ATTITUDE OF PROSPECTIVE TEACHERS TOWARDS USE OF COMPUTERS IN EDUCATION IN RELATION TO THEIR CERTAIN DEMOGRAPHIC VARIABLES

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Abstract

The aim of this study is to examine the Attitude of Prospective Teachers towards use of computers in education. A sample of 150 Prospective Teachers was assessed for their Attitude towards use of computers in Education using a Likert type questionnaire. The results of this study showed that no significant differences were found with respect to gender, educational stream or type of institution. However, significant difference was found in attitude of Prospective Teachers towards use of computers in Education with respect to their residential background.

Keywords*: Attitude Towards Use of Computers, Prospective Teachers, Demographic Variables*

Computers are increasingly widespread, influencing many aspects of our social and work lives, as well as many of our leisure activities. As more tasks involve human computer interaction, computer skills and knowledge have become more positively correlated with both occupational and personal success. Therefore, as we move into a technology based society, it is important that children'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 computers 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 computers and the factors that act as facilitators to teachers' positive computer usage. Timothy Teo (2008) found that Pre-service Teachers had positive attitude towards use of computers and the results suggested that both male and females pre-service teachers at all ages were similar in their attitudes towards the computer.

ATTITUDE TOWARDS COMPUTERS

Attitude is one of the determining factors in predicting people's behavior. That is to say by understanding an individual's attitude towards something, one can predict with high precision the individual's overall pattern of behavior to the object (Ajzen and Fishbein, 1977: as cited in Yushau, 2006). Attitude has been defined as "a learned predisposition to respond positively or negatively to a specific object, situation, institution, or person" (Aiken, 2000: as cited in Yushau, 2006). Therefore, attitude affects people in everything they do and in fact reflects what they are, and hence a determining factor of people's behavior (Yushau, 2006). Computer attitude has been defined as a person's general evaluation or feeling of favour or antipathy toward computer technologies and specific computerrelated activities (Smith, Caputi and Rawstorne, 2000).

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Computer attitude evaluation usually encompasses statements that examine users' interaction with computer hardware, computer software, other persons relating to computers, and activities that involve computer use.

JUSTIFICATION OF THE STUDY

The success of any initiatives to implement technology in an educational program depends strongly upon the support and attitudes of teachers involved. It has been suggested that if teachers believed or perceived proposed computer programs as fulfilling neither their own or their students' needs, they are not likely to attempt to introduce technology into their teaching and learning. Among the factors that affect the successful use of computers in the classroom are teachers' attitudes towards computers (Huang & Liaw, 2005). In many developed countries, nearly all schools are equipped with the infrastructure to conduct ICT mediated teaching and learning. Positive teacher attitudes towards computing are critical if computers are to be effectively integrated into the school curriculum. A major reason for studying teachers' attitude towards computer use is that it is a major predictor for future computer use in the classroom (Myers & Halpin, 2002). In achieving excellence in schools, it is important to ensure that teachers are able to integrate technology into the curriculum. As such, the groundwork must be laid at the trainee or pre-service teacher's level. To do otherwise is to produce future teachers with underdeveloped skills in the use of technology. In the course of their training, pre-service teachers should be provided with the tools and experiences that will be useful for the regular activities in their future job: classroom instruction, research, and problem solving. Using technology enables pre-service teachers to arrange their environment and adjust their instructional strategies (Zhang & Espinosa, 1997). On the part of teacher educators, there is a need to understand the dimensions that influence pre-service teachers' attitudes towards computers as a means for effective development of teacher training curriculum that will prepare teachers to face the challenges in the information age (Fisher, 2000).

OBJECTIVES OF THE STUDY

1)   To compare the mean scores of Attitude of Prospective Teachers towards use of Computer in Education with respect to their Educational streams.

2)   To compare the mean scores of Attitude of Prospective Teachers towards use of Computer in Education in relation to Residential background.

3)   To compare the mean scores of Attitude of Prospective Teachers towards use of Computer in Education in relation to their Gender.

4)   To compare the mean scores of Attitude of Prospective Teachers towards use of Computer in Education in relation to their Type of Institution.

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HYPOTHESES:

$H_{01.1}$ There is no significant difference between mean scores of Attitude of Prospective Teachers of Arts and Science streams towards use of Computer in Education.

$H_{01.2}$ There is no significant difference between mean scores of Attitude of Prospective Teachers of Arts and Commerce streams towards use of Computer in Education.

