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RESEARCH ARTICLE

EFFECTIVE TRAINING ANALYSIS OF MALE PRIMARY TEACHERS OF WEST BENGAL

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ABSTRACT

Training is the process of teaching or learning the skills you need to be a teacher in a school. This article studies the effectiveness of training on Male Primary Teachers of West Bengal during the period of Sarva Siksha Avijaan (SSA). It uses a feature of the Primary Education system in which some teachers have been receiving different training during District Primary Education Programme (1997-2002) and Sarva Siksha Avijan (2002-2014). Four categories of teachers are included in the sample viz. experienced trained teachers, experienced untrained primary teachers, trained novice teachers and untrained novice teachers. To identify the effects, we use structured schedule containing thirteen independent variables viz. age of teacher(X_1), education of teacher(X_2), resourcefulness(X_3), size of family(X_4), distance from the school(X_5), number of leave enjoyed last year(X_6), social cosmopolitaness(X_7), status of TL materials used (X_8), training limitation(X_9), feedback response from training(X_{10}), attitude towards training(X_{11}), suggestion towards improvement of training programmes(X_{12}), and improvement of academic environment through training(X_{13}) against dependent variable training effectiveness index(Y). The findings are: (1) variables like education of teacher(X_2), social cosmopolitaness(X_7), status of TL materials used (X_8), training limitation(X_9), and feedback response from training(X_{10}) had significant bearing on training effectiveness index(Y) and (2) variables like training limitation(X_9), and feedback response from training(X_{10}) have been found to exercise significant regression effect on the training effectiveness index.

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INTRODUCTION

The effectiveness of training is one of the indirect ways of measurement of learning. Several papers find a large variability in the extent to which teachers promote student learning. Yet little evidence has been found that any observable teacher characteristic explain a large part of this variation. As for the impact of teachers' academic training, the results are mixed. Some studies show that measures of academic skills are positively related to teacher effectiveness: verbal ability, subject matter preparation, quality of a teacher's undergraduate college, test scores etc. Still it seems that teachers holding master's degrees are not more effective (Ehrenberg and Brewer, 1994; Ehrenberg and Brewer, 1995; Clotfelter, Ladd and Vigdor, 2006). Few studies have specified the impact of professional training in developed countries. In France, Bressoux (1996) studies the effect of teachers' training on third-grade pupils' achievement, comparing certified and uncertified teachers. Bressoux finds that training substantially improves students' scores in mathematics. Angrist and Lavy (2001), evaluating the effect of in-service teacher training in Jerusalem schools, find a significantly positive causal effect of this program on pupils' test scores.

Their cost effectiveness analysis suggests that teacher training may provide a less costly means of improving pupil achievement scores than reducing class size or adding school hours. In the study of Eswaran and Singh (2008) on Effectiveness of In-service Education of Teachers, they found that in the state of Tamil Nadu and Bihar in India, nearly 72 and 75 per cent teachers respectively reported that the training content of the training programmes they underwent was relevant to their professional learning needs. The remaining teachers expressed that it was not relevant at all to their professional learning needs. Of the teachers who perceived the training content relevant to their needs, nearly 94 and 49 per cent respectively expressed that it was relevant to some extent. Only 6 and 23.7 per cent respectively expressed that it was relevant to a great extent. Education is the ongoing changing process of acquiring training or knowledge or imparting knowledge among stakeholders. Teachers are the primary stakeholders and students are the secondary stakeholders.

Objective of the Study

- i) To assess how the training of teachers would improve the academic environment of the school.
- ii) To study the utility of training on primary teachers of the state of West Bengal in general and district of Cooch Behar in specific.

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- iii) To assess limitations of training and measures would be adopted for improvement of such training programmes.
- iv) To find the measurement of Training Effectiveness Index (Y) from different social, cultural, economic, environmental and academic variables viz. age of teachers(X_1), education of teacher(X_2), resourcefulness(X_3), size of family (X_4), distance from the school(X_5), number of leave enjoyed last year (X_6), social cosmopolitaness (X_7), status of TL materials used (X_8), training limitation (X_9), feedback from training (X_{10}), attitude towards training (X_{11}), suggestion towards improvement of training programme (X_{12}), and improvement of academic environment through training (X_{13}).

MATERIALS AND METHODS

Since Cooch Behar is a district out of five districts in West Bengal where District Primary Education Programme (DPEP) launched in 1997 and Sarva Siksha Avijaan (SSA) from 2002 along with all districts of the country. Naturally, a series of training programmes have been organized between 1997 and 2011. With the help of random sampling method 37 primary teachers were selected from different parts of the district. A structured schedule containing 47 different questions/statement/views were placed before each respondent teacher separately to measure training effectiveness index during March-July, 2014.

Here,

- Education is measured as the sum of numeric score of formal education and diploma in education.
- Resourcefulness is calculated as land per capita X expenditure per capita.
- Social Cosmopolitaness is measured as the sum of membership and office bearer of different organizations and their degree of participation.
- Training Effectiveness Index (TEI) is calculated as follows :

$$TEI (Y) = \frac{\text{Utility Score} + \text{Coverage Score}}{\text{Total Score obtainable}} \times 100\%$$

Where coverage score is the extent of training understood by the teacher in seven different aspects like Multigrade/Multilevel Teaching, use of Teaching Learning Materials, Communication Skill, Text/Minimum Level of Learning, Gender Issue, Extra Curricular activities, Concept of VEC/CLRC/BRC and Utility Score is the extent of application of the above seven aspects in class room situation or school environment.

