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"ATTITUDE OF MATHEMATICS TEACHERS TOWARDS ICT IN ENGINEERING COLLEGES"

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ABSTRACT

Technology can improve teaching and learning, but just having technology doesn't automatically translate to better instructional outcomes. Calculators and other technological tools, such as computers algebra systems, The attitude of teachers towards teaching profession is as important as subject knowledge. In the present research questionnaire was used as a tool for collection of data. Through this study it is understood that Mathematics teachers have less ICT skills. But it is the fact that any concept in Mathematics can be easily understood with the help of technology.

KEYWORDS : Attitude, ICT, Technology, Integration,

INTRODUCTION :

The individual's conceptions and self perceived relationship to mathematics are of primary importance in the formation of their learning and teaching behavior. Their relationship is linked to belief's about self – efficacy and was substantiated in numerous studies. For instance, Bandura(1986) considered self efficacy belief's as the strongest predictors of human motivation and behavior. These involve people's evaluation of their own competence to undertaken particular tasks and belief's about their capabilities. The most prominent technology motivated suggestions for change in content/process goals focus on decreasing attention to those aspects of mathematical work that are readily done by machines and increasing emphasis on the conceptual thinking and planning required in any tool environment In general attitudes, beliefs and emotions are the major descriptors of the affective domain in mathematics education.Communication is the backbone of education. It helps in exchanges of ideas between the teacher and students. The use of sensory aids in the teaching of mathematics is of recent origin. In fact all teaching has always involved

the communication of cleans through the reducing speech (or) visually by the use of written or printed material text books, writing aids, geometrical instruments and the black board have long been regarded as indispensable equipment from mathematic classes. Moreover it is perceived by a vast majority of people that mathematics is a dry and difficult subjects and full of abstract things. The result is that students take very little interest in it. To create the necessary interest is a constant problem for the teacher. This subject demands the use of aids in every step black board, models, filmstrips, flash cards.

REVIEW OF RELATED LITREATURE

Tholappan R.Krishnakumar (2010) conducted a study on attitude of teachers towards ICT. The researches adopted survey method for this investigation. Data was collected from 300 Government school teachers. Questionnaire in used as the tool. The findings reveal that the level of attitude of male teachers towards CAI was found to be higher than that of the female teacher.

Sumita Rao. K (2012) studied the attitudes of secondary school teachers towards teaching profession. The teacher occupies a unique place in the educational system. He is the pivot of the entire education process. So if teacher are to be efficient in their work they should have adequate profession information sound philosophy of work and positive attitude towards teaching as well as favorable attitude teacher the profession

Gouri Vijay Patil (2011) conducted a study teacher attitude towards ICT, by Secondary and higher secondary school teachers. In their research data were collected from 200 teachers of which 100 teachers from secondary level and 100 teachers from higher secondary level. Questionnaire is the tool used for their study revealed that the ICT attitude of teachers is more for secondary level teachers.

Prabhu (2013) conducted a study on attitude of teachers towards ICT. The researches adopted survey method for this investigation. Data was collected from 260 higher secondary school teachers. Questionnaire was used as the tool. The findings reveal that the levels of attitude of the higher secondary school female teachers are higher than the higher secondary school male teacher with respect to their attitude towards ICT.

Need and Significance of the Study

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavor within business and governance. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centered learning settings. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. The above discussion initiates the investigators to do the investigations from the topic of "Attitude towards ICT among Mathematics Teachers of Engineering Colleges".

Statement of the Problem

The problem selected for the study is stated as "Attitude of mathematics Teachers towards ICT in Engineering College at Pudukkottai District".

HYPOTHESIS OF THE STUDY

1.There is no significant difference in the attitude of male and female Engineering college mathematics teachers towards ICT.
2.There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based on educational Qualification.
3.There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based on experience.
4.There is no significant difference in the attitude of Enginnering college mathematics teachers based on the usage and access of computer use.
5.There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based on do you have a computer.
6.There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based where do you assess the computer.

METHODOLOGY OF THE PRESENT STUDY

As the present study is descriptive survey techniques was adopted 95 Engineering college Mathematics teachers were chosen as sample using simple random sampling technique. A questionnaire aimed at the usage of ICT for the purpose of collecting data. The collected data were subjected to descriptive analysis.

SELECTION OF THE TOOL

In the present research questionnaire was used as a tool for collection of data. The investigator prepared a questionnaire for the investigation by consulting the experts in the field of psychology and technology. The questionnaire includes 30 items data regarding the attitude of Mathematics teachers towards ICT.

