A Study on Perception of Graduate Teachers towards Computer Assisted Instruction in Eastern Province of Sri Lanka

A.M.Jazeel

Lecturer in English,
Government Teachers College,
Addalaichenai
Sri Lanka

Abstract

The technological advancement has offered a plethora of opportunities in educational practices. Pedagogical delivery of lessons in most of the universities in the world has got reshaped and absorbed Computer Assisted Instruction (CAI) as means of modern learning and teaching process. Nonetheless, most of the teachers in Sri Lanka, if not all, seem to be reluctant to capitalize on this effective instructional strategy of computer assisted instruction instead of the conventional method of teaching. The objectives of this study are to find out the extent of attitude of the teachers towards computer assisted instruction (CAI) and to test whether significant mean differences exist in sub groups based on gender, subjects studied in degree level, locality of residence, and knowledge of computer. A self-prepared tool of attitude scale was employed and administered among teachers. The comparisons of mean scores were made by using "t" test. The results revealed that the extent of attitude among university teachers is mediocre and the selected factors have differential influence in attitude towards computer assisted instruction.

Key words: Attitude, Computer Assisted Instruction, teachers

Introduction

The technological advancement has offered a plethora of opportunities in educational practices in the recent years. The education sector has attained a paradigm shift in it modalities of teaching learning process. The pedagogical delivery of lessons in most of the schools in the world has got reshaped and absorbed Computer Assisted Instruction (CAI) as means of modern learning and teaching process. Nonetheless, most of the teachers in Sri Lanka, if not all, seem to be reluctant to capitalize on this effective instructional strategy of computer assisted instruction instead of the conventional method of teaching since they have lack resources and awareness of the new inventions in the education sphere. With the invention of information technology, computers were used in education sector as means of delivering lesions in most of the schools in the world. Computer Assisted Instruction (CAI) is a program of instructional material presented by means of a computer or computer system. It can play the role of instructional tutor and learning aids in addition to assessment process.

Computer programs are interactive and can illustrate a concept through attractive animation, sound, and demonstration. They allow students to progress at their own pace and work individually or problem solve in a group. Computers provide immediate feedback, letting students know whether their answer is correct. If the answer is not correct, the program shows students how to correctly answer the question. Computers offer a different type of activity and a change of pace hi learning from teacher-led or group instruction. Computers capture the students' attention because the programs are interactive and engage the students' spirit of competitiveness to increase their scores. Also, computer-assisted instruction moves at the students' pace and usually does not move ahead until they have mastered the skill Programs provide differentiated lessons to challenge students who are at risk, average, or gifted.

It is a well known fact that almost not a single teacher is capable of ignoring the latest information in his own subject. Information Communication Technology provides a variety of avenues in the presentation of content. Computer Assisted Instruction (CAI), as one of the instructional methods helps learners to have good concentration, better understanding and long retention in their subject of learning. CAI also provides more flexibility to learners which are not given in the traditional methods and approaches. In short computer assisted instruction provides ample opportunity not only for the learners, but also for the teachers and educators.

In Sri Lanka, the teachers are encouraged to employ the information communication technology in the learning teaching process. Teachers in most of the schools have already been trained to use computers to deliver their subjects under several ICT programmes. Most of the schools have been provided computers, multi media projectors and internet facilities in order to motivate teachers to apply computer assisted instruction in the school learning set up. However, it is still unknown how far this projects have been implemented and how many teachers are aware of the new instructional methods.

In this backdrop, this study deals with the attitudes of teachers towards one of the instructional strategies namely CAI so as to make the required attitudes which will help them to implement the innovative teaching technology for their students in future successfully.

Statement of the problem

The re-statement of the problem is "A Study on Perception of Graduate Teachers towards Computer Aided Instruction in Eastern Province of Sri Lanka"

Objectives of the study

- To find out the level of the attitude of graduate teachers towards Computer Assisted Instruction in the eastern province of Sri Lanka
- To find out the following selected differential factors influencing the attitude of graduate teachers towards Computer Assisted Instruction.

o Male and females
o Residents in rural and urban background
o Subject studied in degree level
o Knowledge of computer

Hypotheses of the study

The following were hypotheses for the intended study.

- There is significant difference between the mean score of male teachers and female teachers towards inclusive education
- There is significant difference between the mean score of teachers residing in rural area and urban area towards Computer Assisted Instruction
- There is significant difference between the mean score of teachers with arts degree and teachers with science degree towards Computer Assisted Instruction
- There is significant difference between the mean score of teachers with computer knowledge and teachers without computer knowledge towards Computer Assisted Instruction

Method of the study

Participants

The targeted population of this study is all the graduate teachers serving in government school in Sri Lanka. However, the accessible population of the study is all the teachers working in the government schools in the eastern province of Sri Lanka. The study was conducted on a sample of graduate 300 teachers selected by using the stratified sampling technique with the strata as gender, locale, subjects studied in degree level, Knowledge of computer. The investigator adopted normative survey method for this study.

Instruments

1. **Attitude Scale:** The investigator developed an attitude scale which was standardized by experts opinion. The Scale consists of 25 items, out of which 18 items are positive and the remaining 7 items are negative. It uses a five point rating scale for the purpose of scoring. Numerical weightage was given to each of the five categories of response viz, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The reliability of the test has been established by the method of Cronbach Alpha, and the alpha coefficient obtained is 0.79 and that the scale is reasonably reliable and the scale have construct validity as it has theoretical assumptions.
2. **Personal Data Sheet:** The relevant information like gender, locality, subjects studied in degree level, Knowledge of computer , age were collected through a personal data sheet.

