

Primary Teachers Attitude Toward Personal Contact Programme – A Quantitative Study.

Bikash Barai

Assistant teacher

Dalsingpara Sree Ganesh Vidhyalaya High School
Alipurduar, West Bengal, India, 735208

Abstract: In modern world of education distance education is becoming an effective way of providing education to the huge number of untrained primary teachers of India. To meet the learning needs and problems of primary teacher trainees pursuing Diploma in elementary education (D.El.Ed) offered by national institute of open schooling (NIOS), a unique short time face to face mode of interaction session is included in the curriculum of the course called personal contact programme (PCP). The present study is an effort to determine the attitude of the in-service primary teacher trainees toward the PCP. The study revealed positive attitude of trainees for PCP with no significant difference in attitude of both the genders.

Key words: Distance education, in-service teacher trainee, personal contact programme, attitude,

I. Introduction.

1.1 Teachers education in India.

India is a country of 1.32 billion people with 300 million children in the school going age group. For securing the education of such huge population of children government of India made the constitution (Eighty-sixth Amendment) Act, 2002 and inserted Article 21-A in the Constitution of India to provide free and compulsory education of all children in the age group of six to fourteen years as a Fundamental Right in such a manner as the State may, by law, determine. The Right of Children to Free and Compulsory Education (RTE) Act, 2009, which represents the consequential legislation envisaged under Article 21-A, means that every child has a right to full time elementary education of satisfactory and equitable quality in a formal school which satisfies certain essential norms and standards. One of the key points of RTE is to provide proper teacher-pupil ratio at every level of school education. This ratio is of 30:1 that means behind every thirty pupils there must be at least one teacher. Around 10 million teachers are required in Indian schools. It resulted into large scale teacher recruitment in both private and government schools. Many teachers are not having essential professional degree for teaching which in turn resulting into degradation of quality of school education. This is a problem of great concern, National Council for Teacher Education (NCTE) a statutory body established by government of India, realizing it made the professional degree compulsory for every teacher in every level of school education. The broad mandate given to the NCTE is to achieve planned and coordinated development of the teacher education system throughout the country, the regulation and proper maintenance of norms and standards in the teacher education system and for matters connected therewith. The Act has given to the Council statutory powers for framing regulations required for planned and coordinated development of teacher education and issues connected with the professional role of teachers. NCTE recommended two modes of teacher education system, regular face to face mode and distance education mode. As Rosenblit (2005) described that distance education is characterized by physical separation of the learner from the instructor, at least at certain stages of the learning process. One of the issue with such separation between the learner and instructor is failing to understand the learning needs and satisfaction level of the learners.

1.2 Distance education in context to teacher education.

There are different modes of distance education, live television with two way communications, video presentation with discussion wrapped around it (Annetta & Shymansky, 2008), web based, postal and printed text based and many more. Each mode have some advantages and some disadvantages. Being a developing country, for India providing distance education using information and communication technology (ICT) like video conferencing, live television etc. is economically challenging in contrast to modes used by other developed countries. The most popular mode of distance education in India is postal mode with printed text based distance education, where the learning materials in printed book form are being sent to the learner. These books are designed as a module where each contents are divided into blocks and each blocks are subdivided into many units. Such a structure of learning materials promotes the self-instructional learning. With the completion of each block learners are provide with assignment works, completing which reflect their achievement level followed by semester examination for final assessment. Almost all courses follows this structure of distance education in India except some professional courses for teacher education like bachelor of education (B.Ed) and Diploma in elementary education (D.El.Ed) where the teacher trainees during their course have to participate in compulsory workshops of 10-15 days. These workshops are to help them with their teaching proficiency but it do not address their learning needs and academic challenges. To overcome such deficiencies a shift in teacher education is required and it can be achieved with blended curriculum, which is a combination of ICT based tool with face to face method of education (Jonker, Marz & Voogt, 2018). A form of blended curriculum was included into D.El.Ed course offered by national institute of open schooling (NIOS). The Ministry of Human Resource Development

(MHRD), Government of India set up the National Open School in November 1989. In July 2002, the MHRD amended the nomenclature of the organization from the National Open School (NOS) to the National Institute of Open Schooling. D.El.Ed. programme was developed by academic board of NIOS to provide training to the in-service teachers of primary and upper primary schools of India via distance mode of education.

