MIER Journal of Educational Studies, Trends & Practices
May 2017, Vol. 7, No. 1 pp. 95-106

ATTITUDE OF TEACHER TRAINEES TOWARDS LEARNING THROUGH POWERPOINT: A CASE STUDY

MoolRaj and Kawal Preet Kour

Educational technology and its use in Education are increasing day by day. It has completely changed our mode of teaching and learning. Use of computer assisted teaching, audio visual aids, PowerPoint presentations etc. have found their place in every institution of the world. Most of the teachers believe that use of Power Point in the teacher training colleges has made the teaching-learning process more interactive and dynamic. This paper is based upon a study conducted to know the attitudes of teacher trainees towards PowerPoint presentations and its use in a teaching -learning context. A questionnaire on attitude towards Power Point was prepared by the investigators and administered to a sample of 200 teacher trainees in Jammu. It was found that teaching through PowerPoint enabled classrooms to be interesting and motivating for both teachers and learners. However, no significant differences were found to exist between scores obtained on attitudes towards PowerPoint on the basis of gender, residential background, computer training and teaching subjects respectively. Nevertheless, teacher trainees exhibited favourable and positive attitude towards the use of PowerPoint for teaching at the B.Ed. level.

KEYWORDS: PowerPoint, Attitudes, Teacher Trainees

INTRODUCTION

Past two decades have witnessed a phenomenal growth in the development and application of information technology. Nothing has been left behind from the influence of information technology. Computers provide motivation to the student to continue learning. Learning is a process in which an activity originates due to encountered situations thereby bringing a change in

Mool Raj Sharma ✉
Assistant Professor, MIER College of Education (Autonomous), Jammu, India
Email:moolraj.sharma@miercollege.in

Kawal Preet Kour
Research Scholar, MIER College of Education (Autonomous), Jammu, India
Email: kewalpreetkour@gmail.com

behaviour, provided that this change may not be explained on the basis of native response tendencies, maturation, and effect of fatigue, drugs, accidents or other temporary states of the organism. Learning is not acquiring knowledge or skill by mere mechanical repetitions. It is a process in which the learner organizes different elements and experiences to reach a particular goal. Learning is change in a living individual which is not heralded by genetic inheritance. It is a process in which the learner organizes different elements and experiences to reach a particular goal. It is an organization of behaviour; it is the activity by virtue of which we organize our responses with new habits. Learning has been facilitated through many methodologies like lecturing, demonstration practical work and these days through PowerPoint presentations (PPT's) etc. Studies are being carried out to know about these methodologies from time to time and necessary changes are being made for the betterment of the educational system.

On the other hand, attitude is an important concept to understand human behaviour. An attitude is a point of view that someone holds towards an idea or objects in his/her everyday life. It is defined as a complex mental state involving beliefs and feeling. Anyone can develop positive or negative attitudes towards the object or idea. In any case, to do a given task effectively there is need to have positive attitudes toward it. Attitude plays a key role in achieving successful social interaction among teachers and students and wins their attention in favour of the required educational modality. Anastasi (1957) defines attitude as a tendency to react in a certain way towards a designed class of stimuli.

Since PPT's are being used by teacher educators to make their lectures and other techniques of teaching interesting so studies are being conducted to study the impact and use of these kinds of technologies in educational settings. One such area of interest is learning through PPT. It would be, therefore, useful to know about the attitudes of learners and especially those of teacher trainees since they are the one for whom these developments are being made in educational systems. Knowledge of attitudes of teacher trainees towards PowerPoint may be helpful towards improvement of educational system in colleges/institutions and teacher education system can draw some guidelines for using this strategy effectively.

Need and Significance of the Study

Attitudes are an organization of beliefs, habits and motives associated with a particular object. It is generally believed that attitudes of teacher trainee towards learning through Power Point presentation play a vital role in their educational development. Teacher trainee's favourable attitudes towards learning through Power Point may promote creative potentiality of students while unfavourable ones may demote it. Teaching as a profession demands a

clear set of goals, love for profession, good interpersonal and intra-personal skills and obviously latest technology skills. PowerPoint presentations may be one of the skills for promoting technological and pedagogical knowledge. But use of these skills required to be researched well also which seems to be important in this changing world. Once found to be significant, favourable attitudes towards teaching through technology may take prospective teachers one step ahead in the development of technological skills.

