INTERNATIONAL JOURNAL OF RESEARCHES IN SOCIAL SCIENCES AND INFORMATION STUDIES
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www.vmsindia.org

AN INVESTIGATION RELATED TO COMPUTER SELF-EFFICACY OF PRE-SERVICE TEACHERS

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Abstract:
In the age of globalization efficacy of computer application is essential for teachers. The present study was conducted to investigate the computer self-efficacy of pre-service teachers. The sample of 120 pre-service teachers(60 male+ 60 female) was drawn from the five Education Colleges in Amravati District of Maharashtra state by applying random sampling method. The computer self-efficacy scale developed by Askar and Umay was used as a tool for data collection. Mean, S.D.and 't' test were used to analyze the data. The results revealed that, more pre-service teachers (43.33%) have moderate level of computer self-efficacy. Both male & female Pre-service teachers are much similar in respect of their Computer self-efficacy. The computer self-efficacy of Pre-service teachers having some computer experience & lot of computer experience, some computer experience & no computer experience, lot of computer experience & no computer experience don't differ significantly. There was no significant difference exists between the computer self-efficacy of Arts & Science graduate, Arts graduate & post graduate, science graduate & post graduate Pre-service teachers. More over it was concluded that, the computer self-efficacy is not gender sensitive. Also the computer self-efficacy is not affected by computer experience & qualification.

Keywords- Globalization, self-efficacy, Pre-service teachers

Introduction

In the age of globalization, Indian education is highly advanced in all aspect. Due to Globalization, education is no longer constrained by national boundaries. Development in information technology has drastically changed the way how a student would take part in education system of the whole world. Therefore it is very essential to make students competent in the use of ICT. This technology is providing networks to students & teachers across the world. As education systems become remoulded by technological innovations, teachers in these institutions are faced with need to gain knowledge and skills to survive in this renewed environment (Erdem,2007).

Self-efficacy is a well known concept in psychological testing. According to Bandura(1994) self efficacy is people's beliefs about their capabilities to produce designated level of performance. Computer self-efficacy theory has been derived from Bandura's construct and used to provide a theoretical basis for understanding technology integration into instruction (Antonacci,2002). The concept of computer self-efficacy specifically refers to judgements made by an individual regarding his or her own capability to use computers for instruction(Faseyitah, Libii and Hirschbuhl, 1996, smith,2001) computer self-efficacy is an important personal trait that influences an individual's decision to use computers (compeau and Higgins,1995) Hasan (2003) noted that self-efficacy indicates a positive correlation with increased computer usage and also provides insights into learning performance and the ability to acquire new computer skills. Studies of computer self-efficacy (Compeau and Higgins 1995, Harrison and Rainer, 1997) demonstrated the impact that computer self-efficacy has on increasing performance and the technological innovation of employees, reducing computer induced anxiety, and promoting higher occupational positions. Hence in this study it is aimed to investigate the computer self-efficacy of pre-service teachers and compare it with reference to gender, computer experience & qualification.

Methodology

Sample -The sample of 120 pre-service teachers (60 male and 60 female) were selected randomly from five Education Colleges of Amravati District.

Tool-Computer self- efficacy scale developed by Askar and Umay (2001) was used to assess and analyze the computer self- efficacy of pre-service teachers.

Procedure -

The computer self- efficacy scale was administered on 120 male and female subjects and their responses were scored, tabulated and analyzed using appropriate statistical techniques.

Statistical Techniques used -

Mean, S.D. and 't' test were employed for analysis of data.

Results -

Table 1 Shows that out of the total 120 pre-service teachers 32 Pre-service teachers i.e. 26.67% have high level of computer self - efficacy, 52 Pre-service teachers i.e 43.33% have moderate level of computer self- efficacy and the rest 36 Pre-service teachers i.e. 30% have low level of computer self- efficacy.

Hypotheses 1 -There exists no significant gender difference in computer self- efficacy of pre-service teachers

Table 2 Shows that, at 118 of df, 0.05 level of Significance, the calculated "t" value is 0.38 which is less than the table value 1.98.

Therefore it was inferred that, there was no significant difference found in the computer self- efficacy of male of female pre-service teachers. The result shows that, both male and female pre-service teachers are much similar in respect of their computer self- efficacy.

