

An analysis of Teacher Trainees' Attitude towards ICT in Education and their Perception of Computer Attributes in Mizoram

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ABSTRACT

Teacher training is an important activity as the result affects the quality of teaching. Quality teaching has the ability to change the whole nation in a positive way. With the advent of computers and allied technology, there is even more opportunity for teacher education to grow and improve. But in order to make use of this technology, teachers themselves have to be acquainted with and be able to deal with it. The present study was undertaken so as to find out the extent of teacher trainees' understanding of digital technology. For this, two teacher training institutes were selected, Aizawl and Sechhip DIETS to be exact. It was found that teacher trainees had a rather low competence towards technology. It was also found that those who had low competence also had a negative attitude towards technology.

Keywords: ICT, Teacher trainees, DIET, digital, technology, competence.

Teacher education deserves to be a priority where the introduction of new technology is concerned. Especially at the elementary stage, ICT can be incorporated with teaching in order to bring about a number of desired changes in the teaching learning process. But not all innovations are appreciated by teachers if he/she does not know how to make use of it. As rightly stated by the National Curriculum Framework (NCF) 2005, 'Teacher Education needs to orient and sensitize the teacher to distinguish between critically useful, developmentally appropriate and the detrimental use of ICT. In a way, ICT can be imaginatively drawn upon for

professional development and academic support of the pre-service and in-service teacher'. Therefore, in order to make teachers a part of new technological improvements, teachers need to be provided with the right kind of environment along with a proper supply of equipment to empower them as teachers.

Rationale

Although there are a number of benefits of ICT, there is no guarantee that all teachers will make good use. This could be because of a number of reasons. Therefore, the investigators thought it would be a worthwhile endeavour to study the

attitude of elementary teacher trainees towards ICT based on their knowledge of computer attributes in the hope that the results yielded would enable educational administrators and even teachers themselves to make necessary adjustments for the betterment of the teaching profession.

Delimitation

Although it would have been ideal to study all the DIETS in Mizoram, the present study has been confined to DIETS Aizawl and Serchhip because it was only in these two DIETS that computer education was introduced at the time this study was done.

Objectives

- ⊙ To prepare a brief profile of teacher trainees of the academic year 2015-2016.
- ⊙ To study the attitude of teacher trainees towards ICT.
- ⊙ To find out Teacher Trainees' Perceptions of Computer Attributes.
- ⊙ To calculate Teacher Trainees' Computer Competence.
- ⊙ To analyse the relationship between Teacher Trainees' Attitude towards ICT in Education and their Perception of Computer Attributes.

Methodology

The present study has followed the descriptive research design using survey as the main method of data collection.

The population comprised of 255 elementary school teacher trainees who enrolled themselves for computer courses along with their regular training

course at the time this study was done.

Sampling was done by means of stratified random sampling so as to ensure equal representation of both DIETS i.e. Aizawl and Serchhip districts. Table A clearly denotes how sampling was done.

The main tool for the present study was 'Attitude Scale towards Information and Communication Technology (ICT) in education' developed by Prof. Abdulkafi Albirini (2004), Ohio State University, USA.

Primary data was collected by means of questionnaire distributed to the sample teacher trainees in their own institutions.

Data analysis was done by means of descriptive statistics like percentages. Mean, standard deviation and correlation have also been applied where applicable.

Analysis and Interpretation of data

Brief Profile of Teacher Trainees' during the academic year 2015-2016

The total sample population (n) consist of 128 teacher trainees in District Institute of Education and Training (DIET), Mizoram, out of this 64.06% (n = 82) were male, 35.94% (n = 46) were female. Majority of the respondents (83.59%, n = 107) did not receive any kind of training on computer.

Teacher Trainees' Attitudes towards ICT in Education

Participants were asked to respond to 20 Likert-type statements dealing with their attitudes toward ICT in education. Table 2 shows the mean scores on the attitude of teacher trainees towards ICT.