SAMPLE OF THE STUDY

The present study aims to find out the problems of 95 Engineering College Mathematics teachers have been to form the sample of simple random sample technique.

STATISTICS USED IN THE STUDY

Questionnaire in used as tool for this study. The collected data were tabulated and analysed. Suitable statistical procedure like descriptive analysis and t-test were used in this study.

DIFFERENTIAL ANALYSIS

Hypothesis 1 : There is no significant difference in the attitude of male and female Engineering college mathematics teachers towards ICT.

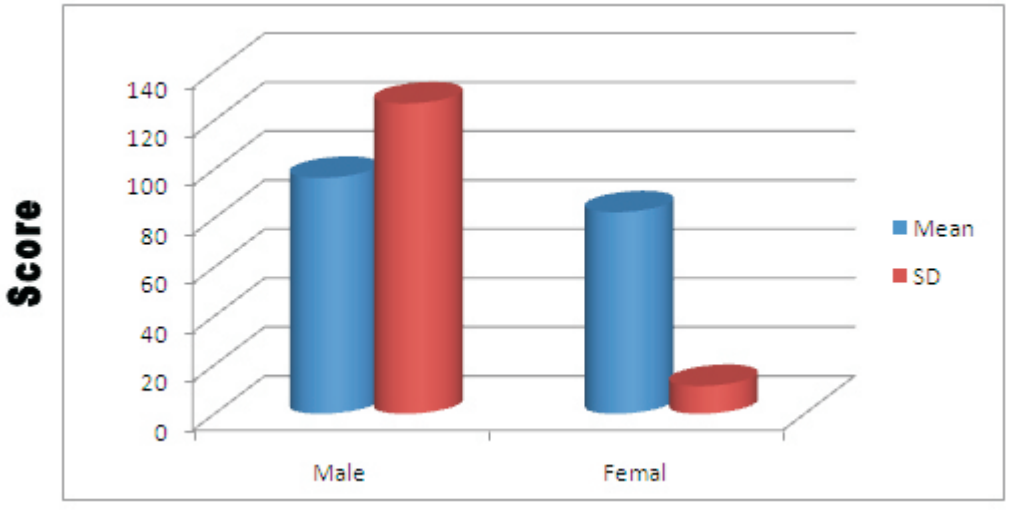
Table – 1

Table – 1 Shows Mean Score of usage of ICT by the Male and Female Engineering Colleges Mathematics Teachers.

Gender	N	Mean	S.D	t	Significance at 0.05 Level
Male	39	96.41	126.819	0.689	NS
Female	56	82.38	11.377		

The calculated "t" value is 0.689 which is not significant at 0.05 levels. It is understood from the result that there is no significant difference between The Mean scores the attitude of Mathematics Teachers towards ICT. Hence the Hypothesis is accepted.

Mean Score of usage of ICT by the Male and Female Engineering Colleges Mathematics Teachers



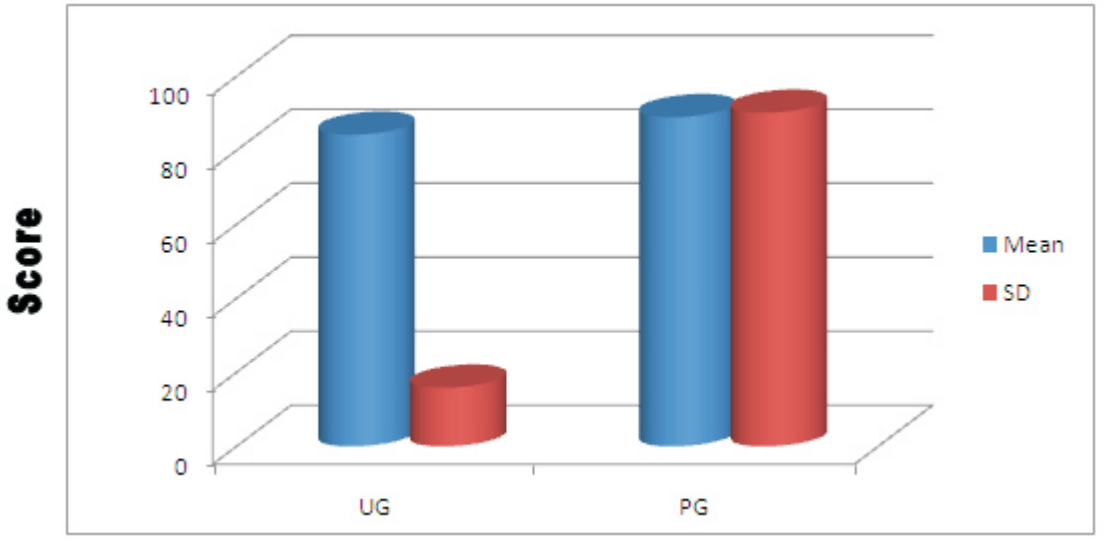
Hypothesis :2 There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based on educational Qualification.

