas, more queries and more solutions. A smart classroom is a technology enhanced learning classroom that enhances the way of teaching and learning digitally. The classroom is integrated with the digital displays, tabs, white board, assistive listening devices and other devices. A student can learn better through visualization. Such teaching helps to maintain the interest of the students and focus by engaging them fully for the entire learning experience. Quality education is an essential requisite in today's competition environment.

Location of the Study:

The present study has conducted only at Cuddalore District in Tamil Nadu which government and private schools are available and some schools have been utilizing smart classroom learning in the campus.

Sample of the Study:

The investigator has utilized simple random sampling technique for choosing the sample to the present study and he has selected Government private schools in the Cuddalore district. Smart classroom schools have randomly selected by the investigator in the same district and the size of the sample is 300 standard IX and X rural school students from high schools. It means that each individual of the population has equal chance or probability of selection for constituting a sample.

Objectives of the Study:

To find out whether there is any significant difference in effectiveness of smart classroom learning in rural school students with respect to their:

- Gender : Male / Female
- Location of student : Rural / Urban
- Type of school : Government / Private
- Medium of instruction : English / Tamil
- Father's Education : School / College / Illiterate
- Mother's Education : School / College / Illiterate
- Parent's Occupation : Government / Private / Self-employee
- Type of family : Nuclear / Joint

Hypotheses of the Study:

There is no significant difference in effectiveness of smart classroom learning in rural school students with respect to their:

- Gender : Male / Female
- Location of student : Rural / Urban
- Type of school : Government / Private

- Medium of instruction : English / Tamil
- Father's Education : School / College / Illiterate
- Mother's Education : School / College / Illiterate
- Parent's Occupation : Government / Private / Self-employee
- Type of family : Nuclear / Joint

Operational Definition of Key Term Used:

Effectiveness:

Effectiveness is the product or programme output i.e., usefulness, value, success or failure and results. It is recognized the quality of the instrument and programme. As a primary measure of success of a programme or of a higher education institution, clear indicators, meaningful information, and evidence best reflecting institutional effectiveness with respect to student learning and academic achievement have to be gathered through various procedures. Engaging in the measurement of educational effectiveness creates a value-added process through quality assurance and accreditation review and contributes to building, within the institution, a culture of evidence.

Smart Classroom:

Smart Classroom is educational institutions are utilizing the new advanced apparatus in the classroom for enhanced teaching and learning by integrating learning technology, such as computers, specialized software, audience response technology, assistive listening devices, internet (online teaching and video conferencing), networking, and multimedia capabilities. Smart classroom learning scale by constructed and standardized by Senthilraja and Pandian (2021)

Description of the Tool:

One of the objectives of the present investigation, it may be recalled, is to find out the effectiveness of smart classroom for high school students of IX standard and also to find out if there is any significant difference between the selected pairs of sub-samples in respect of their effectiveness of smart classroom. The researcher has taken strenuous effort to find validated tool but no fruitful result so the researcher has convinced himself then; the investigator has constructed and validated the one in order to realize the objectives.

Scoring:

The Likert kind of Scale has given a graded response to each statement on a five - point scale ranging from "Strong Agreement" to Strong Disagreement". 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 arbitrary weights- for examples 5, 4, 3, 2 and 1 in the order of "Strongly Agree" response to "Strongly Disagree" response for the favourable statements. The scoring scheme is reversed for the unfavourable statements. Here the "Strongly Disagree" response is given the weight of 5 and the "Strongly Agree" response a weight of 1. Finally, the effectiveness of smart classroom tool minimum score is 42 and maximum score is 210.

Differential Analysis:

Gender:

Table 1: Effectiveness of Smart Classroom Learning of Rural School Students with Respect to Gender

Gender	N	Mean	S.D	't' Value
Male	172	122.45	44.52	2.544
Female	128	119.69	41.97	S

There is a significant difference in the effectiveness of smart classroom learning among male and female rural school students as the calculated t-value (2.544) is greater than the table t-value (1.96) at 0.05 level.

Location of Student:

Table 2: Effectiveness of Smart Classroom Learning of Rural School Students with Respect to Location of student

Location of Student	N	Mean	S.D	't' Value
Rural	134	119.24	43.75	0.727
Urban	166	122.91	43.21	NS

There is no significant difference in the effectiveness of smart classroom learning among rural and urban of rural school students as the calculated t-value (0.727) is lesser than the table t-value (1.96) at 0.05 level.