OBJECTIVES OF THE STUDY

The following objectives were framed for conducting the present study:

1. To find general trends in the attitudes of teacher trainees towards learning through Power Point.
2. To find significant differences in the attitudes of teacher trainees towards learning through Power Point with respect to their gender.
3 To find significant differences in the attitude of teacher trainees towards learning through Power Point with respect to their residential background.
4) To find significant differences in the attitude of teacher trainees towards learning through Power Point with respect to their teaching subjects.
5) To find significant differences in the attitude of teacher trainees towards learning through Power Point with respect to their computer training.

HYPOTHESES OF THE STUDY

The following hypotheses were proposed for conducting the present study:

1. Teacher trainees have positive attitude towards learning through Power Point.
2. There is no significant difference in the attitude of teacher trainees towards learning through Power Point with respect to their gender.
3. There is no significant difference in the attitude of teacher trainees towards learning through Power Point in relation to their residential background.
4. There is no significant difference in the attitude of teacher trainees towards learning through Power Point with respect to their teaching subjects.
5. There is no significant difference in the attitude of teacher trainees towards learning through Power Point with respect to their computer training.

METHODOLOGY AND DESIGN

SAMPLE

A sample of 200 teacher trainees was taken from one B.Ed. college where PowerPoint presentations were being used in teaching on a regular basis. A

Survey method was used to collect the data to study the attitudes of teacher trainees towards learning through Power Point.

TOOL USED

A self-prepared questionnaire having 40 statements namely Teacher Trainees' Attitudes towards Learning through Power Point was used for collection of data. The tool was prepared by the investigators and reliability as well as validity of the tool was established statistically for the present study. The value of reliability coefficient (Cronbach's Alpha, α) for the scores obtained on the scale was found to be 0.66.

FINDINGS OF THE STUDY

Major findings of the present study are presented according to the objectives:

Research Objective 1

To Find General Trends in the Attitude of Teacher Trainees towards Learning through Power Point.

To know the overall trends of the responses made by teacher trainees on attitudes towards Power Point, mean scores on each item were computed. It was found that mean scores obtained for all fifty items of the scale ranged from 2.5 to 4.71 on a five point scale. Out of these fifty items, forty-four items were having mean scores greater than 3.0 (average) and only six items were having mean scores less than 3.0 on a five point scale. For the purpose of analysis, firstly, ten items having highest mean scores have been represented graphically in Figure 1 and secondly, six items having lowest mean scores have been represented graphically in Figure 2.

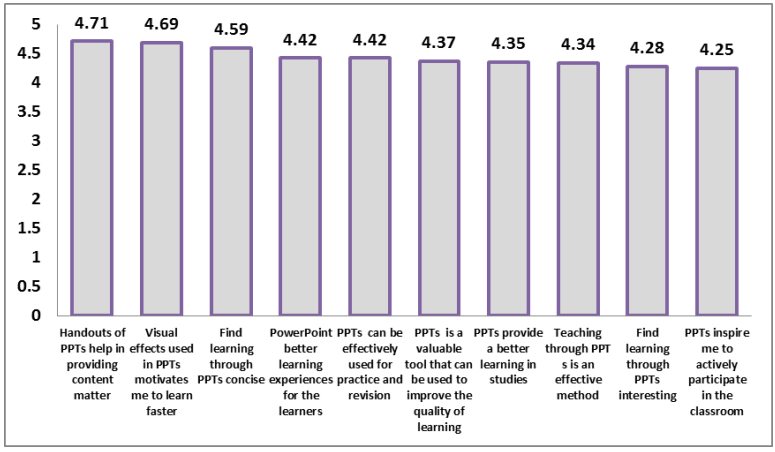

Figure 1. Top Ten Mean Scores Obtained on Attitudes towards PowerPoint.