A study conducted on in-service public primary teachers in the two districts each from Assam and Andhra Pradesh indicated that in-service teacher training is not reflective of the principles proposed in the curriculum (Kidwai, Burnette, Rao, Nath & Bajaj, 2013). Distance education plays a key role in such situation where with limited resources quality education is needed. In developing countries it is found that teacher training by distance mode may reach large groups of trainees and have profound impact on the development of national education systems. This includes initial training for formal qualifications, in-service supplementary training for formal upgrading, and continuing in-service training in particular subjects and topics. Printed text study materials provided in distance education course for teacher are effective in relating the theories of teaching learning with practice but a more efficient orientation programme must be there to fully meet the objectives the course (Fung,2005). For a well-structured distance education programme component like syllabi, study guides, course delivery format, the learning environment, and time scheduling are very essential (Kearsley & Lynch, 1996). Short but highly structured face to face mode of interaction session which is now becoming a popular course delivery format in distance mode of education and it is found to be more useful than online ICT based support by the learners (Price, Richardson & Jelfs, 2007). So instead of just only online ICT based support system in distance education, it must be combined with face to face interaction session to increase the effectiveness of the curriculum. A study was made in America on the perception of male and female pre-service teacher for distance teacher education programme which revealed that there was a significant difference in perception in the area of course structure, student-teacher interaction, overall course satisfaction and peer interaction (Younga & Lewisb, 2008). Such studies motivated the author to measure the attitude of in-service primary teacher trainee toward PCP.

1.3 Structure of D.El.Ed course and importance of Personal contact programme (PCP).

The two years of D.El.Ed course designed for untrained in-service primary teacher training consist of ten subject papers- with code 501,502,503,504,505 to be completed in 1st year and 506, 507, 508, 509, 510 to be completed in 2nd year. Study materials for these papers are provided both online and in printed text form (offline via postal services). These papers cover comprehensively areas of primary teacher education like pedagogical process, child psychology, importance of teaching language, science and mathematics, contextual learning, teaching aids, environmental science, social science, inclusive education and physical education. Apart from these self-learning materials the course consist of three practical works, namely workshop, school based activities (SBA) and practice teaching (PT). Among the above mentioned practical works, workshop is conducted in respective study centres assigned to the trainees whereas SBA and PT are conducted in the respective working place of the in-service trainees. Trainees have to complete total of thirty days of workshop, equally divided into fifteen days for each year. In workshop they learn and discuss about lesson planning, teaching methods, developing test materials, evaluation methods like continuous and comprehension evaluation (CCE), health education activity, art education activity, field visit to environmental and community participation points, organizing parent teacher meeting and assessing it, preparing for multi grade teaching. In SBA they conduct and take active participation in various curricular and co-curricular activities which takes place during the academic calendar year of their respective schools, they do case study of a child, conduct educational trip for children, maintain records and files related to academic works, at the end they have to prepare report on each activities and submit it to the mentor for evaluation. In PT they under supervision of mentor take forty classes in their respective schools based on lesson plans prepared and verified by the mentor. But there is one more very essential component of D.El.Ed curriculum, PCP, which is conducted by study centres and each study centres are appointed with four to five resource person (RP) for PCP as well as workshop. PCP is specially meant for supporting and facilitating distant learners to solve their problems which they face during their self-study. It gives the trainee a chance of face to face interaction with the RP and other peer trainee to share their experience and to find out solutions of the problems which they face during their learning activities. Teacher trainees have to attend fifteen days of PCP in each year. Author has extensively used ICT tool called K-Yan (knowledge-Yantra), “Yantra” is word in Hindi for “machine”, during PCP. So the approach followed here for teacher education in PCP is blended teaching method, it enriches the face to face session in distance education with the advantages of digital online approach (Gerbic, 2011). K-Yan was developed in collaboration with Indian institute of technology Bombay to provide all in one solution for transforming class rooms of Indian school into digital classroom in as economical way as possible. Since the present study was designed to measure attitude of primary teacher trainees toward PCP it's very essential to understand the objectives of PCP in D.El.Ed.

The objectives of PCP are to enable the trainees to:

- Provide an opportunity for interaction with RP and peer trainees that will remove their isolation that is seen in most distance education courses.
- Deal with learning needs and problems and ensure guidance from RP.
- Develop skill for self-learning and assessment.
- Use ICT and the library available at study centre for facilitating their learning.
- Get feedback about their progress.
- Get prepared for the other practical works like SBA & PT.
- Get prepared for the annual examination.

1.4 Research questions and objectives of the study:

The study is aimed to measure the attitude of the primary in-service teachers toward the PCP during the first year of their D.El.Ed course. Also the study explores the relationship of gender and the attitude toward PCP. So the research questions which the present study has tried to answer are as follows:

- What is the suitable tool for measuring the attitude of the trainees?
- What is attitude of teacher trainees toward the PCP programme?
- Is there any difference of attitude among male and female teacher trainees toward the PCP?

