



5. Attitudes of Secondary School Teachers' Towards Smart Classroom Teaching: An Explanatory Study

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Abstract

Now a day's smart classroom teaching is regarded as a panacea for modern education system. This technology based education system along with modern and electronic devices brought a huge and drastic change in class room teaching and deliberation of instruction and pedagogy. The successful utilization and implementation of such programme is related with various factors like installation of appropriate devices, proper use with trained instructor, attitude of pupil and teacher etc. The present study investigated the attitude of secondary school teachers of Nayagarh and Kandhamal district of Odisha. It was a descriptive survey based study by taking 200 teachers from Nayagarh and Kandhamal district of Odisha. For the study, the investigator has used Mean, SD and t-test statistical methods has been used, and formulae for analyzing the data with reference to gender, location and training on smart classroom teaching. The study found that, Gender, and Training of the teachers has not any difference on secondary teacher's attitude towards smart classroom teaching in Nayagarh and Kandhamal districts. Urban teacher are more attitude as compare to rural towards their smart classroom teachers, and districts wise have not any difference when compare districts wise i.e. Nayagarh and Kandhamal districts.

Keywords: Smart Classroom Teaching, Attitude, Secondary School Teacher, Technology

1. Introduction

In this 21st century, perhaps the teacher and instructor has no such burden in the classroom while delivering the instruction inside the classroom atmosphere with much more over crowded and overloaded syllabus. And it is held only due to the presence of modern technology, application of software and hard ware approaches in the field of education process both inside and outside the classroom atmosphere, which has been proved from the hazardous covid-19 like pandemic in the past few days. Due to some hurdles from administrative and execution point of view, although it was regarded as an alternation of imparting education in the past, now a days it is a mandate by the situation for a meaning full and reasonable development of education today. But sometimes it



is seen that most of the teachers are felt under pressure despite of removal of conventional black board with chalk and duster. However in the classroom, the presence of audio visual aids with the use of integrated software and hardware devices make the process of education more attractive and fruitful than the past. No doubt that any technology cannot replace the presence of teacher for quality education itself. It is clear that effective and purposeful based teaching can be possible by an effective and efficient teacher, who has good communication skill and sound knowledge and adaptation with modern teaching related devices during teaching learning process. The deliberation of class with power point presentation, internet and web based information and application.

2. Review of Literature

The introduction of technology in the modern education and teaching –learning system is very much effective as it became flexible, comfortable, personalize and attractive in comparison to traditional method of education system. The application of e-devices, internet, computer make today's education system more forward, time saving and update with latest information and understandable. So the smart class room approaches are being implemented in many schools in the country. Despite of implementation of such project, it is necessary to have apposite attitude of the teachers as well as the students towards smart classroom for effective teaching learning process.

Chow P(2015) studied on “teachers attitude towards technology in the classroom” the main objectives of the study was to what the teachers in Toronto and York region think about educational technology and implement in their classroom. It was found that [1] instructor's age does not determine perception of technology [2] the comfort of teacher or instructor using the technology directly impacts the classroom teaching.

Kumar and Rani (2016) studied “attitude of teachers towards the use of technology and innovation in the classroom” the main objectives of the study is to reveal the attitude of the college teachers towards the use of technology, while they are teaching in the classroom. Here the investigator collected sample from 200 teachers from 10 autonomous degree colleges in Bengaluru. the investigator found that [1] the college teachers are using educational technology in all spheres, while they are involved in teaching [2] future classes should be technology enhanced classroom with multimedia and modern devices for more effective teaching.

Phoong et al. (2019) studied the effect of smart classroom on student achievement at higher education. The aim of the study was, to know the effect of smart classroom teaching among under graduate students of mathematics. It was revealed that smart classroom teaching helps the educators to learn better than previous. The knowledge acquired through smart classroom teaching or through blended more is more effective and flexible.

Meher et al. (2020) attitude of teachers about the use of information and Communication technology (ICT) in teaching-learning process. The main aim of the study to compares the

attitudes of the instructors at Gangadhar Meher University in Sambalpur towards the use of ICT. In this study, an effort has been made to compare teachers' attitudes according to their sex and academic stream. The descriptive cum causal comparative approach was used for this study, and 60 teachers were selected at random. A standardized attitude scale was employed to gather the data. The study's findings showed that 40% of instructors and close to 60% of teachers had favorable attitudes towards the usage of ICTs in the teaching-learning process. The study's findings also showed that there were no appreciable differences in teachers' attitudes towards their sex and stream.

