Computer Attitude in relation to the Personal Values of Student- Teachers in Shillong

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Abstract: This study was conducted to find out the relationship between computer attitude of pre-service student-teachers with their personal values. Technology is the main support for the students learning development nowadays. Computers are the main technology support as a tool for effective learning and teaching process. Teachers play an important role in using technology to enhance the learning of children. In this present study the computer attitude of pre-service student-teachers was found out using Computer Attitude Scale (CAS-$_{KS}$) and for studying the personal values the Personal Values Questionnaire (PVQ-$_{SV}$) was used.

Keywords: Computer attitude, personal values and student-teachers

Introduction

The use of computer technology in schools has made rapidly and tremendous growth through governments generous funding, especially in the urban areas. The pervasive influence of computer technology has made significant changes to the concept of school. With the help of computer technology, students are now able to be more proactive in the learning process in order to achieve learning goals better. The information students gather can be individually processed, evaluated, analysed and critically examined.

Rationale of the study

Computer being one of the most frequently used technology. Recent survey has found that in comparison with the general public of the same age, teachers did not use computer technology to the same extent (Hylén, 2003). Furthermore, teachers had a more skeptical and reserved attitude towards computer technology. 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. It is therefore important to understand how and when teachers use computer technology in order to devise implementation strategies to encourage them. In support of the importance of teachers' attitude towards computer use, Zhao, Tan and Mishra (2001) provided evidence to suggest that the attitudes of teachers are directly related to computer use in the classroom.The success of student learning with computer technology will depend largely on the attitudes of teachers and their willingness to embrace the technology (Teo, 2006). In this way, prospective teachers become an important element in the education of students in the use of computers. Own value was found to be a significant effect for all perceived self-efficacy variables and perceived past success was a significant effect for only ability to offer help, ability to offer a challenge, and confidence (Kellenberger, 2014).

Statement of the problem

Based on the importance of information technology and communication in the classroom today there is a felt need to study the computer attitude of the prospective teachers. At the same time observing that personal value tremendously influences one's opinion and attitude it is necessary to study whether the computer attitude of the student-teachers is being influenced or not by their personal values. Thus the problem is stated as "Computer Attitude in relation to the Personal Values of Student- Teachers in Shillong."

Operational definition of the terms used

i. *Computer attitude*: Computer attitude has been defined as a person's general evaluation or feeling of favour or antipathy towards computer technologies and specific computer related activities (Smith et al., 2000).
ii. *Personal Values*: Personal values refer to the self desirable ends, goals, or modes of action which make human behaviour selective (Sherry & Verma, 2006).
iii. *Student-teachers*: It refers to those student teachers who are studying in the colleges of teacher education.

Objectives of the study

i. To study the computer attitude of student-teachers in Shillong.
ii. To study the personal values of student-teachers.

iii. To find out the difference in computer attitude between male and female student-teachers.
iv. To find out the difference in the personal values between male and female student-teachers.
v. To study the relationship between computer attitude and personal values of student-teachers.

Hypotheses

Ho1. There is no significant difference in computer attitude between male and female student-teachers.
Ho2. There is no significant difference in the personal values between male and female student-teachers.
Ho3. There is no significant relationship between computer attitude and personal values of student-teachers.
Ho4. There is no significant relationship between computer attitude and the different areas of personal values of student-teachers.

Delimitation of the study

  The study was delimited only to the colleges of teacher education located in Shillong and the second semester student teachers in the colleges of teacher education.

Methodology

i. Design of the study: Descriptive method was employed in the study.

ii. Population and Sample of the study: The population and sample of the study included all the second semester student teachers. The total population of the student teachers was 100. However, when the tool was collected it was found that some failed to return them and some did not respond to all the questions. Thus, removing the incomplete scales the total number of tools returned is 93.

iii. Tools used: The tools used in the study include:

1. Computer Attitude Scale (CAS-$_{KS}$) developed and standardized by Dr. (Mrs.) Tahira Khatoon and Manika Sharma (2011).
2. Personal Values Questionnaire (PVQ-$_{SV}$) developed and standardized by Dr. (Mrs) G.P. Sherry and Prof. R.P. Verma (2006).

Results of the study

1. To study the computer attitude of student-teachers

  In order to examine the first objective the data collected was analysed using descriptive statistics like percentage.