Type of School:

Table 3: Effectiveness of Smart Classroom Learning of Rural School Students with Respect to Type of school

Type of School	N	Mean	S.D	't' Value
Government	120	122.40	42.90	0.365
Private	180	120.52	43.86	NS

There is no significant difference in the effectiveness of smart classroom learning among government and private rural school students as the calculated t-value (0.365) is lesser than the table t-value (1.96) at 0.05 level.

Medium of School:

Table 4: Effectiveness of Smart Classroom Learning of Rural School Students with Respect to Medium of school

Medium of School	N	Mean	S.D	't' Value
English	184	118.28	43.14	1.987
Tamil	116	126.02	43.62	S

There is a significant difference in the effectiveness of smart classroom learning among English medium and Tamil medium of rural school students as the calculated t-value (1.987) is greater than the table t-value (1.96) at 0.05 level.

Father's Qualification:

Table 5: Effectiveness of Smart Classroom Learning scores of Rural School Students with Respect to fathers' qualification shown in Anova

Father's Qualification	Sum of Squares	df	Mean Squares	'F' Value
Between Groups	1200.065	2	600.033	0.317 NS
Within Groups	562559.972	297	1894.141	
Total	563760.037	299		

It is clear from the above table 5, that the computed value of "F" for effectiveness of smart classroom learning of rural student's father's qualification score (0.317) is lesser than the critical value of "F" (3.02) for 2 and 297 df at 0.05 level. Therefore, there is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to father's qualification.

Mother's Qualification:

Table 6: Effectiveness of Smart Classroom Learning scores of Rural School Students with Respect to mothers' qualification shown in Anova

Mother's Qualification	Sum of Squares	df	Mean Squares	'F' Value
Between Groups	8156.149	2	4078.075	2.180 NS
Within Groups	555603.887	297	1870.720	
Total	563760.037	299		

It is clear from the above table 6, that the computed value of "F" for effectiveness of smart classroom learning of rural student's mother's qualification score (2.180) is lesser than the critical value of "F" (3.02) for 2 and 297 df at 0.05 level. Therefore, there is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to mother's qualification.

Parents Occupation:

Table 7: Effectiveness of Smart Classroom Learning scores of Rural School Students with Respect to parents' occupation shown in Anova

Parents Occupation	Sum of Squares	df	Mean Squares	'F' Value
Between Groups	1277.265	2	638.633	0.337 NS
Within Groups	562482.771	297	1893.881	
Total	563760.037	299		

It is clear from the above table 7, that the computed value of "F" for effectiveness of smart classroom learning of rural student's parents occupation score (0.337) is lesser than the critical value of "F" (3.02) for 2 and 297 df at 0.05 level. Therefore, there is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to parents occupation.

Type of Family:

Table 8: Effectiveness of Smart Classroom Learning of Rural School Students with Respect to Type of family

Type of Family	N	Mean	S.D	't' Value
Nuclear	160	118.90	44.73	1.014 NS
Joint	140	123.99	41.86	

There is no significant difference in the effectiveness of smart classroom learning among type of family of rural school students as the calculated t-value (1.014) is lesser than the table t-value (1.96) at 0.05 level.

Major Findings of the Study:

- There is a significant difference in the effectiveness of smart classroom learning among male and female rural school students.
- There is no significant difference in the effectiveness of smart classroom learning among rural and urban of rural school students.
- There is no significant difference in the effectiveness of smart classroom learning among government and private rural school students.
- There is a significant difference in the effectiveness of smart classroom learning among English medium and Tamil medium of rural school students.
- There is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to father's qualification.
- There is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to mother's qualification.
- There is no significant difference in the effectiveness of smart classroom learning of rural school students score with regard to parents' occupation.
- There is no significant difference in the effectiveness of smart classroom learning among type of family of rural school students.

Conclusion:

The majority of the smart classroom solutions mentioned above necessitate additional hardware and software resources. Due to the technology a complete smart classroom system may become an expensive investment. A smart classroom, for example, includes projectors, sensors, high-speed connectivity, and a computer at a bare minimum. Furthermore, in developing countries with large and young populations, the number of colleges and therefore classrooms are enormous; most schools cannot afford to procure cameras, numerous projectors, workstations, and other such things for each classroom. Smart class is the revolution in the today's classrooms. Teaching and learning process is child centric and become very interesting and effective. Education through new technology like the smart class has made it easier for the teachers to relate the subject to the students. Quality education is an essential requisite in today's competition environment.

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