Visahal. A. (2022) conducted a study on “perception of secondary schools teachers towards smart classroom at patina district”. The study aimed at to know the perception of the secondary teachers towards smart classroom of Patna district in Bihar. The study revealed that the perception of secondary school teachers in this district is same with respect to gender, location and teaching experience.

3. Objective of the study

- To compare the attitudinal difference of secondary school teachers of Nayagarh and Kandhamal districts towards smart classroom teaching with reference to gender and location. .

4. Research Question

- What are the attitudes of secondary school teachers' of Nayagarh and Kandhamal districts towards smart classroom teaching ?
- How the level of attitude differ among the teachers of two districts i.e Nayagarh and Kandhamal ?

5. Hypothesis of the study

The researchers have formulated the following hypothesis as per the objectives of the study.

- H_{01} : There doesn't exist any significant difference in the attitude of secondary school teachers of Kandhamal and Nayagarh districts towards smart class teaching with respect to gender.
- H_{02} : There doesn't exist any significant difference in the attitude of secondary school teachers of Kandhamal and Nayagarh districts towards smart class teaching with respect to location.

6. Methodology

- **Method:** For the above study, the investigators has adopted descriptive cum survey method of educational research as the study based on existing phenomenon.
- **Population:** For the current study the investigator collected responses from 200 secondary school teachers (100 teachers from each districts) of Nayagarh and Kandhamal district of Odisha, where classroom project smart is implemented. There

were 92 secondary schools in the district of Nayagarh and 83 secondary schools in the district of Kandhamal under smart classroom project. Likewise the study covers 628 teachers from Nayagarh and 330 from Kandhamal district respectively.

- **Sample and sampling:** Here the investigator has collected data from 40 schools from both of the districts. In order to examine the attitude of the secondary school teachers towards smart classroom teaching the investigator has selected 200 teachers from the above two districts employing the random sampling technique.
- **Tools used in the study:** For the study to examine the level of attitude of the teachers, the investigator has used a self developed attitude scale containing 30 items to gather the responses of the teachers during collection of data. The investigator has developed a self made attitude scale containing 30 statements for the respondents. In order to implement the attitude scale the investigator has taken 13 positive statements and 17 negative statements for teachers. The investigator has developed the scale based on different dimensions in relation to different variables on smart classroom teaching.
- **Variables used in the study:**
 - a. Dependent variable
 1. Attitude
 - b. Independent variable
 - I. Smart classroom
 - II. Secondary school
 - III. Gender
 - IV. Location
 - V. Training on Smart classroom teaching

7. Analysis and Interpretation of the Data

To investigate the attitude of the secondary school teachers from Nayagarh and Kandhamal district, the investigator collected responses of the teachers with the help of self developed attitude scale and analyzed with applying inferential statistics technique for fulfill the prime objectives of the study. For this the investigator used Mean, SD, t-test to analyze the collected data.

The attitude scale was consist of 30 items on smart classroom teaching project implemented in the above districts of Odisha. To examine the attitude of the school teachers, the investigator collected response from 100 teachers each of the both districts (total 200) with reference to gender, location and training

Table no- 4.10: attitudinal difference of secondary school teachers of Nayagarh, Kandhamal district of Odisha towards smart classroom with reference to gender

District	Variable	Sub-category	N	Mean	SD	SE _d	df	t =	Remarks
Nayagarh	Gender	Male	45	104.2	8.12	1.50	98	1.07	Not Significant
		Female	55	105.82	6.91				
Kandhamal	Gender	Male	51	103.67	5.92	1.19		0.27	Not Significant
		Female	49	104	6.03				
Total	Gender	Male	96	103.92	7.00	0.95	198	1.08	Not Significant
		Female	104	104.96	6.55				

(Table No-1)

Interpretation : table no-1, Indicates the attitudinal difference of the secondary school teachers of Nayagarh district towards smart classroom teaching with reference to gender variable. It was found that the female teachers of Nayagarh district shows high attitude towards smart classroom teaching as the mean score of female is 105.82 than the male teachers of the same districts .it also indicates that the computed ‘t’ value found to be 1.07 and which is lower than the critical ‘t’ value 1.96 at 0.05 level of significance with degree of freedom 98.