This is presented in Table 1.

Table 1: *Computer attitude of student-teachers in Shillong*

Range of Raw Score	Range of z-score	Frequency (f)	Percentage (%)	Grade	Level of Computer Attitude
95 and above	+2.01 and above	-	-	A	**Extremely High**
89 to 94	+1.26 to +2.00	-	-	B	**High**
82 to 88	+0.51 to +1.25	-	-	C	**Above Average**
73 to 81	-0.50 to +0.50	1	1.07%	D	**Average**
72 to 66	-0.51 to -1.25	15	16.13%	E	**Below Average**
65 to 59	-1.26 to -2.00	59	63.45%	F	**Low**
58 and below	-2.01 and below	18	19.35%	G	**Extremely Low**
Total		**93**	**100%**		

  From Table 1 it is indicated that only 1.07% of student teachers fall in the average level of computer attitude and 63.45% of student teachers fall in the low level of computer attitude which means that majority of student teachers have low level of computer attitude.

2. To study the personal values of student-teachers

  The personal values of the student-teachers was analysed by using percentages. This is shown in Table 2.

Table 2: *Personal values of student-teachers*

Values & Symbols	T-scores	Sten-scores	Frequency		Percentage		Interpretation
			Male	Female	Male	Female	
Religious value (A)	65 and above	9-10	1	8	4.54%	11.26%	Very High Value
	55-64	7-8	6	19	1.32%	26.70%	High Value
	46-54	5-6	12	30	2.64%	42.25%	Average value
	35-45	3-4	3	13	2.86%	18.309%	Low value
	34 and below	2-1		1	4.54%		Very low value
Social value (B)	65 and above	9-10					Very High Value
	55-64	7-8	2		9.09%		High Value
	46-54	5-6	5	8	22.72%	11.26%	Average value
	35-45	3-4	6	44	27.27%	61.97%	Low value
	34 and below	2-1	9	19	40.90%	26.76%	Very low value
Democratic value (C)	65 and above	9-10	5	6	22.72%	8.455%	Very High Value

Value	Age range	Score	Male	Female	Male %	Female %	Interpretation
	55-64	7-8	11	21	50%	29.57%	High Value
	46-54	5-6	5	33	22.72%	46.47%	Average value
	35-45	3-4	1	10	4.54%	14.08%	Low value
	34 and below	2-1		1			Very low value
Aesthetic value (D)	65 and above	9-10		4		5.63%	Very High Value
	55-64	7-8	5	11	22.72%	15.49%	High Value
	46-54	5-6	12	33	54.54%	46.475	Average value
	35-45	3-4	3	21	13.63%	29.57%	Low value
	34 and below	2-1	2	2			Very low value
Economic value (E)	65 and above	9-10	2	7	9.09%	9.85%	Very High Value
	55-64	7-8	12	33	54.54%	46.47	High Value
	46-54	5-6	7	28	31.81%	39.43%	Average value
	35-45	3-4	1	2	4.54%	2.81%	Low value
	34 and below	2-1		1		1.40%	Very low value
Knowledge value (F)	65 and above	9-10		1		1.40%	Very High Value
	55-64	7-8	1	4	4.54%	5.63%	High Value
	46-54	5-6	8	43	36.36%	60.56%	Average value
	35-45	3-4	10	17	45.45%	23.94%	Low value
	34 and below	2-1	3	6	13.63%	8.45%	Very low value
Hedonistic value (G)	65 and above	9-10	2	6	9.09%	8.45%	Very High Value
	55-64	7-8	8	46	36.36%	64.78%	High Value
	46-54	5-6	10	11	45.45%	15.49%	Average value
	35-45	3-4	2	8	9.09%	11.26%	Low value
	34 and below	2-1					Very low value
Power value (H)	65 and above	9-10	3	5	13.63%	7.04%	Very High Value
	55-64	7-8	8	10	36.36%	14.08%	High Value
	46-54	5-6	8	31	36.36%	43.66%	Average value
	35-45	3-4	3	23	13.63%	32.39%	Low value
	34 and below	2-1		2		2.81%	Very low value
Family prestige value (I)	65 and above	9-10		2		2.81%	Very High Value
	55-64	7-8	5	30	22.72%	42.25%	High Value
	46-54	5-6	10	29	45.45%	40.84%	Average value
	35-45	3-4	7	10	31.81%	14.08%	Low value
	34 and below	2-1					Very low value
Health values (J)	65 and above	9-10					Very High Value
	55-64	7-8		1		1.40%	High Value
	46-54	5-6	4	32	18.18%	45.07%	Average value
	35-45	3-4	17	33	77.27%	46.47%	Low value
	34 and below	2-1	1	5	4.54%	7.04%	Very low value