Based on the above research questions the author has set few objectives for the study. Author has conceptualized that attitude toward PCP has three factors or construct: enthusiasm, participation and satisfaction, so following objectives were considered for the present study.

- To develop a measure for attitude toward PCP based on three factors enthusiasm, participation and satisfaction.
- To find out the attitude of in-service Primary teachers toward the PCP.
- To find out any significant difference in attitude of gender toward PCP.

1.5 Hypothesis of the study:

The author has formulated the following hypothesis for the present study.

H₀1. There is no attitude of in-service primary teacher trainees toward PCP

H₀2. There is no significant relation between gender and enthusiasm.

H₀3. There is no significant relation between gender and participation.

H₀4. There is no significant relation between gender and satisfaction.

II. Methodology of the study:

2.1 Research method:

In the present study cross-sectional survey method was followed to collect the data from the sample. Cross-sectional surveys are simple in design, economical and require only one contact with the sample hence preferred by the author. The sample was collected from two different study centers of Alipurduar district, West Bengal, India. The survey was made during the PCP in both the study centers simultaneously to collect the data.

2.2 Population and sample:

The population for the present study consists of four thousand eight hundred (4800) in-service primary teachers of government and private schools of Alipurduar district of West Bengal, enrolled in the D.El.Ed. course offered by NIOS for the session 2018-2019. There are total of forty eight (48) study centers in Alipurduar district with hundred (100) trainees enrolled in each study center. Author randomly selected one hundred and thirty six (136) trainees as a sample for the study from two different study centers. The sample was subdivided into two groups, male (consisting 47 trainees) and female (consisting 89 trainees). The sample consisted of both the types of trainees some working in government and some in private primary schools. The sample represents 3% of the population with 7% error (Weisberg & Bowen, 1977), which is acceptable for survey research (Roscoe, 1975). The study was delimited to only one of the district as due to author's independent work and absence of any funding organization it was not financially feasible for the author to conduct a large scale survey.

2.3 Tools and techniques used:

2.3.1 Development of tool to measure attitude:

To measure the attitude in quantitative scale author developed questionnaire initially consisting of ten items, each representing a definite construct of attitude. The items were then collectively grouped based on three constructs to be measured resulting into a questionnaire based on Likert Scale of measurement. All the ten items were Likert item with 5 points of scale (Likert type scale, 1-strongly disagree, 2-disagree, 3- neither agree nor disagree, 4-agree, 5-strongly agree). All the items were positively phrased and were designed to measure three factors (construct) of attitude: enthusiasm, participation and satisfaction. Exploratory factor analysis (EFA) was used by the author to check the factor loadings of the Likert items so that construct validity could be established. The result on applying principal axis factoring with varimax rotation (orthogonal rotation) and extraction eigen value >1, is shown in table 1.

Table1. Rotated factor matrix

Items (questions)	Construct	Factor		
		1	2	3
Q1 I reach timely for PCP every day at study center.	Enthusiasm			0.71

Q2 I go through the blocks to be discussed prior to every class.		0.41
Q3 I do not leave the class early every day.		0.50
Q4 I take notes during each session of the class.	Participation	0.42
Q5 I ask questions to the resource person whenever I have any doubt related to the topic being discussed.		0.74
Q6 I participate in the group activities given during the class.		0.64
Q7 I participate in the discussions related to teaching learning difficulties with peer and resource person constructively in class.		0.76
Q8 PCP helped in solving many difficulties related to my profession.	Satisfaction	0.56
Q9 I feel professionally more confident after attending PCP.		0.81

(Values below 0.4 were removed)

Out of ten statements one statement was removed from the final questionnaire as it was not loaded properly with any of the three factors. Table 1. Clearly shows the higher factor loadings for three groups of items representing the three construct to be measured it validates the construct validity of the questionnaire, content validity was established by the panel of experts. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.744 which shows sufficient items for each factor.

To establish the reliability of the questionnaire, Guttman Split-Half method was preferred over Cornbach's alpha test as the Likert scale content multiple constructs (Tavakol & Dennick, 2011). Guttman Split Half Coefficient was 0.69 which shows the questionnaire was moderately reliable.

Due to paucity of time and money the questionnaire was kept short consisting only 9 items (1 item was removed from the original questionnaire for poor factor loadings).

2.3.2 Statistical tools used for analysis:

For the analysis of collected data parametric descriptive and inferential statistic like mean, standard deviation and t-test were used. The combined analysis of different Likert items as Likert scale (for measuring three constructs) makes the use of parametric statistic logical but nonparametric statistical tool like Chi-square test was also used for analysis of data obtained from each Likert items (Likert type Scale) separately (Joshi, Kale, Chandel & Pal, 2015). Author has used SPSS, IBM software for all statistical calculations.

