



ATTITUDE TOWARDS CAI METHOD OF TEACHING – A STUDY AMONG POSTGRADUATE PHYSICS TEACHERS

Education

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ABSTRACT

Computer-Assisted Instruction (CAI) is among the range of strategies being used to improve the students achievement in school subjects. The success of any new educational program on computer technology depends upon the support and attitude of teachers are strongly involved. Positive teacher attitude towards computing is critical while computers are to be effectively integrated into the curriculum. Thus the investigator aimed to study the attitude of postgraduate Physics teachers towards CAI method of teaching. The investigator used simple random sampling technique and chosen 90 Physics postgraduate teachers in Tenkasi educational district. Finally, the findings reveals that OS using postgraduate Physics teachers and Government aided school postgraduate physics teachers are having better results in their teaching.

KEYWORDS

Attitude, Computer Assisted Instruction, Physics.,

INTRODUCTION

Computer-Assisted Instruction (CAI) among the range of strategies being used to improve the student's achievement in school subjects. Efficient teaching methods are the essential tool that can help the students to achieve their goal in their classroom.

In CAI, on computers in the form of text or in multimedia formats, including photographs, videos, animation, speech, and music can help to increase active participation of the students in teaching-learning process. CAI applications guided the drill and practice exercises, visualization of complex objects, and computer-facilitated communication between students and teachers. It can be collect, organize, analyze, and transmit information to the students.

The success of any new educational program on computer technology depends upon the support and attitude of teachers involved. Teacher attitude towards positively to computing the knowledge about CAI is the effective tool for classroom teaching and learning. It should be inculcate in the curriculum.

SIGNIFICANCE OF THE STUDY

CAI is a popular teaching method employed by teachers. While using CAI packages, the students are very much interested and involved in the teaching learning process. In CAI packages, the subject content is explained with pictorial representations, textual matter is provided in attractive colors and animated objects are given if needed. When learning takes place without difficulties, the understanding capacity of the learner may also be improved.

According to Stevens (1982), General teacher attitude plays an important role in the educational process. To implement the technological advancement successfully in the classroom, teachers' attitude must be positive towards the new technology. Physical science is a subject that expects the learner to imagine many abstract concepts and therefore most of the times stressful one for the teacher and the learner in the classroom particularly in higher classes. Hence the investigator aimed to study the attitude of postgraduate physics teachers towards CAI method of teaching.

OBJECTIVE

- To find out the level of attitude towards CAI method of teaching among postgraduate physics teachers.

NULL HYPOTHESES

- There is no significant difference between male and female postgraduate physics teachers in their attitude towards CAI method of teaching and its dimensions.
- There is no significant difference between postgraduate physics teachers those who are using android mobile and those who are not using android mobile in their attitude towards CAI method of teaching and its dimensions.
- There is no significant difference among the postgraduate physics teachers working in government, government aided and matriculation schools in their attitude towards CAI method of

teaching and its dimensions.

SAMPLE

90 postgraduate physics teachers were selected by means those who are working in the higher secondary schools of Tenkasi educational district. Simple Random sampling technique was used in the present study.

TOOL USED

In the present study, the investigator used JASS (2015) scale of attitude towards CAI method of teaching was prepared and validated by the investigator and guide.

STATISTICAL TECHNIQUES USED

Standard deviation, 't' test and F test were employed to analyse the data.

TABLE 1

To find out the level of attitude towards CAI method of teaching among postgraduate physics teachers.

LEVEL OF ATTITUDE TOWARDS CAI METHOD OF TEACHING AMONG POSTGRADUATE PHYSICS TEACHERS

CAI method of teaching & its dimensions	Low		Moderate		High	
	N	%	N	%	N	%
Student Learning	9	10	61	67.8	20	22.2
Attitude of Teacher	22	24.4	56	62.2	12	13.3
Classroom Condition	19	21.1	58	64.4	13	14.4
CAI method of Teaching	16	17.8	60	66.7	14	15.6

It is inferred from the above table shows that the Physics postgraduate teachers had moderate level of attitude towards CAI method of teaching.