$H_{1.3}$ There is no significant difference between mean scores of Attitude of Prospective Teachers of Science and C0mmerce streams towards use of Computer in Education.

H_{02} There is no significant difference between mean scores of Attitude of Prospective Teachers of Urban and Rural areas towards use of Computer in Education.

H_{03} There is no significant difference between mean scores of Attitude of Male and Female Prospective Teachers towards use of Computer in Education.

H_{04} There is no significant difference between mean scores of Attitude of Prospective Teachers of Govt.-Aided and Self-Financing Institutions towards use of Computer in Education

RESEARCH DESIGN

In the present study, descriptive survey method was used.

POPULATION AND SAMPLE

The population of the study was Prospective Teachers of B.Ed. course of Maharshi Dayanand University, Rohtak, Haryana. A sample of 100 Prospective Teachers was drawn by using simple random sampling technique.

TOOL USED

As no suitable standardized tool was available so Self developed Scale of Attitude Towards Use of Computers in Education was used for data collection.

STATISTICAL TECHNIQUES USED

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Mean, Standard Deviation and t-test were used for analysing the data.

ANALYSIS AND INTERPRETATION

Table - 1

Comparison of mean scores of Attitude of Prospective Teachers with Reference to their certain Demographic Variables

Variables	Categories	N	Mean	S.D.	t-value	Level of significance	Remarks
Educational Streams	Arts	70	26.10	3.88	0.156	0.05	Not Significant
	Science	70	26.22	3.82			
	Arts	70	24.44	3.68	.302	0.05	Not Significant
	Commerce	60	24.70	4.86			
	Science	70	22.04	3.29	.386	0.05	Not Significant
	Commerce	60	21.80	2.93			
Residential Background	Urban	100	24.03	3.10	2.185	0.05	Significant
	Rural	100	23.14	2.64			
Gender	Male	100	23.80	4.28	1.273	0.05	Not Significant
	Female	100	24.57	4.29			
Type of Institution	Govt. Aided	100	22.71	3.93	1.579	0.05	Not Significant
	SFS	100	21.92	3.09			

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Table -1 reveals that the mean scores of Attitude towards use of computers in Education of Prospective Teachers of Arts and Science streams are 26.10 and 26.22 and values of S.D. are 3.88 and 3.82 respectively. The calculated t-ratio between the mean scores is 0.156 which is not significant at 0.05 level of significance. Hence the null hypothesis $H_{01.1}$ "There is no significant difference between mean scores of Attitude of Prospective Teachers of Arts and Science streams towards use of Computer in Education" is not accepted.

From Table-1 it is inferred that the mean scores of Attitude towards use of computers in Education of Prospective Teachers of Arts and Commerce streams are 24.44 and 24.70 and values of S.D. are 3.68 and 4.86 respectively. The calculated t-ratio between the mean scores is 0.302 which is not significant at 0.05 level of significance. Hence the null hypothesis $H_{01.2}$ " There is no significant difference between mean scores of Attitude of Prospective Teachers of Arts and Commerce streams towards use of Computer in Education" is not accepted.

From Table-1 it is inferred that the mean scores of Attitude towards use of computers in Education of Prospective Teachers of Science and Commerce streams are 22.04 and 21.80 and values of S.D. are 3.29 and 2.93 respectively. The calculated t-ratio between the mean scores is 0.386 which is not significant at 0.05 level of significance. Hence the null hypothesis $H_{01.3}$ " There is no significant difference between mean scores of Attitude of Prospective Teachers of Science and Commerce streams towards use of Computer in Education" is not accepted.

Again From Table-1 it is inferred that the mean scores of Attitude of Prospective Teachers of Urban and Rural areas towards use of computers in Education are 24.03 and 23.14 and values of S.D. are 3.10 and 2.64 respectively. The calculated t-ratio between the mean scores is 2.185 which is significant at 0.05 level of significance. Hence the null hypothesis H_{02} "There is no significant difference between mean scores of Attitude of Prospective Teachers of Urban and Rural areas towards use of Computer in Education" is accepted.

Table -1 reveals that the mean scores of Attitude of Male and Female Prospective Teachers towards use of computers in Education are 23.80 and 24.57 and values of S.D. are 4.28 and 4.29 respectively. The calculated t-ratio between the mean scores is 1.273 which is not significant at 0.05 level of significance. Hence the null hypothesis H_{03} "There is no significant

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difference between mean scores of Attitude of Male and Female Prospective Teachers towards use of Computer in Education" is not accepted.

