



Attitude of Secondary School Teachers towards ICT Literacy and Its Implications in Classroom Teaching

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Abstract

Computers are increasingly widespread, influencing many aspects of our personal, work lives, as well as many of our leisure activities. As more tasks involve human-computer interaction, ICT skills and knowledge have become more positively correlated with both occupational and personal success. It is possible to acquire information through using ICTs and the Internet. Therefore, as we move into a technology based society, it is important that student's classroom experiences with technology be equitable and unbiased for males and females. In most cases, the teacher is key to effective implementation of the use of ICTs in the educational system and given that teachers have tremendous potential to transmit beliefs and values to students, it is important to understand the biases and stereotypes that teachers may hold about the use of ICTs and the factors that act as facilitators to teachers' positive ICT usage. Present study was conducted keeping in mind the objectives of comparing the attitude of government and private secondary school science and arts teachers belonging to urban and rural background towards use of ICTs in class-room teaching. The study was carried out on 500 secondary school teachers of rural and urban areas of Amritsar. The result revealed that there exists no significant difference in attitude of secondary school teachers belonging to urban and rural area towards use of ICT. Further results showed that there exists no significant difference in attitude of secondary school teachers towards ICT in classroom teaching.

Key Words:

ICT; Use of ICT; Secondary school teaching

Introduction

One of the common teaching methods that secondary school teachers prefer today is the lecture method. In this the teacher transmits knowledge to the students who sit passively in the classroom and listen. Another common method is the question-and-answer approach, which was developed in order to avoid the boredom caused by lecturers and to provide a more efficient learning environment. On the other hand, case studies allow the students to face the problems that occur in real life. They help to fill the gap between theory and practice through putting the previously learnt concepts and principles into use.

In contrast to the previously described methods, the teacher can use ICT at different times and places according to the characteristics of the subject matter, the students and the available software and hardware. ICT programs can be used for practice, revision, one-to-one instruction, problem solving, or simulations during the applications.

The successful and effective uses of ICT in classrooms depend on several factors; of which teacher acceptance is considered a major factor. Researches indicate that teachers are resistant to use ICT despite the fact that ICT are sufficiently available in their school guarantees the effective use of these technologies.

Rogers defines "the adoption process as the mental process through which an



individual passes from first hearing about an innovation to final adoption". The theory emphasizes the importance to attitudes toward innovation.

Factors that can affect attitudes towards ICT use in schools may include:

- Effects of gender
- Age
- ICT experience
- Computer literacy and
- Psychological factors such as locus of control and personality characteristics.

In this thesis, we emphasized on analyzing the attitude of Secondary School Teachers towards use of ICT in class room teaching. Teachers often view the ICT as a tool to accomplish housekeeping tasks, manage their students more efficiently, and to communicate with parents more easily. The success of student learning with ICT will depend largely on the attitudes of teachers, and their willingness to embrace the technology. Gaining an appreciation of the teachers' attitudes towards ICT use may provide useful insights into technology integration and acceptance and usage of technology in teaching and learning. Positive teacher attitudes towards computing are critical if ICT are to be effectively integrated into the school curriculum. Myers & Halpin (2002).

Objectives of the Study

The main objective of this study was to examine the attitude towards use of ICT among secondary school teachers. Since achieving excellence in schools, it is important to ensure that teachers must be able to integrate technology into the curriculum. The present study was conducted with the following objectives:

1. To study and compare the attitude of government and private secondary school teachers towards use of ICT in class-room teaching.

2. To study and compare the attitude of male and female secondary school teachers towards use of ICT in class-room teaching.
3. To study and compare the attitude of science and arts secondary school teachers towards use of ICT in class-room teaching.
4. To study and compare the attitude of rural and urban secondary school teachers towards use of ICT in class-room teaching.

Design

In the present investigation descriptive survey method was followed by the investigator. Data was collected on variables such as attitude towards ICT by male and female secondary school teachers of government and private schools.

Sample

For collection of relevant data, the sample will comprise 500 Secondary School Teachers (Male/Female) teaching in schools of Amritsar District.

Method and Procedure

In order to achieve the stipulated objectives data was collected from the sample of 500 secondary school teachers (Male/Female) teaching in schools of Amritsar district. In the present study Descriptive Survey Method of research was used. Self Framed Questionnaire has been selected as a tool of study. Relevant statistical techniques were employed in order to arrive at generalizations about the study.