Figure 1, represents the test items along the X-axis and their mean scores on a five point scale along the Y-axis. Item wise mean scores obtained on attitude towards PowerPoint which ranged from 4.25 to 4.71 show that majority of the teacher trainees are in strong agreement that handouts of PPTs help in providing content matter (4.71), visual effects used in PowerPoint motivate them to learn faster (4.69), learning through PowerPoint is concise (4.59), it provides better learning experiences and helps them to concentrate more (4.42), it is a valuable tool that can be used to improve the quality of learning (4.37), it provides a better learning (4.35), teaching through PPT's is an effective method (4.34), learning through PPTs is interesting (4.28) and PPTs inspire them to actively participate in the classroom (4.25).

Therefore, high values of mean scores show a positive and highly favourable attitude of the teacher trainees towards Power Point for these ten statements as given in Figure 1. These values depict that, teacher trainees feel that PowerPoints provide adequate support when given as handouts and it also shows that PowerPoints are found to be useful due to the visual effects, conciseness, and helps improving the quality of learning and they have also agreed that it is a good source of motivation and active learning. In addition to these ten items, they have also shown an agreement of above average i.e. more than 3 on a five point scale level for 34 attitude statements which were there in the tool. These mean scores also depict that the attitudes of teacher trainees have been found positive and above average for all these 44 items of the attitude scale. However, a graph for the items (6 out of 50) with a mean score less than three were also plotted for knowing the weaknesses of PowerPoint as a techniques of teaching (Figure 2).

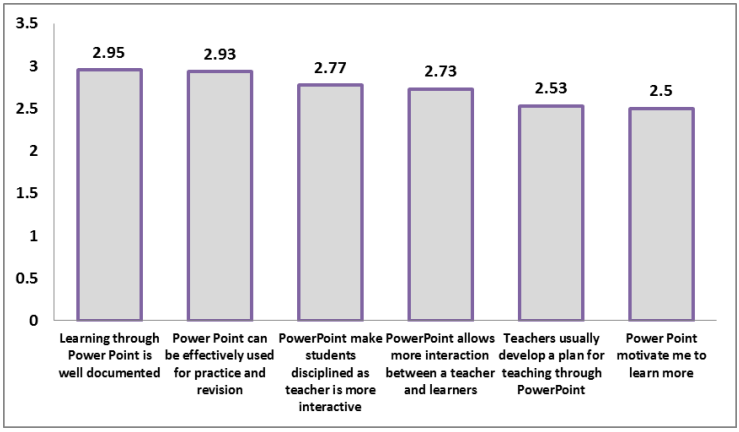

Figure 2. Lowest Mean Scores Obtained on Attitudes Towards PowerPoint.

Figure 2, represents the test items along the X-axis and their mean scores on a five point scale along the Y-axis. Item wise mean scores obtained on these six statements on attitude towards PowerPoint ranged from 2.5 to 2.95. It shows that majority of the teacher trainees disagree that Power Points motivate them to learn more (2.5), teachers usually develop a plan for teaching through PowerPoint (2.53), PowerPoint allows more interaction between a teacher and learners (2.73), it makes students disciplined as teacher is more interactive (2.77), it can be effectively used for practice and revision, (2.93) and learning through Power Point is well documented (2.95).

These mean values depict the teacher trainees' disagreement with these statements and they have indicated that Power Points do not motivate them to learn more through this method, teachers do not develop a plan for teaching and there is a lack of interaction between teacher and learners during learning through this technique. Teacher trainees have also disagreed that use of PowerPoint can create discipline and can be used for practice and revision. They also agreed that teaching through PowerPoint is not well documented as teachers do not provide them with the handouts on the topic taught inside the classroom. These values depict the negative and unfavourable attitudes of the teacher trainees towards PowerPoint on these aspects of teaching through presentations.