Hypotheses -2 There exists no significant difference in computer self efficacy of Pre-service teachers based on their computer experience.

Table 3 Shows that, the mean computer self-efficacy of pre-service teachers with some computer experience and lot of computer experience do not differ significantly as the difference between mean values of two groups (0.30) is satistically not significant at 0.05 level of significance. Furthermore, the mean computer self-efficacy of pre-service teachers having some computer experience are compared with Pre-service teachers having no computer experience. The difference between mean values of two groups (0.96)is statistically not significant at 0.05 level of significance. This shows that, the computer self -efficacy of pre-service teachers having some computer experience and no computer experience don't differ significantly.

Another comparison of mean computer self- efficacy of pre-service teachers with lot of computer experience and no computer experience shows a mean difference of 1.12 which is not significant at 0.05 level of significance. This shows that the computer self-efficiency of pre-service teachers having lot of computer experience and no computer experience don't differ significantly. The result shows that, computer self efficacy is not affected by computer experience.

Hypotheses - 3 There exists no Significant difference in computer self- efficacy of Pre-service teachers based on their qualification

Table 4 Shows that, the mean computer self - efficacy difference (0.56) between Arts and science graduates is not significant at 0.05 level of significance. The result shows that, computer self- efficacy of Arts graduate and science graduate Per-service teachers do not differ significantly.

Another comparison of mean computer self-efficacy of Arts and post graduate Pre-service teachers shows a mean difference of 0.55 which is not significant at 0.05 level of significance. The result shows that computer self - efficacy of Arts graduate and post graduate pre-service teachers don't differ significantly. Furthermore, the mean computer self-efficacy difference (0.18) between science graduates and post graduate is not significant at 0.05 level of significance. The result shows that science graduate and post graduate pre-service teachers don't differ significantly in respect of their Computer self-efficacy

Discussion

As the result of the research it is stated that no significant difference exists between the computer self- efficacy of male and female pre-service teacher. The finding of the present study is not consistent with the finding of the studies conducted by cheong, pajares and oberman 2004 where they found in terms of computer self- efficacy, males on average have higher computer self- efficacy than females. Another's finding of the present study reveals that no significant difference between the computer self-efficacy of computer experienced and inexperienced pre-service teachers. The finding of the present study is incongruence with the findings of the study conducted by Hakverdi, Gucum, and Korkmaz (2007) where they found high correlation between computer experience and computer self-efficacy.

Conclusion

The ideal method for developing teachers self- efficacy for computer use would be to provide them with training and support to work successfully with computers. If anxiety is reduced and self- efficacy level is increased teachers will be benefited fully from their computer training and subsequently can be expected to increase their commitment to and use of computers in education. So pre-service teachers must be trained effectively about the use of computer, which will be fruitful in their professional life.

Acknowledgement

The author extend her heartiest gratitude to the principals, students of selected five Education colleges in Amravati District for extending their co-operation in providing the necessary information's and to the librarian for

providing books and to colleagues for help and inspiration.

Table -1

Computer Self efficacy Level	No. of Pre-service teacher	Percentage
High	32	26.67
Moderate	52	43.33
Low	36	30.00
Total	120	100.00

Table -2

Category	N	Mean	S.D	't' Value	Level of Significance
Male	60	64.53	13.09	0.38	0.05
Female	60	65.38	11.64		Not Significant

Table -3

Category	N	Mean	S.D	't' Value	Level of Significance 0.05
Some Experience	54	65.45	11.14	0.30	Not Significant
Lot of Experience	35	66.19	11.59		
Some Experience	54	65.45	11.14	0.96	Not Significant
No Experience	31	62.74	13.30		
Lot of Experience	35	66.19	11.59	1.12	Not Significant
No Experience	31	62.74	13.30		

Table 4

Category	**N**	**Mean**	**S.D**	**'t' Value**	**Level of Significance 0.05**
Arts Graduates	42	64.41	9.78	0.56	Not Significant
Science Graduates	31	65.96	12.92		
Arts Graduates	42	64.41	9.78	0.55	Not Significant
Post Graduates	47	65.71	12.38		
Science Graduates	31	65.96	12.92	0.18	Not Significant
Post Graduates	47	65.71	12.38		

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