Discussion of Results

For the achievement of objectives suitable statistical techniques such as Mean, Standard Deviation, Difference between Means and Standard Error of Difference

between Means were calculated for the variables under study. Thereafter, to test whether the difference between Means was significant or not, 't-test' was applied. The

results have been embodied in Table 4.1 and the Bar Diagram Fig: 4.1 also depict these values.

TABLE 4.1 Showing mean, standard deviation, difference between means, standard error of difference between means and t-value of government and private secondary school teachers' attitude towards use of ICT in class-room teaching.

| Group | Sample (N) | Mean (M) | Standard Deviation (σ) | Difference between Means (D) | Standard Error of Difference Between Means (σ_D) | t-value | Level Of Significance |
|--|------------|----------|---------------------------------|------------------------------|---|---------|-----------------------|
| Attitude of Government Secondary School Teachers | 100 | 157.25 | 5.86 | 0.12 | 0.80 | 0.15 | Insignificant |
| Attitude of Private Secondary School Teachers | 100 | 157.13 | 5.49 | | | | |

The results obtained after analysis in table can be graphically presented as in the figure below:

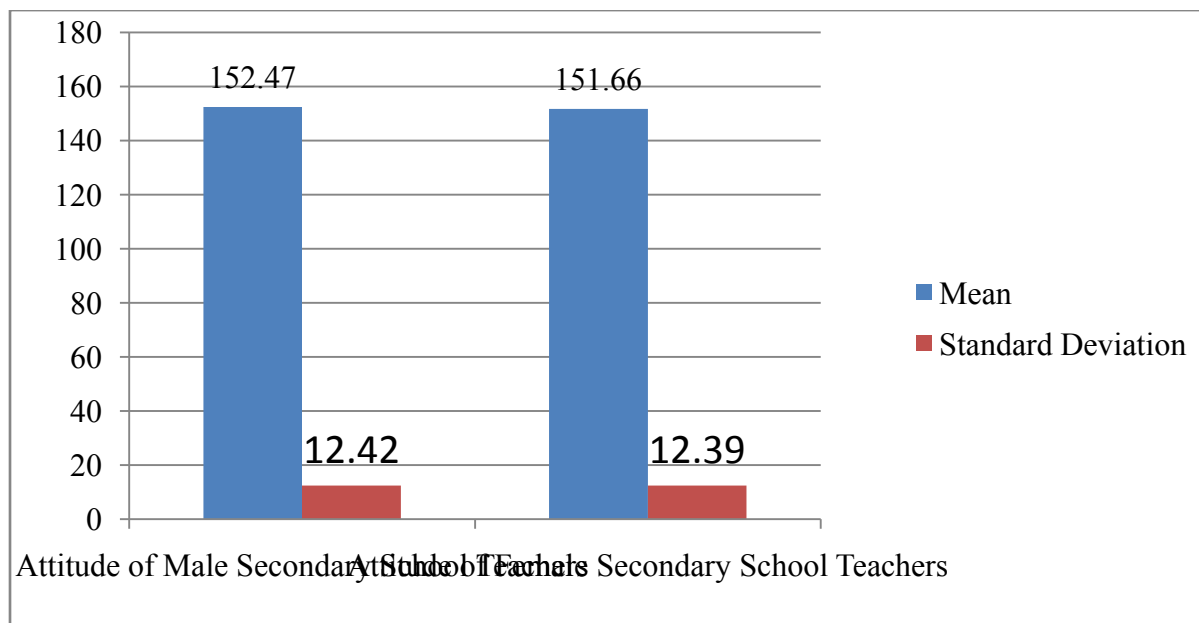


Figure 4.1 : Bar Diagram showing the Mean and Standard Deviation of Attitude Government and Private Secondary School Teachers Towards Use of ICT in Class-Room Teaching.

This implies that there is no significant difference in the attitude of government and private secondary school teachers towards use of ICT in class-room teaching. The insignificant result

may be attributed to the teachers of both the categories viz Government and Private Schools being equally aware of use of the ICT in class room teaching.