So, it can be said that 34 statements i.e. 'Power Point can't address the needs of visually disabled', 'visual effects used in Power Point motivate me to learn faster', 'learning through Power Point is concise' and 'Power Point provides better learning experiences for the learners' etc. have been found to be showing favourable and positive attitude as most of the items have mean scores more than 3 on a 5-point scale. On the other hand, the six statements having lowest mean scores i.e. 'Power Point motivates me to learn more', 'Teachers usually develop a plan for teaching through Power Point etc. showed unfavourable attitudes towards Power Point as most of the items were found to have mean scores less than 3 on a 5-point scale. Therefore, overall, it can be said that teacher trainees are being provided with a better learning experience and they are in favour of these, however, areas like planning, motivation, interaction, revision and documentation required to be addressed by our teacher educators and it should be taken care of by the teacher educators while teaching through this technology.

Research Objective 2

To Find Significant Differences in the Attitude of Teacher Trainees towards Learning through Power Point with Relation to their Gender (Male/Female)

For the fulfilment of the objective, mean scores obtained by teacher trainees on 'attitudes towards learning through Power Point' scale with respect to gender were computed by using independent sample t-test. The results are presented in Table 1.

Table 1

Mean, Standard Deviation and 't' Value on Attitude Scores of Male and Female Teacher Trainees.

Variable	Gender	N	Mean	Std. Deviation	*t*	Significance
Attitude towards Learning through PowerPoint	Male	61	154.39	9.36	1.28	Not Significant
	Female	139	152.56	9.33		

Table 1 depicts that 't' value (1.28) computed for difference between the mean scores of male and female teachers' trainees. The value was not significant at 0.05 level of significance. Therefore, it can be said that no significant differences were found to exist between scores obtained by male and female teacher trainees on overall attitudes towards Power Point.

However, mean scores obtained by both the groups (male and female) have been found to be high, it can be said that male and female teacher trainees have shown equally positive and favourable attitudes towards learning through Power Point. This may be due to the fact that all the students are being exposed to these environments equally irrespective of their gender.

Research Objective 3

To Find Significant Differences in the Attitude of Teacher Trainees towards Learning through Power Point in Relation to Background (Urban/Rural).

Table 2

Mean, Standard Deviation and 't' Value of Attitude of Teacher Trainees with respect to Residential Background.

Variable	Gender	N	Mean	Std. Deviation	*t*	Significance
Attitude towards Learning through PowerPoint	Rural	104	153.43	9.73	0.49	Not Significant
	Urban	96	152.78	8.96		

Table 2 reveals that 't' value (0.49) computed for difference between the

mean scores obtained by teacher trainees belonging to rural and urban areas is not significant at 0.05 level of significance. This indicates that no significant differences are there between scores obtained on overall attitudes towards Power Point by teacher trainees belonging to rural and urban areas. However, mean scores obtained by both the groups (male and female) have been found to be high, it can be said that teacher trainees with rural and urban background have shown equally positive and favourable attitudes towards learning through Power Point. This may be attributed to the fact that all the students are being exposed to these environments equally irrespective of their rural backgrounds.

Research Objective 4

To Find Significant Differences in the Attitude of Teacher Trainees towards Learning through Power Point in Relation to their Computer Training.

Table 3

Mean, Standard Deviation and 't' Value of Attitude of Teacher Trainees with respect to Computer Training.

Variable	Training	N	Mean	Std. Deviation	*t*	Significance
Attitude towards Learning through PowerPoint	Yes	144	153.23	9.52	0.26	Not Significant
	No	56	152.84	8.99		

Table 3 reveals that 't' value (0.26) computed for difference between the mean scores obtained by the groups formed on the basis of computer training received by them is not significant at 0.05 level of significance. This implies that no significant differences are there between scores obtained on overall attitudes towards Power Point on the basis of their computer training. However, mean scores obtained by both the groups (trained and untrained in using computers) have been found to be high, it can be said that teacher trainees have shown equally positive and favourable attitudes towards learning through Power Point irrespective of the training. This may be due to the fact that all the students are only receiving (not disseminating/creating) the information equally irrespective of their computer training.

Research Objective 5

To Find Significant Differences in the Attitude of Teacher Trainees towards Learning through Power Point in Relation to their Teaching Subjects.

Table 4

Mean and Standard Deviation for Attitude of Teacher Trainees with respect to their Teaching Subjects.