2.3.3. Administration of questionnaire.

To administrate the questionnaire author selected the 12th day of the PCP programme for first year trainees. Throughout the PCP programme the trainees were involved extensively in the process of learning and sharing problems and experiences related to their academics and profession. In each session of PCP K-Yan was utilized by the author and other fellow RP in best possible way to promote the blended approach of teaching and learning. Before providing them the questionnaire they were briefed about time given and process for marking their options. Clarification of each statement was made to them in English and local language Hindi. The time provided for submitting the questionnaire was fifteen minutes. For preventing the influence of one trainee response over other, spacious auditorium hall room of the study centre was arranged for them. A similar arrangement was made for the trainees of the other study centre. One of the RP of the other study centre was personally trained by the Author for administrating the survey questionnaire. The collected data was then filed and converted into digital score using SPSS for testing and Analysis.

III. Result and discussion:

Though the skewness test revealed a moderate to high skewness between -0.8 to -1.2, the assumptions of central limit theorem gave author the confidence to use mean, standard deviation and t-test for analysis of data. Table 2 presented below shows the mean and standard deviation of Likert scale data.

Table 2. Gender wise central tendency table.

Construct (factor)	Gender		Mean	Standard deviation (SD)	Standard error (SE)
Enthusiasm	Male	47	4.06	0.75	0.11
	Female	89	4.27	0.64	0.07

Participation	Male	47	3.98	0.72	0.10
	Female	89	3.95	0.71	0.07
Satisfaction	Male	47	3.89	0.93	0.14
	Female	89	4.07	0.75	0.08

The high value of means for all the three construct of attitude toward PCP revealed that primary teacher trainees don't have a neutral attitude for PCP. Which rejected the author's first hypothesis H_01 and hence it revealed that, they have a positive attitude of 'agree' toward PCP. As evident the mean of female is slightly greater than male but to find out if the difference among the genders are significant or not t-test is necessary. Very low values of standard errors signifies that mean of the sample represent the population mean accurately.

Table 3. t-test value of score for enthusiasm.

Construct	Levene's test of equal variance		t-test						
	F	Sig	T	df	Sig (2- tailed)	Mean difference	S.E	95% confidence interval of difference	
Enthusiasm	0.77	0.38	-1.74	134.00	0.085	-0.21	0.12	-0.46	0.03
	Equal variance assumed								

On performing t-test over the means of two sub groups (male and female) of the sample (table 3) it was found that the two groups of sample has equal variance ($F = 0.77, p = .38$) and thus $t(134) = -1.74, p = .085$ is not significant at .05 level of confidence. So the null hypothesis H_02 'there is no significant relation between gender and enthusiasm' was accepted. Both the genders were equally enthusiast toward PCP.

Table 4. t-test value of score for participation.

Construct	Levene's test of equal variance		t-test						
	F	Sig	T	df	Sig (2- tailed)	Mean difference	S.E	95% confidence interval of difference	
Participation	0.27	0.607	0.23	134.0	0.819	0.03	0.13	-0.22	0.04
	Equal variance assumed								

Table 4. revealed that the two groups of sample has equal variance ($F = 0.27, p = .607$) and thus $t(134) = 0.23, p = .82$ is not significant at .05 level of confidence. So the null hypothesis H_03 'there is no significant relation between gender and participation' was accepted. Both the genders have equal positive attitude "agree" for participation in PCP.

Table 5. t-test value of score for satisfaction.

Construct	Levene's		t-test						
	test of equal variance		F	Sig	T	df	Sig (2-tailed)	Mean difference	S.E
Satisfaction	0.43	0.51	-1.22	134.0	0.226	-0.18	0.15	-0.47	0.11
	Equal variance assumed								

Table 5. revealed that the two groups of sample has equal variance ($F = 0.43, p = 0.512$) and thus $t(134) = -1.22, p = .23$ is not significant at .05 level of confidence. So the null hypothesis H_04 'there is no significant relation between gender and satisfaction' was accepted. Both the genders were equally satisfied with PCP.

Due to Authors interest for in depth analysis of each item of the questionnaire, author also tested all the Likert items separately using Chi-square test of indifference. For first item Q1, it was found that 10 trainees do not agree with the statement, a personal conversation with them revealed that the inability of timely reaching for PCP by them was due to poor transportation from their home to the study centre. A major portion of trainees (122) were positive toward the statement and it was because of their enthusiasm for attending the PCP. With $X^2(4, N = 136) = 7.053, p = .133$ showed no significant difference between the males and females regarding their responses.