Results and Discussion

The mean score of obtained for the total sample is 98.85 with the standard deviation 8.95.When tested for significance it was found to be greater than the middle value of the attitude scale. The 99 percent confidence interval for the attitude towards Computer Assisted Instruction is (96.48, 99.19). Therefore it can be inferred that the population has mediocre level of attitude towards computer assisted instruction since the population mean is between 96.48 and 99.19.

As cab be seen from Table 1, it is clear that the t-value for the attitude of secondary grade teachers towards CAI in terms of gender is 11.565 which is significant at 0.01 level with df = 298. It shows that the attitude of male

and female secondary grade teachers differs significantly. Further, the mean value of the scores for the attitude of male teachers is 104.77 which is significantly higher than that for female teachers whose mean value is 92.87. It may therefore be said that the attitude of male teachers towards CAI was found to be higher than that of female teachers.

From Table 1, it is clear that the t-value for the attitude of secondary grade teachers towards CAI in terms of residential background is 18.859 which is significant at 0.01 level with df = 298. It indicates that the attitude of teachers belonging to rural and urban residential background differs significantly. Further, the mean value of the scores of the attitude of teachers belonging to urban areas is 105.67 which is significantly higher than that for teachers belonging to a rural background, whose mean value is 89.83. It may therefore be said that the attitude of teachers belonging to an urban background towards CAI was found to be higher than that of the teachers who belong to a rural background.

From Table: 1, it is evident that the t-value for attitude of secondary grade teachers towards CAI who studied a science subject is 17.517 which is significant at 0.01 level with df = 298. It implies that the attitude of arts and science teachers differs significantly. It may therefore be said that the attitude of teachers with a science discipline was found to be higher than that of the teachers with an art discipline. Also, it is found that the mean value of marks scored by the teachers with a science discipline is comparatively higher than that of the teachers with an art discipline.

From Table 1, it is clear that the t-value of the for scores for the attitude of secondary grade teachers with and without computer knowledge is 19.251 which is significant at 0.01 level with df-298. It shows that the attitude of teachers with and without computer knowledge differs significantly. Further, it indicates that the mean scores for the attitude of teachers with computer knowledge is 105.49 which is found to be higher than that of the teachers who are not having computer knowledge, whose mean score is 89.45. It may therefore be said that the attitude of secondary grade teachers towards CAI who are having knowledge of computer was found to be higher than that of the teachers who are not having computer knowledge.

From the analysis, this study reveals the following major findings:

* The level of the attitude of male teachers towards CAI was found to be higher than that of the female teachers.

* The level of the attitude of teachers who belong to an urban residential background was found to be higher than that of the teachers with a rural background.

* The level of the attitude of teachers belonging to science discipline was found to be higher than that of the teachers of arts discipline.

* The level of the attitude of teachers who are having computer knowledge was found to be higher than the teachers who are not having computer knowledge.

Conclusion

Teachers at different levels are trying to develop self instructional material according to the needs of the subject, and they are trying their level best to use the material in the

teaching learning process. Any innovative instructional strategy and its success depend on the knowledge and positive attitude of the teachers. The author suggests that steps should be taken to conduct in-service training and refresher courses by the respective bodies in the working environment of the teachers to develop a favourable attitude towards CAI as well as to provide hands on experience for teachers in computer. Train them to develop computer based instructional software of their own.

References

Benson, G M., (1996), Combining Computer Assisted Instruction and a live TV teacher to extend learning opportunities into the home, A Learning Productive Research and Developmental Project of the Research foundation of the State University of New York andInstructional System Inc. Albany, NY. (ERIC Doc. ED'359936)

Jazeel A.M., Saravanakumar. AR, and Subbiah. S (2012) "Efficacy of ICT-Assisted Learning Package in Teaching Writing Skills in English among B.Ed Students" International Journal of Scientific Research, 1 (6) 20 -24.

Jazeel, A.M. and Saravanakumar AR. (2015) Enhancing Writing Skills in English through ICT-Integrated Instructional Approach, *International Journal of Scientific Research*, Vol.04 (11) 77-79

Kumar. A, and Sarita, N, (2005), Increasing Role of Technology in Education, Isha Books, New Delhi.

Vanaja, M, (2006), Educational Technology and Computer Education, Neel Kamal Publications Pvt. Ltd., New Delhi.

Rajasekar, S.(2010) e-Resources for Teaching and Learning, Accessed at www.sekars.net

Yuen, P. K. (2003), e-Learning: Tools and Technology, DRTC.

Table 1

MEAN DIFFERENCE IN THE ATTITUDE OF SECONDARY GRADE TEACHERS TOWARDS CAI BASED ON THEIR GENDER, RESIDENCE, SUBJECT AND KNOWLEDGE OF COMPUTER.

SI No.	Factors	Sub-Factors	N	Mean	Standard Deviation	t-value	Remark
1	Gender	Male	143	104.77	9.6		
		Female	157	92.87	8.22	11.57	p<0.01
2	Residential Background					18.86	p<0.01
		Rural	135	89.83	7.12		
		Urban	165	105.67	7.32		
3	Subject studied in degree level					17.52	p<0.01
		Arts	138	90.3	7.46		
		Science	162	105.56	7.58		
4	Knowledge of computer	Yes	170	105.49	7.34	19.25	p < 0.01