Again from Table-1 it is inferred that the mean scores of Attitude of Prospective Teachers of Govt.-Aided and Self-financing institutions towards use of computers in Education are 22.71 and 21.92 and values of S.D. are 3.93 and 3.09 respectively. The calculated t-ratio between the mean scores is 1.579 which is not significant at 0.05 level of significance. Hence the null hypothesis H_{04}. "There is no significant difference between mean scores of Attitude of Prospective Teachers of Govt.-Aided and Self-Financing Institutions towards use of Computer in Education" is accepted.

FINDINGS AND DISCUSSION

- No significant difference was found between mean scores of Attitude of Prospective Teachers towards use of computers in Education with respect to their educational streams. This finding supports the finding by Deepika Agarwal and Sona Ahuja(2013) who found that Prospective teachers do not differ in their Attitude towards use of ICT (computer) in Education.
- Significant difference was found between mean scores of Attitude of Prospective Teachers towards use of computer in Education with reference to their Residential background. Prospective Teachers of Urban areas have more positive attitude towards use of computers in Education than that of the Prospective Teachers of Rural areas. This finding contradicts the finding by N.Navaneethakrishnan (2014) who found that students of D.T.Ed. of Urban and Rural areas do not differ in their attitude towards computers .
- No significant difference was found between mean scores of Attitude of Prospective Teachers towards use of computers in Education with respect to their Gender. This finding supports the finding by Nishta Rana (2012),Gunamala Suri & Sneha & Sharma (2013) and N.Navaneethakrishnan (2014) who found that Prospective teachers do not differ in their Attitude towards use of ICT ,computer and technology in Education.
- No significant difference was found between mean scores of Attitude of Prospective Teachers towards use of computers in Education with respect to their type of institution.

EDUCATIONAL IMPLICATIONS

Computer now-a-days seems to be an inevitable part of the human life especially students life. Now, the learning process has been done through online, namely 'online learning'. Already the

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new generation students come across the e-learning, it is the learning process which helps the learner to know about the subject he wants to learn with the help of the latest technology, the computer. The students must know the way of learning from the computer. Future pedagogy depends mainly on three 'W's viz., wire or wireless (internet), windows and web. In future, the student community will call a modern professor as a wired, windowed and webbed professor. This statement emphasizes the importance of use of computers in education. There is a significant role of computers in society and schools.

Studying attitude towards use of computers in education among prospective teachers is critical for the successful implementation of computer and information technology in the classroom. Findings of such studies will determine the proper direction toward the success of technology incorporation in the classroom. Additionally the instilling of positive attitude toward computers will assist the nation to achieve its goal of an information literate society who is able to keep abreast with the latest technology development. In addition to this, students need a computer education to get efficient studies in order to get related knowledge. At these conclusions, by following new trends and tendency to use computers in order to help future success of students is necessary. By these reasons, teacher and student should accept that computer has a great influence on educational context.

CONCLUSION

The study points out to the fact that almost all of the Prospective Teachers were willing to use technology in education effectively as understood by their positive attitude towards computers. Having so many academicians in a positive attitude towards technology is a good thing for any institution and would be helpful in attaining effective integration of computers in the academic programme.The results showed that in general, almost all the Prospective teachers were in favor of using computers. This positive attitude is an important indicator of willingness and first step ineffective integration. As per the findings of present study, in the Prospective Teachers of Rural areas and Urban areas, significant difference was observed with respect to potential in the use of computers. Prospective Teachers of Rural areas scored lower than that of Prospective Teachers of Urban areas. However, gender, educational streams and type of institution are not determining factors in the attitude towards use of computers in Education. Teachers are change agents in schools. They are key drivers who play crucial roles in technology integration in the schools and classrooms. It is important for them to possess positive computer attitudes since attitudes has been found to be linked to usage and intention to use, variables that determine successful technology integration in education. In other words, computer attitudes, whether positive or negative, affect how teachers respond to technology in an instructional setting or learning environment. This in turn affects the way students react to computers in schools (Teo, 2008) and current and future computer usage. Despite the high level of technology in schools, the extent to which it is optimized depends on teachers having a positive attitude towards it (Huang & Liaw, 2005). This study suggests a need for teacher educators to provide a conducive and non-threatening environment for pre-service teachers to experience success in using the computers, with a view to allowing pre-service teachers to gain competence and confidence in using computers for teaching and learning.

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