Teaching Subjects	N	Mean	Std. Deviation
ENGLISH	31	152.52	8.87
HINDI	14	150.86	8.58
MATHS	21	152.33	9.97
SCIENCE	70	154.71	9.71
SST	64	152.42	9.17
Total	200	153.12	9.35

Table 5

Summary of ANOVA for Scores on Attitude towards Learning through PowerPoint with respect to Teaching Subject of Teacher Trainees.

Source of Variances	Sum of Squares	df	Mean Square	F
Between groups	603.52	4	150.89	1.75
Within Groups	16809.6	195	86.20	
Total	17413.12	199		

For the fulfilment of the last objective, analysis of variance was conducted to know the significance of difference among these five groups. Results are presented in Tables 4 and 5. The mean scores (as given in Table 4) of five groups of the students which were formed on the basis of their teaching subjects i.e. Teaching of English, Hindi, Math's, Science and S. St. were found to be 152.52, 150.86, 152.33, 154.71 and 152.42 respectively. Summary of analysis of variance (ANOVA) as presented in Table 5 shows that value of F-ratio (1.75) computed for these five groups is not significant as it is less than the table value of F (1.94 at 0.05 level). So, it can be said that there is no significant difference on the attitudes of teacher trainees towards Power Point with respect to their teaching subjects. Thus, it implies that all groups formed on the basis of their teaching subjects have equally shown a favourable and positive attitude towards Power Point. However, it is also important to note in Table 4 that the mean scores obtained by Science group are little bit higher as compared to scores obtained by the Hindi

group which has obtained the lowest means scores on attitude among these five groups. It may be due to the fact that majority of the PowerPoint presentations are being developed in English medium and a very less number of presentations is being developed in Hindi.

Therefore, it can be said that all hypotheses proposed for the study have been accepted and it can be said that attitude of teacher trainees towards Power Point have been found to be positive and favourable irrespective of their gender, residential background, computer training and teaching subjects.

Educational Implications and Conclusions

In the light of the findings of the present study, some suggestions have been laid down for the usage of PowerPoint. Almost all the pupil teachers included in the present study were willing to learn through Power Point in their courses. The results showed that, in general, all the teacher trainees were in favour of use of PowerPoint for teaching by the teacher educators. Teachers must do a task analysis of strategies to be used. In other words, teachers must think about how a particular strategy is best applied in a context which in turn will help to provide effective and appropriate instructions. Proper development of PowerPoint presentation method is essential for developing good learning skills and enables the learners to perform well in examination as a teacher with inadequate knowledge of PowerPoint method may not do justice with teaching and hence student's learning may suffer. In fact, PowerPoint helps a teacher to discharge one's duties effectively. The present isolated and teacher centered classroom is being transformed into students-focused, interactive knowledge centered environment because of Power Point. Power Point provides better environment for both teachers and learners useful for managing and organizing activities. Power Point offers new methods of teaching using digital technology like concept maps, animation etc. This enables better conceptual understanding of concepts.

If teachers want to improve their interaction with the students and want to make their classroom environment interesting, they should ensure that use of Power Point should be made effective and they can make it effective by taking care of the limitations of this technology as discussed in the results section. Teacher education system empowered by Power Point driven infrastructure can have a great opportunity to come up to the centre stage in a knowledge-based society. It will act as a launch pad for e-learning also. In a nutshell, the results from this study may help the teacher trainees to develop more positive and productive interactive relationship by teaching through PowerPoint.

Similar studies can be conducted on a larger sample of pupil-teachers who are learning through PowerPoint in different types of institutions. The teacher trainees should be given opportunities to prepare and use educational slides with multimedia content (including movie, animation, sound, pictures etc.). The subject/curriculum should be revised and provision of various educational software in the field of education may be made accordingly. Teacher trainees should be given opportunity for PowerPoint presentation or multimedia presentation with interactive/ multimedia projector while doing teaching practice during their internship which will enable them to prepare themselves for use of ICT in education. Studies can be conducted on development and validation of those types of PowerPoint which can be converted further into e-learning objects which will be used for self-learning by teacher trainees.

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