From Table 2 it is observed that male and female student teachers have average value in the area of religious value. In the area of social value both male and female student teachers have a low value. Male student teachers have very high value as compared to female student teachers in the area of democratic value. Both male and female student teachers have average value in the aesthetic value. Further, male and female student teachers have high value in the area of economic value. Both male and female student teachers have average value in the area of knowledge value. Male and female student teachers have high value in the area of hedonistic value. Male student teachers have high value in the area of power value as compared to female student teachers. Male and female student teachers have average value in the area of family prestige value. Lastly, male and female student teachers have low value in the area of health value.

3. To find out the difference in computer attitude between male and female student-teachers

In finding out the difference in computer attitude between male and female student-teachers both descriptive statistics and inferential statistics were used. The descriptive statistics of mean and standard deviation and the inferential statistics for testing the null hypothesis were employed.

Ho1. There is no significant difference in computer attitude between male and female student-teachers

In order to test the stated hypothesis that is the t-test was used. The t-value set at 0.05 level of significance with df=91 is 1.98. Table 3 represents the difference in computer attitude between male and female student-teachers.

Table 3: *Difference in computer attitude between male and female student-teachers*

Gender	N	Mean	SD	t-value	Interpretation
Male	22	62.40	5.170	0.792	Not significant
Female	71	61.53	4.305		

From Table 3 it is indicated that the mean score of male and female student teachers in computer attitude were found to be 62.40 and 61.53 and standard deviation is 5.170 and 4.305 respectively. It also shows that the t-value 0.792 is lower than the table t-value therefore it is not significant at 0.05 level. Hence, the stated hypothesis there is no significant difference in computer attitude between male and female student-teachers was accepted.

4. To find out the difference in the personal values between male and female student-teachers

In finding out the difference in the personal values between male and female student-teachers both descriptive statistics and inferential statistics were used. The descriptive statistics of mean and standard deviation and the inferential statistics for testing the null hypothesis were employed.

Ho2. There is no significant difference in the personal values between male and female student-teachers

In order to test the stated hypothesis that is the t-test was used. The t-value set at 0.05 level of significance with df=91 is 1.98. Table 4 represents the difference in the personal values between male and female student-teachers.

Table 4: *Difference in the personal values between male and female student-teachers*

Values	Gender	N	Mean	SD	df	t-value	Interpretation
Religious value	Male	22	13.59	2.71	91	0.0368	Not significant
	Female	71	13.61	3.33			
Social value	Male	22	12.09	3.46	91	1.396	Not significant
	Female	71	11.08	2.78			
Democratic value	Male	22	17.09	3.16	91	0.782	Not significant
	Female	71	16.46	3.311			
Aesthetic value	Male	22	11.77	2.82	91	1.163	Not significant
	Female	71	12.54	2.70			
Economic value	Male	22	11.13	2.96	91	1.215	Not significant
	Female	71	11.97	2.77			
Knowledge value	Male	22	12.95	2.62	91	1.425	Not significant
	Female	71	13.84	2.53			
Hedonistic value	Male	22	10.36	2.66	91	0.764	Not significant
	Female	71	10.91	3.04			
Power value	Male	22	8.86	3.07	91	1.986	Significant
	Female	71	7.35	3.13			
Family prestige value	Male	22	11.31	2.80	91	0.741	Not significant
	Female	71	11.83	2.84			
Health value	Male	22	10.81	1.89	91	0.667	Not significant
	Female	71	10.42	2.42			

From Table 4 it is indicated that from all the ten areas of personal values the t-value was not found to be significant since it is lower than the t-critical value therefore the stated hypothesis there is no significant difference in the personal values between male and female student-teachers was accepted. However except in only one area of personal values that is in power value the t-value was found to be significant which means that the stated hypothesis there is no significant difference in the personal value between male and female student-teachers was rejected.