TABLE 2

HYPOTHESIS 1

There is no significant difference between male and female postgraduate physics teachers in their attitude towards CAI method of teaching and its dimensions.

DIFFERENCE BETWEEN MALE AND FEMALE POSTGRADUATE PHYSICS TEACHERS IN THEIR ATTITUDE TOWARDS CAI METHOD OF TEACHING AND IT'S DIMENSIONS

CAI Method of Teaching & its diemnsions	Gender	N	Mean	SD	Calculate d 't' value	Remarks
Students Learning	Male	26	10.04	1.800	1.03	NS
	Female	64	10.42	1.510		
Attitude of Teachers	Male	26	10.58	1.528	0.46	NS
	Female	64	10.73	1.428		

Classroom Condition	Male	26	10.19	1.833	0.31	NS
	Female	64	10.05	2.011		
CAI Method of Teaching	Male	26	30.81	4.128	0.47	NS
	Female	64	31.20	3.348		

(At 5% level of significance the table value of 't' is 1.98)

It is inferred from the above table shows that there is no significant difference between male and female postgraduate Physics teachers in their attitude towards CAI method of teaching and its dimensions.

**TABLE 3
HYPOTHESIS 2**

There is no significant difference between postgraduate physics teachers those who are using android mobile and those who are not using android mobile in their attitude towards CAI method of teaching and its dimensions.

DIFFERENCE BETWEEN POSTGRADUATE PHYSICS TEACHERS THOSE WHO ARE USING ANDROID MOBILE AND THOSE WHO ARE NOT USING ANDROID MOBILE IN THEIR ATTITUDE TOWARDS CAI METHOD OF TEACHING AND ITS DIMENSIONS

CAI Method of Teaching & its dimensions	Android Phone	N	Mean	SD	Calculated 't' value	Remarks
Students Learning	Android Phone	63	10.49	1.458	1.65	NS
	Not Android Phone	27	9.89	1.847		
Attitude of Teachers	Android Phone	63	10.98	1.431	3.08	S
	Not Android Phone	27	10.00	1.271		
Classroom Condition	Android Phone	63	10.30	1.989	1.59	NS
	Not Android Phone	27	9.59	1.803		
CAI Method of Teaching	Android Phone	63	31.78	3.540	2.91	S
	Not Android Phone	27	29.48	3.155		

(At 5% level of significance the table value of 't' is 1.98)

It is inferred from the above table shows that there is no significant difference between postgraduate Physics teachers those who are using android mobile and those who are not using android mobile in their students learning, classroom condition.

But there is a significant difference between postgraduate physics teachers in their dimensions of attitude of teachers and CAI method of teaching.

While comparing the mean scores of using android phone (mean = 10.98) and not using android phone (mean =10.00) postgraduate Physics teachers in their attitude of teaching, using android phone postgraduate Physics teachers are better than not using android phone postgraduate Physics teachers.

While comparing the mean scores of using android phone (mean = 31.78) and not using android phone (mean =29.48) postgraduate Physics teachers in their CAI method of teaching, using android phone postgraduate Physics teachers are better than not using android phone postgraduate Physics teachers.

**TABLE 4
HYPOTHESIS 3**

There is no significant difference among the postgraduate Physics teachers working in government, government aided and matriculation schools in their attitude towards CAI method of teaching and its dimensions.