Table A: Population and Sample of the present study

Name of the institution	Number of teacher trainees (population)			Number of teacher trainees (sample=50% of the population)		
	Male	Female	Total	Male	Female	Total
DIET Aizawl	126	80	206	63	40	103
DIET Serchhip	38	11	49	19	6	25
Total	164	91	255	82	46	128

Table 1: Teacher Trainees' characteristics in the present study

Variable / Characteristics	Category	Frequency	Percent
Gender	Male	82	64.06
	Female	46	35.94
Age	20-29	33	25.78
	30-39	74	57.81
	40-49	19	14.84
	>=50	2	1.56
	1-5 Years	73	57.03
Experience	6-10 Years	43	33.59
	11-15 Years	8	6.25
	16-20 Years	0	0.00
	>=20 Years	4	3.13
Training Course	Yes	21	16.41
	No	107	83.59
Certificate, Diploma, etc.	Yes	28	21.88
	No	100	78.13

Table 2: Distribution of Mean Scores on the Attitude toward ICT Scale

Scale	Percent (%)					Mean	S.D.
	Highly Negative	Negative	Neutral	Positive	Highly Positive		
Affective	2.60	6.38	8.07	62.37	20.57	3.07	0.36
Cognitive	1.82	9.64	15.19	55.47	17.88	3.09	0.32
Behaviour	2.03	15.00	11.41	51.72	19.84	2.96	0.40
Overall Attitude	2.11	10.00	12.11	56.60	19.18	3.05	0.24

Analyses of the above data reveal that the overall mean score on the attitude was 3.05 with Standard Deviation of 0.24. In general, the attitude of teacher trainees was positive towards ICT.

Teacher Trainees' Perceptions of Computer Attributes

Participants were asked to respond to 18 Likert-type statements dealing with their perceptions about computer attributes. In general, teacher trainees' perceptions of computers' attributes were positive with an overall mean score of 3.11 and a standard deviation of 0.21 as shown in Table 3.

Teacher Trainees' Computer Competence

Respondents were asked 15 statements that

correspond to their own perception of their level of computer competence. On an average, respondents have somewhat low competence in using computers. The overall mean score of teachers trainees' responses on the Computer Competence was 2.31 (S.D. = 0.76) as shown in Table 4.

Relationship between Teacher Trainees' Attitude towards ICT in Education and their Perception of Computer Attributes

Pearson Product Moment correlation was used to represent the relationships between the variables measured. The correlation matrix contains the dependent variable (attitudes) and the independent variable (computer attribute). They were found

Table 3: Distribution of Mean Scores on the Computer Attributes Scale

Scale	Percent (%)					Mean	S.D.
	Highly Negative	Negative	Neutral	Positive	Highly Positive		
Relative Advantage	0.78	5.00	13.75	65.78	14.69	3.25	0.29
Compatibility	0.94	18.28	20.63	53.91	6.25	3.22	0.35
Complexity	0.00	27.93	18.36	48.63	5.08	3.01	0.43
Observability	0.20	8.40	8.98	61.33	21.09	2.89	0.40
Overall Attribute	0.52	14.54	15.63	57.68	11.63	3.11	0.21

Table 4: Distribution of Mean Scores on the Computer Competence Scale

Scale	Percent (%)				Mean	S.D.
	No Competence	Little Competence	Moderate Competence	Much Competence		
Computer Competence	28.91	26.82	28.65	15.63	2.31	0.76

Table 5: Correlation table of Teacher Trainees' attitude towards ICT in education and their computer attribute

		Attitude	Attribute
Attitude	r	1	.207**
	N	128	128
Attribute	r	.207**	1
	N	128	128

to show a low yet positive relationship between teacher trainees' attitude towards ICT and teacher trainees' perception of their computer attributes ($r = 0.21$)

Relationship between Teacher Trainees' Attitude towards ICT in Education and their Computer Competence

Pearson Product Moment correlation was used to represent the relationships between the variables measured. An analysis of the correlation between teacher trainees' attitude towards ICT and their computer competence (Table 6) shows that there is a negative relationship ($r = -0.138$) indicating that teachers with low level of computer competence tend to have negative attitudes toward computers

Table 6: Correlation between teacher trainees' attitude towards ICT and computer competence

		Attitude	Competency
Attitude	R	1	-0.138
	N	128	128
Competency	R	-0.138	1
	N	128	128

CONCLUSION

The introduction of new technology in India is not very recent. It was in the year 1975 that India began to incorporate technology in teaching with the introduction of satellite communication. Yet there was still mixed feelings among the teacher trainees as far as ICT was concerned. This shows

that in light of the present campaign of the Indian government to make India a digital nation, there is still a lot of preparations needed where teachers are concerned. With the right direction, there is a hope that digital India will slowly but surely make teaching an enjoyable and worthwhile task instead of a burden as perceived by many teachers and students alike.

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