Further the attitudinal difference of the secondary school teachers of Kandhamal district towards smart classroom teaching with reference to gender variable says that, the female teachers of Kandhamal district shows high attitude towards smart classroom teaching as the mean score of female is 104.00 than the male teachers of the same districts .It also indicates that the computed ‘t’ value found to be 0.27 ,which is lower than the critical ‘t’ value 1.96 at 0.05 level of significance with degree of freedom 98

As a whole the investigator found that the female teachers from both of the district i.e. Nayagarh and Kandhamal show high attitude with a mean value 104.96 towards smart classroom teaching than the male teachers of the both district. It also indicates that the computed ‘t’ value 1.08 is lower than the critical ‘t’ value 1.96 at 0.05 level of significance with degree of freedom 198.hence the null hypothesis H_{01} : there doesn’t exist any significant difference in the attitude of secondary school teachers of Kandhamal and Nayagarh districts towards smart class teaching with respect to gender is accepted as not significant

Tab no 4.12 attitudinal difference of secondary school teachers of Nayagarh, Kandhamal district of Odisha towards smart classroom with reference to location

District	Variable	Sub-category	N	Mean	SD	SE _d	df	t =	Remarks
Nayagarh	Location	Rural	65	104.74	7.52	1.57	98	0.63	Not Significant
		Urban	35	105.74	7.48				
Kandhamal	Location	Rural	75	102.97	5.97	1.33		2.56	Significant at 0.01 Level
		Urban	25	106.4	5.19				
Total	Location	Rural	140	103.79	6.77	1.03	198	2.14	Significant at 0.05 Level
		Urban	60	106.02	6.58				

(Table No- 2)

Interpretation : table no-2, indicates the attitudinal difference of the secondary school teachers of Nayagarh and Kandhamal district towards smart classroom teaching with reference to location variable in the both of the districts. It was found that the urban teachers of Nayagarh district shows high attitude towards smart classroom teaching as the mean score of female is 105.74 than the rural teachers .further it indicates that the urban teachers of Kandhamal district shows high attitude towards smart classroom teaching with a mean score 106.4 than rural teachers. As a whole it is found that on the basis of location variable the computed ‘t’ value found to be 2.14 and which is higher than the critical ‘t’ value 1.96 at 0.05 level of significance with degree of freedom 198.Hence the null hypothesis H_{02} : There doesn’t exist any significant difference in the attitude of secondary school teachers of Kandhamal and Nayagarh districts towards smart class teaching with respect to location is rejected as it is significant.

8. **Result And Discussion**

In this study the investigator tries to explore the attitude of secondary school teachers of Nayagarh and Kandhamal district. From the above analysis it is clear that there was no difference on teachers attitude towards smart classroom teaching in terms of gender for both of the two districts. On the contrary the table no 1,2, there was a variation between Nayagarh and Kandhamal districts in terms of location as it was significant. This only happens as the teachers of these days are taking more interest to work with computer and technology as it saves their more valuable time and work pressure during their work hour.Vo and Vo (2020) On EFL teachers attitude towards the use of mobile devices in learning English at a university in Vietnam indicates that e-learning platform provides holistic insights to educators for better understanding of contents as well as to enable pupil for better education. If consider about



location variable, the urban teachers shows high attitude towards smart classroom teaching as the teachers of these area are more acquainted with frequent network, electric city, technological infrastructure as well as resources and making smart school teaching environment more feasible and accessible

9. Major finding

- The finding revealed that there doesn't exist differences between male and female teachers towards the attitude of smart classroom teaching. Therefore, the researchers found difference between rural and urban teachers towards smart classroom teaching, urban teachers are more knowledgeable as compare to rural teachers about smart classroom teaching.
- It was also found that there are no significant difference between Nayagarh and Kandhamal districts male teachers, and Nayagarh and Kandhamal districts female teachers towards smart classroom teaching.
- The researchers found the difference between Nayagarh and Kandhamal districts rural teachers, as well as Nayagarh and Kandhamal districts urban teachers.

1. Implication of the Study

This study addressed the teachers' attitude towards smart classroom teaching in secondary schools of Nayagarh and Kandhamal districts. The findings of the study have following significant educational implications:

- The finding of the present study provides fast input to the policy planner both at government level as well as school administration level.
- This present study should imply as soon as possible, the use of different technological tools should be encouraged to the students and teachers in to the classroom.
- This study will be helped the school management to enhance technological skill of the teachers into the classroom.
- This study will suggest the school authorities of rural areas to make necessary arrangement for providing frequent electric city and internet service with possible alternation.
- The present study will help researchers; this study may help those researchers, who are pursuing research in the field of smart class.
- The findings of the study also provide an input to the organizations and companies related to development of software & hardware of smart classroom teaching.

2. Conclusion

From the above finding of the study, it is conclude that, Gender of the teachers have not any difference on secondary teachers' attitude towards smart classroom teaching in Nayagarh and Kandhamal districts, but while researchers compare location wise the significant difference was found. Likewise, districts wise there was a significant different found towards smart classroom



teaching on location basis. But both two districts are same attitude towards smart classroom teaching.

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