5. To study the relationship between computer attitude and personal values of student-teachers.

In order to find out the relationship between computer attitude and personal value of student-teachers the data collected was analysed using Pearson Correlation.

Ho3. There is no significant relationship between computer attitude and personal values of student-teachers.

In order to test the stated hypothesis Pearson r was used, with df=91, table r-value was set at .05 level of significance=0.2050 and at .01 level of significance=0.2673. This is presented in Table 5.

Table 5: *Relationship between computer attitude and personal values of student-teachers*

Variables	N	df	r	Interpretation
Computer Attitude	93	91	-0.1358	Not significant
Personal Values				

From the above Table 5 it can be observed that the calculated r-value is -0.1358 is lower than the table r-value at .05 and .01 level of significance and also shows that there is a negative correlation. Therefore the stated hypothesis there is no significant relationship between computer attitude and personal values of student-teachers was accepted.

Ho4. There is no significant relationship between computer attitude and the different areas of personal values of student-teachers.

In order to test the stated hypothesis Pearson r was used, with df=91, table r-value was set at .05 level of significance=0.2050 and at .01 level of significance=0.2673. This is presented in Table 6.

Table 6: *Relationship between computer attitude and the areas of personal values of student-teachers*

CAS and Areas of Personal Values	N	df	r	Interpretation
CAS Religious value	93	91	0.026	Not significant
CAS Social value	93	91	0.128	Not significant
CAS Democratic value	93	91	-0.165	Not significant
CAS Aesthetic value	93	91	0.181	Not significant
CAS Economic value	93	91	-0.101	Not significant
CAS Knowledge value	93	91	-0.078	Not significant
CAS Hedonistic value	93	91	-0.049	Not significant
CAS Power value	93	91	-0.024	Not significant
CAS Family prestige value	93	91	-0.005	Not significant
CAS Health value	93	91	0.080	Not significant

From the above Table 6 it shows that the calculated r-value in all the areas of personal values was not found to be significant. It was also found that the r-value in all the areas are lower than the table r-value. Therefore the stated hypothesis that there is no significant relationship between computer attitude and the different areas of personal values of student-teachers was accepted.

Conclusion

The present study has attempted to investigate the computer attitude in relation to the personal values of student teachers. The study revealed that there is no significant relationship between computer attitude and personal values of student teachers. This indicates that the computer attitude of the student teachers which is low is not influence by their personal values.

References

Hyle´n J. (2003) IT i skolan – en internationellja¨mfo¨relse.Stiftelsenfo¨rKunskaps- ochKompetensutveckling. InW. W. K. Ma, R. Andersson, & K. O. Streith, (2005). Examining user acceptance of computer technology: an empirical study of student teachers.*Journal of Computer Assisted Learning,* 21, 387–395. Retrieved from http://www.streith.se/dok/JCAL_145.pdf

Kellenberger, D. W. (2014).Preservice teachers' perceived computer self-efficacy based on achievement and value beliefs within a motivational framework. *Journal of Research on Computing in Education, 29* (2), 124-140.doi.org/10.1080/08886504.1996.10782190

Khatoon, T., & Sharma, M. (2011).*Computer attitude scale CAS-$_{KS}$.* H.P. Bhargava Book House KacheriGhat, Agra:282004.

Sherry, G.P. & Verma, R.P. (2006).*Personal values questionnaire PVQ-$_{SV}$.* National Psychological Corporation KacheriGhat, Agra: 282004.

Teo, T. (2006). Attitudes toward computers: A study of post-secondary students in Singapore. *Interactive Learning Environments, 14* (1), 17-24.

Teo, T. (2008). Pre-service teachers' attitudes towards computer use: A Singapore survey. *Australasian Journal of Educational Technology, 24* (4), 413-424.

Teo, T., Lee, C. B., & Chai, C. S. (2007). Understanding pre-service teachers' computer attitudes: applying and extending the technology acceptance model. *Journal of Computer Assisted Learning, 24* (2), 128–143. doi: 10.1111/j.1365-2729.2007.00247.x

Zhao, Y., Tan, H. S., & Mishra, P. (2001). Teaching and learning: Whose computer is it? Journal of Adolescent & Adult Literacy, 44 (4), 348-354.