DIFFERENCE AMONG THE POST GRADUATE PHYSICS TEACHERS WORKING IN GOVT., GOVT. AIDED AND MATRICULATION SCHOOLS IN THEIR ATTITUDE TOWARDS CAI METHOD OF TEACHING AND ITS DIMENSIONS

CAI Method of Teaching & its dimensions	Source of Variation	df (2, 89)		Calculated 'F' value	Remarks
		Sum of Squares	Mean Square		
Students Learning	Between	29.956	14.978	6.603	S
	Within	197.333	2.268		
Attitude of Teachers	Between	0.156	0.078	0.036	NS
	Within	187.133	2.151		
Classroom Condition	Between	33.889	16.944	4.827	S
	Within	305.400	3.510		
CAI Method of Teaching	Between	98.689	49.344	4.141	S
	Within	1036.600	11.915		

(At 5% level of significance for (2,89) df the table value of 'F' is 3.10)

It is inferred from the above table shows that there is no significant difference among the postgraduate Physics teachers working in government, government aided and Matriculation schools in the dimension attitude of teachers. But there is a significant difference in the dimensions of students learning, classroom condition and CAI method of teaching.

POSTANOVA TEST (Scheffe)

Table 4 (a)

STUDENTS LEARNING

Type of School	N	Subset for alpha = 0.05	
		1	2
Matriculation	30	9.67	
Government	30	10.20	10.20
Government Aided	30		11.07

While comparing the mean scores of Matriculation (mean =9.67), Government (mean =10.20) and Government Aided (mean =11.07) postgraduate Physics teachers in the dimension students learning, government aided school postgraduate Physics teachers are better than the other two counterpart.

Table 4 (b)

CLASSROOM CONDITION

Type of School	N	Subset for alpha = 0.05	
		1	2
Government	30	9.37	
Matriculation	30	10.03	10.03
Government Aided	30		10.87

While comparing the mean scores of government (mean =9.37) matriculation (mean =10.03) and government aided (mean =11.87) postgraduate Physics teachers in the dimensions of students classroom condition, government aided School postgraduate Physics teachers are better than the other two counterpart.

Table 4©

CAI Method of Teaching

Type of School	N	Subset for alpha = 0.05	
		1	2
Government	30	30.27	
Matriculation	30	30.43	30.43
Government Aided	30		32.57

While comparing the mean scores of government (mean =30.27) matriculation (mean =30.43) and government aided (mean =32.57) postgraduate Physics teachers in their CAI method of teaching, government aided school postgraduate Physics teachers are better than the other two counterpart.

FINDINGS

1. The level of attitude towards CAI method of teaching and its dimensions among postgraduate physics teachers is moderate.
2. There is no significant difference between male and female teachers in their attitude towards CAI method of teaching and its dimensions.
3. There is a significant difference between teachers who are using android mobile and teachers who are not using android mobile in their attitude towards CAI method of teaching and its dimensions. Postgraduate physics teachers those who are using android phone are better than who are not using android phone in their CAI method

of teaching.

4. There is a significant difference among the Physics postgraduate teachers working in government, government aided and matriculation schools in the dimensions students learning, classroom condition and CAI method of teaching.

EDUCATIONAL IMPLICATIONS

The attitude towards CAI method is moderate due to postgraduate physics teachers handling only higher secondary classes. Mostly higher secondary student's parents are expecting with a value marks. In 21st century the technology growing day by day in a very fast manner. This study found that android mobile using postgraduate physics teachers are having better knowledge also using the web sources to teach their students with the virtual evidences. At the same time do not have the android OS they depend only the text books. Furthermore, it is found that government aided school postgraduate Physics teachers are better in their performance about handling classes. Because they improve their teaching skills with the help of CAI or android OS using by teaching methods to change their performance in the classroom teaching and learning.

REFERENCE

1. Aggarawal, J.C. (1995). Essentials of Educational technology: Teaching and Learning. Delhi:Vikas Publishing House Pvt.Ltd.
2. Aggarwal,J.C. (2001) Modern Indian Education Delhi: Shipra Publications.
3. Best,J.W.,andKahn,J.V., (1999) Research in Education, New Delhi: 7th edition,Prentice- Hall of India Private Limited.
4. Pacific Policy Research Center, (2010). 21stCentury Skills for Students and Teachers, Honolulu: Kamehameha Schools, Research & Evaluation Division.