Table –.2

Table-2 Shows Mean Score of usage of ICT by the U.G and P.G Engineering College Mathematics Teachers

Educational Qualification	N	Mean	S.D	t	Significance at 0.05 Level
U.G	18	84.56	15.851	0.403	NS
P.G	77	88.97	90.193		

Mean Score of usage of ICT by the U.G and P.G Engineering College Mathematics Teachers



The calculated "t" value is 0.403 which more than the table value. Hence it is not significant at 0.05 levels. It is understood from the result that there is no significant difference between the Mean scores on attitude of Mathematics Teachers towards ICT. Hence Hypothesis is accepted.

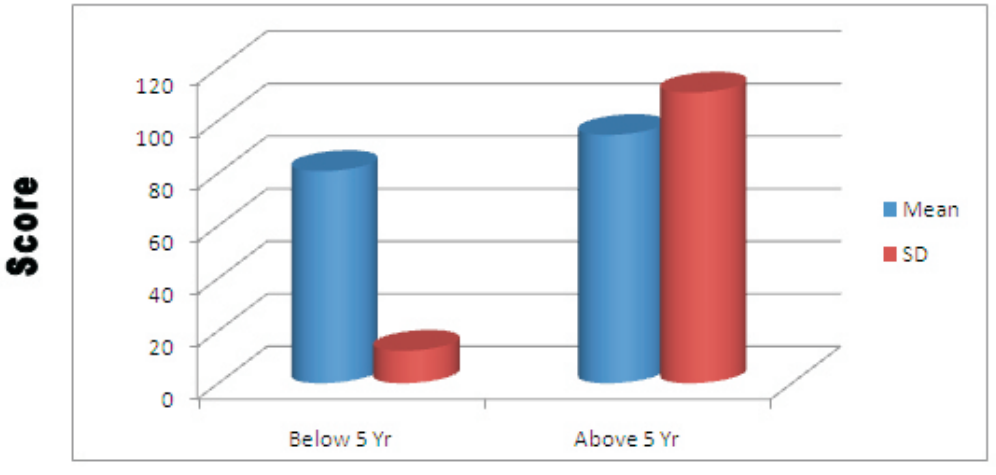
Hypothesis: 3 There is no significant difference in the attitude ofEnginnering college mathematics teachers towards ICT based on experience.

Table –3

Table-3 Shows Mean Score of Sufficient Knowledge for using ICT by the below and above 5 Years experience teachers.

Experience	N	Mean	S.D	t	Significance at 0.05 Level
Below 5 Year	44	80.75	12.367	0.882	NS
Above	51	94.51	110.613		

Mean Score of Sufficient Knowledge for using ICT by the below and above 5 Years experience teachers.



The calculated "t" value is 0.882 which is not significant at 0.05 levels. It is understood from the result that there is no significant difference between The Mean scores on attitude of Mathematics Teachers towards ICT. Hence the Hypothesis is accepted.

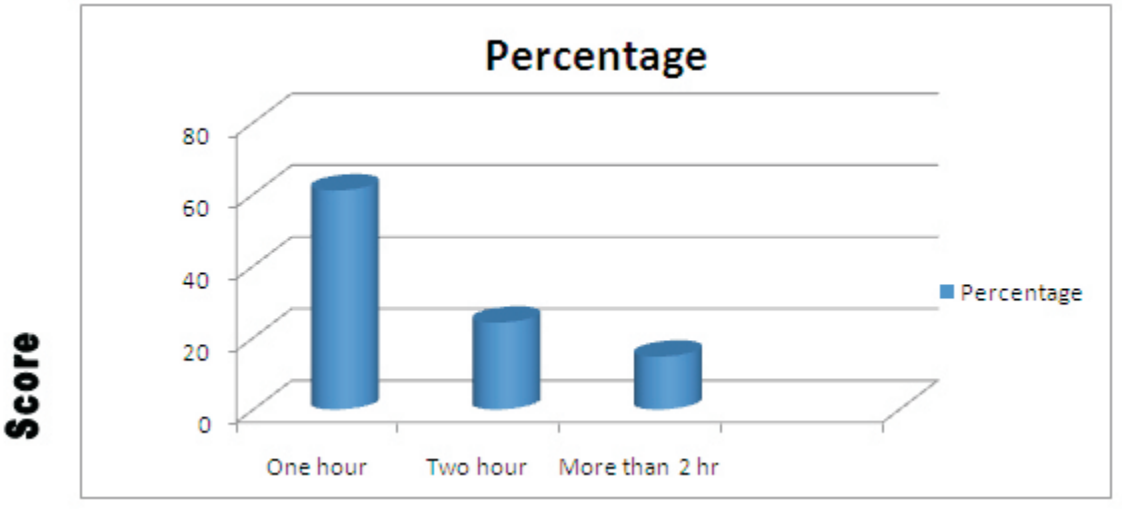
Hypothesis:4 There is no significant difference in the attitude of Enginnering college mathematics teachers based on the usage and access of computer