For the second item Q2, it was found that 15 trainees were undecided about the statement, a conversation with them revealed that they were not able to go through the study materials because they have not received the materials yet by postal services and also due to lack of knowledge about computer they couldn't download it form the online portal. This showed that lack of computer knowledge and postal delays affected the attitude of the trainees. Again a major portion of trainees (119) were either 'agree' or 'strongly agree' about going through the blocks to be discussed prior to the class, it reflect their high enthusiasm for PCP. Chi-squared test value of $X^2(4, N = 136) = 7.64, p = .054$ showed no significant difference between the males and females regarding their responses.

For item Q3, it was found that 115 trainees agree with the statement but 18 trainees (mostly female) were against the statement. When discussed about the cause with such trainees they revealed that though they are enthusiastic but due to long distance between their home and study centre they have to leave the class early. Chi-square test value of $X^2(4, N = 136) = 4.904, p = .297$ showed no significant difference between genders about the statement.

For item Q4, it was found that 107 trainees agree with the statement, whereas 17 trainees were neutral with the statement. As told by the trainees neutrality for the statement was due to the fact that they only take notes for the topic in which they have doubts. So one cannot consider it as their non-participation in PCP. Chi-square test value of $X^2(4, N = 136) = 1.955, p = .744$ showed no significant difference between the genders about the statement.

For item Q5, it was found that 108 trainees were in favour of the statement but 16 were neutral and 12 were in disagreement with the statement. Discussion with trainees revealed that such neutrality and disagreement among few of them was due to the medium of conversation in class, the classes in PCP were taken in English and Hindi but some trainees are from Bengali medium primary schools such trainees were not able to communicate properly with the RP. Chi-square test value of $X^2(4, N = 136) = 1.513, p = .824$ showed no significant difference among the genders toward the statement.

For item Q6, it was found that 111 trainees were in favour of it whereas 19 trainees were neutral toward the statement. Conversation with the trainees revealed that some of them don't understand the task properly given to them during group activities so they were neutral toward the participation in such group activities. Chi-square value of $X^2(4, N = 136) = 5.508, p = .239$ showed no significant difference among the genders toward the statement.

For item Q7, it was found that 100 trainees were in agreement with the statement whereas 17 female trainees and only 2 male trainees were not in favour of it and 17 trainees had neutral attitude toward it. Chi-square value of $X^2(4, N = 136) = 14.373, p = .006$ showed a significant difference between the genders toward the statement. Female trainees participate less in the classroom discussion in comparison to male trainees. Conversation with such female trainees revealed that due to lack of communication skill they don't participate properly in class room discussions.

For item Q8, with chi-square value $X^2(4, N = 136) = 10.37, p = .03$, showed a significant difference between the genders toward the statement. A considerable number of female, 24, 'Strongly Agree' with the statement in comparison to 8 males, it showed female were more satisfied with PCP than male.

Finally, for item Q9, with chi-square value $X^2(4, N = 136) = 14.07, p = .007$, showed a significant difference between the genders toward the statement. Though most of the trainees were more confident with their profession after attending PCP it was found that 10 female trainees were neutral toward the statement whereas none of the male had any such neutral attitude. Conversation with them revealed that still some female trainees have some unsolved issues related to the academic practices at their respective primary school.

IV. Conclusion:

Distance education is playing a very crucial role in educating teacher trainees at all levels of education. Designing an effective curriculum for distance mode of teacher education is the demand of modern educational need. PCP is such a component of D.El.Ed course which is giving trainees a unique experience of sharing their educational need and getting help from peers and RP. Inclusion of ICT tool like K-Yan in PCP promote blended learning and enriches the curriculum of D.El.Ed. In this study author found that there are still many hurdles in conducting a short time face to face programme like PCP for distance education of teachers. Non availability of RP with multiple linguistic knowledge, poor transport communication with the study centres, delay in postal delivery of printed text materials for trainees, low computer knowledge of trainees, lack of sufficient communicative skills among trainees are some of the major problems faced during the PCP. Also RPs must be given regular training for improving their skills of conducting activities during PCP. When viewed as a whole, teacher trainees were very enthusiastic toward PCP and their participation in PCP was active resulting into satisfaction of their educational need. Overall teacher trainee's attitude toward PCP was positive.

The present study was just about one of the component of D.El.Ed course for in-service primary teachers many more research works can be done over the other components of the course like workshop, PT, usefulness of K-Yan, blended curriculum for teachers and perception of RPs for the course.

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