II. It was further analysed that whether gender differences affect the attitude of teachers towards use of ICT in classroom teaching. The results obtained after analysis has been given in table 4.2

TABLE 4.2 Showing mean S.D, , SED means and t-value of male and female secondary school teachers' attitude towards ICT in class-room teaching.

| Group | Sample (N) | Mean (M) | Standard Deviation (σ) | Difference between Means (D) | Std. Error of Diff b/w Means (σ_D) | t-value | Level of Significance |
|--|------------|----------|---------------------------------|------------------------------|---|---------|-----------------------|
| Attitude of Male Secondary school Teachers | 90 | 152.47 | 12.22 | 0.04 | 1.74 | 0.46 | Insignificant |
| Attitude of Female Secondary School Teachers | 110 | 151.66 | 12.39 | | | | |

The above results can be graphically presented as in the figure below:

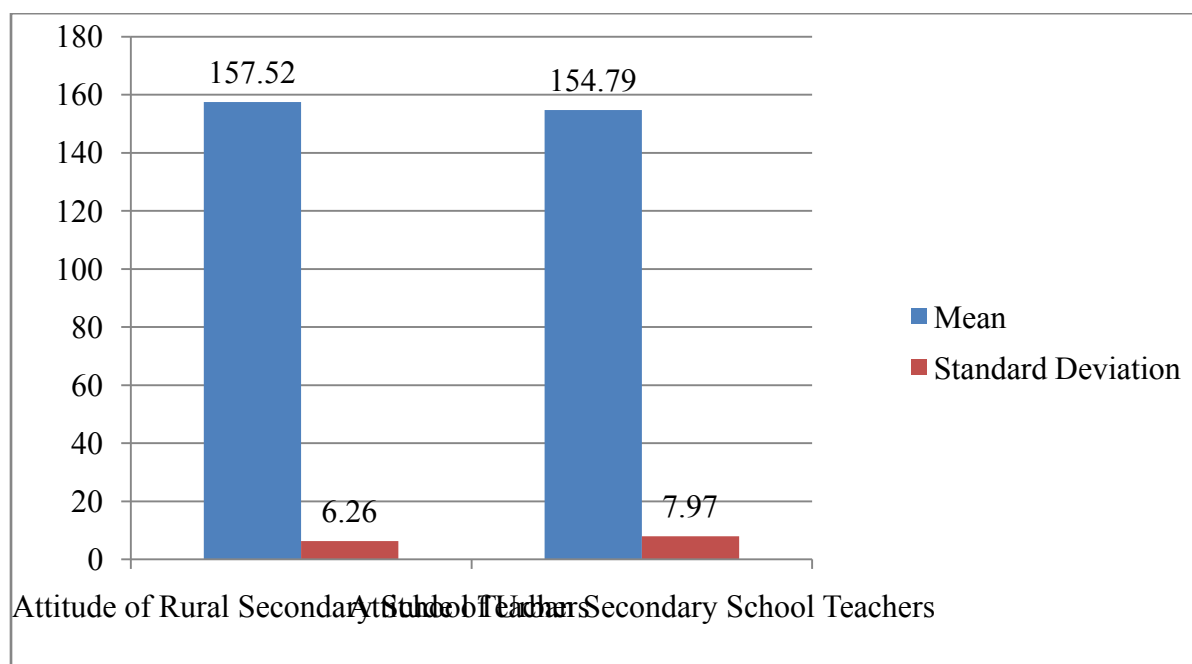


Figure 4.2 : Bar Diagram showing the Mean and Standard Deviation of Attitude of Male and Female Secondary School Teachers Towards Use of ICT in Class-Room Teaching

Discussion of Results

In the light of the analysis and interpretation of data following results were drawn:

1. There is no significant difference in the Attitude of Government and Private Secondary School Teachers Towards Use of ICT in Class-Room



Teaching as 't' value between mans of the two groups – Private and Government Secondary School Teachers came out to be 0.15 which is insignificant at 0.05 and 0.01 levels of significance.

2. There is no significant difference in the Attitude of Male and Female Secondary School Teachers Towards Use of ICT in Class-Room Teaching as 't' value between means of the two groups – Male and Female Secondary School Teachers came out to be 0.46 which is insignificant at 0.05 and 0.01 levels of significance.
3. There is no significant difference in the Attitude of Science and Arts Secondary School Teachers Towards Use of ICT in Class-Room Teaching as 't' value between Means of the two groups – Rural and Urban Secondary School Teachers came out to be 2.70 which is insignificant at 0.05 and 0.01 levels of significance.