Table –4

Table - 4 shows that the Frequency of use of computer in percentage table.

Frequency of use per day	N	Percentage
One Hours	58	61.05
Two Hours	23	24.21
More than Two Hours	14	14.74

Frequency of use of computer in percentage table.



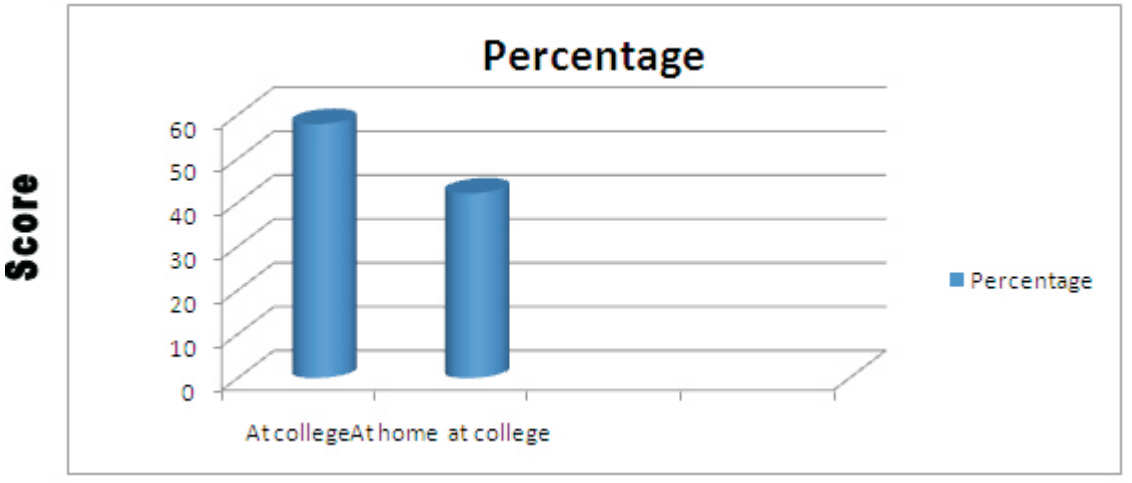
Hypothesis : 5 There is no significant difference in the attitude of Enginnering college mathematics teachers towards ICT based on do you have a computer

Table - 5

Table -5 Percentages of place accessing the computer

Place of assess of the computer	N	Percentage
At college	55	57.89
At home at college	40	42.11

Percentages of place accessing the computer



MAJOR FINDINGS OF THE STUDY

The major findings of the present study are listed as follows.

- The Engineering college mathematics teachers in Pudukkottai district have more favorable attitude towards ICT.
- There is no significant difference between the male and female Mathematics teachers attitude towards ICT.
- There is no significant difference between the UG and PG Mathematics teachers attitude towards ICT.
- There is no significant difference in the attitude of teachers who have working experience above 5yrs and below 5yrs teachers among Engineering Colleges Mathematics teachers are using technology.
- Engineering Colleges are utilizing computer for at two hours 14.74% Mathematics teachers of Engineering Colleges are utilizing computer for more than two hours.
- 100% teachers are having computer at home.
- 42.10% of Mathematics teachers of Engineering colleges are assessing the computer at home and college.

SUGGESTION FOR FURTHER RESEARCH

Following are the suggestions given by the investigator for future research in this area.

- The present study can be conducted with a large sample for the confirmation of findings.
- The present study may be extended to arts and science and College of education teachers.
- A comparative study can be carried out on the views of students and teachers towards ICT.

CONCLUSION

The present investigation is a unique study conducted in a developing country like India. This study found the Mathematics teachers attitude towards ICT. Through this study it is understood that Mathematics teachers have less ICT skills. But it is the fact that any concept in Mathematics can be easily understood with the help of technology. The present study definitely be an eye opener for the Mathematics teachers to become technology proficient teachers.

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