References

- [1.] Akkoyunlu, B. (1998). Prospective Elementary Teachers' Attitudes towards ICT and Internet Use : A Sample from Turkey, world Applied Science Journal, 6(10) : 1433-1440.
- [2.] Akpinar, Y. (2005). Prospective Elementary Teachers' Attitudes towards ICT and Internet Use : A Sample from Turkey, world Applied Science Journal 6(10) : 1433-1440.
- [3.] Albirini, A.A. (2004). An exploration of the factors associated with the attitudes of high school EFL teachers in Syria toward information and communication technology. Unpublished thesis The Ohio State University.
- [4.] Allport G.W. (1935). Attitudes in C. Murchison (ed.), Handbook of Social Psychology. (Worcester, Mass, Clark University Press, p.810.
- [5.] Al-Zaidiyeen, N.; Mei, L. & Fook, F. (2008). In-service teachers' attitudes towards the use of information and communication technology in teaching practice: the case of Jordan. Conference IMETC2008 Kuantan Malasia.
- [6.] Angers, J. & Machtmes, K. (2005). An ethnographic-case study of beliefs, context factors, and practices of teachers integrating technology. The Qualitative Report, 10 (4), 771-794.
- [7.] Arici, N. & Dalkilic, E. (2006). Baki, A. (2002). Prospective Elementary Teachers' Attitudes towards ICT and Internet Use: A Sample from Turkey, world Applied Science Journal 6(10): 1433-1440.
- [8.] Adebowala, O.F. Adedwala, A.A. Bada T.A. (2009). Correlates of ICT attitude among secondary school students in Lagos state, Nigeria Internation Journal of Computing and ICT Research 3(2), 20-30. <http://www/ijcir.org/volume3-number2article3.pdf>. Retrieved on 6-5.11.
- [9.] Birisci, S.; Couskun, K; Yilmaz, G.K.; Metlin, M (2012), Developing an attitude scale towards using instructional technologies for preservice teachers. www.asclite.org.an/ajct/ajet24/tea.pdf. Retrieved on 6/5/14.
- [10.] Bannon, S.H.; Marshall, J.C. & Fluegal, S. (1985) "Cognitive and affective ICT attitude scale," Educational and Psychological Measurement, no. 45, pp. 679-681.



- [11.] Bartsch, R.A. & Cobern, K.M. (2003). Effective of Power Point presentations in lecturers. *Computers and Education* 41, 77-86.
- [12.] Becker, H.J. (1998). Internet Use by Teachers. (www.crito.uci.edu).
- [13.] Bogardus, (1931). Definition of Attitude, <http://www.Psych.umn.edu/course/spring06/borgide/Psy5202/image/attitude%20definitions.pdf>.
- [14.] Carlson, S. & Gadio, C.T. (2003). Teacher professional development in the use of technology. [Online]. *Technologies for Education*. Available: www.TechKnowLogia.org.
- [15.] Chanda, (2002). A study of Attitude of B.Ed Pupil – Teachers towards Teaching Unpublished M.Ed Thesis, G.N.D.U. Amritsar.
- [16.] Demirci, A. (2008). Evaluating the implementation and effectiveness of GIS-based application in secondary school geography lessons. *American Journal of Applied Sciences*, 5(3), 169-178.
- [17.] Demirli, C. & Dikici, A. (2003). Ogretimde Web Etkisi, Third International Education Technologies Symposium, Turkish Republic of Northern Cyprus.
- [18.] Deniz, L. (1994). "Bilgisayar tutum olcegi (BTO-M)' nin gecerlik, guvenirlik, norm calismasi ve ornek bir uygulama," [The Validity, Reliability and Norm Studies of ICT Attitude Scale-Marmara (CAS-M) and A Case Study]. Unpublished Ph.D. dissertation, Marmara University, Istanbul, Turkey.
- [19.] Deniz, L. (2001); Gonen & Kocakaya. (2005); Erkan, S. (2004). Prospective Elementary Teachers' Attitudes towards ICT and Internet Use: A Sample from Turkey, *World Applied Science Journal* 6(10): 1433-1440.
- [20.] Dickey, M.D. (2007). Game design and learning: A conjectural analysis of how massively multiple online role playing games (MMORPGs) foster intrinsic motivation. *Educational Technology Research and Development*, 55, 253-273.
- [21.] Dooley, K.E. (1999). Towards a holistic model for the diffusion of educational technologies: An integrative review of educational innovation studies. *Educational Technology & Society*, 2(4), http://www.ifets.info/journals/2_4/km_dooley.html.
- [22.] Dusick, D.M. (1999). "What social cognitive factors influence a faculty member's choice to use computers for teaching?," *Journal of Research on Computing in Education*, 31.(2), 2, 123-137.
- [23.] Eren. (2004)/; Siimek & Akgemci. (2003); Esgi & Baldkei. (2007); Keser. (1999). Prospective Elementary Teachers' Attitudes towards ICT and Internet Use: A Sample from Turkey, *World Applied Science Journal* 6(10): 1433-1440.
- [24.] Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Reading, MA: Addison-Wesley Publishing Company, Inc.