RESULTS AND DISCUSSION

Table 1 presents the correlational studies between the dependent variable i.e. training effectiveness index (Y) and other thirteen explanatory variables viz. age of teachers(X_1), education of teacher(X_2), resourcefulness(X_3), size of family (X_4), distance from the school(X_5), number of leave enjoyed last year (X_6), social cosmopolitaness (X_7), status of TL

materials used (X_8), training limitation (X_9), feedback from training (X_{10}), attitude towards training (X_{11}), suggestion towards improvement of training programme (X_{12}), and improvement of academic environment through training (X_{13}). It was found that variables like education of teacher(X_2), social cosmopolitaness (X_7), status of TL materials used (X_8), training limitation (X_9), feedback from training (X_{10}) had wielded a substantial influence in characterizing the training effectiveness index.

Table 1. Coefficient of Correlation between Training Effectiveness Index (Y) and other thirteen Casual Factors

Sl. No.	Variables	"r" value
X_1	Age of teachers	- 0.18151
X_2	Education of teacher	0.33146**
X_3	Resourcefulness	0.12717
X_4	Size of family	- 0.2337
X_5	Distance from the school	0.10582
X_6	Number of leave enjoyed last year	0.00043
X_7	Social cosmopolitaness	0.34900**
X_8	Status of TL materials used	0.34483**
X_9	Training limitation	0.36990**
X_{10}	Feedback from training	0.38843**
X_{11}	Attitude towards training	0.12883
X_{12}	Suggestion towards improvement of training programme	0.09793
X_{13}	Improvement of academic environment through training	-0.10299

Critical value (1-Tail, .05) = + or - 0.27490

Critical value (2-Tail, .05) = + or - 0.32409

*Significant at 5% Level

**Significant at 1% Level

Higher educational qualification (X_2) means enrichment in academic arena in terms of innovations, new experiences, deeper understanding in subjects and better output in classroom teaching and accordingly teachers could have associated themselves in the participatory interaction during different training programmes. As a result, they built up higher training effectiveness index. Engagement in allied activities like a member or office bearer of Panchayat Raj Institutions/ Teachers' Organization/ Co-operative or any other organizations, in short, social cosmopolitaness (X_7) helped teachers utilized in diverse access to institutional and interpersonal interaction. These have contributed to build up a wide range of inventory information on different aspects of training during District Primary Education Programme (DPEP) and Sarva Siksha Avijan (SSA) programmes.

Teaching Learning Materials (TLM) cannot be invented from the market rather it is articulated within teachers' innovations. It is the teacher who ultimately invented and developed the TLM (X_8) during classroom teaching which ultimately influenced training effectiveness index. In the developing countries like India, training of teachers cannot be organized in an ideal condition in terms of selection of venue, accommodation, providing food/refreshment supplied to the trainees, incentives, identification of resource persons, modules used, teaching aids, way of giving training (information over loading) etc. Overcoming these training limitations (X_9) contributed a positive bearing on the training effectiveness index. Feedback response after attaining training

(X₁₀) programmes on different aspects like Use of Teaching Learning Materials (TLM), Multigrade Teaching, Communication skill, Text/Minimum Level of Learning, gender issue, and extracurricular activities had placed a significant role to steer the process of measuring training effectiveness index. The correlation as found significant for certain variables did suggest that they had wielded substantive influences on training effectiveness index while making interaction with other variables concurrently.

Table 2. The Multiple Regression Analysis

Sl. No.	Variables	“β” value	“t” value
X ₁	Age of teachers	- 0.3995	-1.430
X ₂	Education of teacher	1.2329	0.691
X ₃	Resourcefulness	0.0015	0.253
X ₄	Size of family	-0.1667	-0.333
X ₅	Distance from the school	-0.0807	-1.591
X ₆	Number of leave enjoyed last year	-0.2902	0.263
X ₇	Social cosmopolitaness	0.2970	1.186
X ₈	Status of TL materials used	1.7967	-2.374*
X ₉	Training limitation	-1.4322	2.642**
X ₁₀	Feedback from training	1.4485	-0.569
X ₁₁	Attitude towards training	-0.4436	-1.322
X ₁₂	Suggestion towards improvement of training programme	-2.0411	-1.322
X ₁₃	Improvement of academic environment through training	-0.5928	-0.774

Adjusted R² = 0.2953
 R² = 0.5498
 Multiple R = 0.7415
 Std. Error of Estimate = 6.4222
 F value = 2.161

Table 2 presents the multiple regression analysis with values, corresponding t values and multiple R. It is discernible that the variables like training limitation (X₉) and feedback from training (X₁₀) have been found to exercise significant regression effect on the training effectiveness index. It has been found that the different factors affecting training limitation is when minimum, it scored maximum value. Similarly, the feedback response of the trainee after attaining training led to the maximum score towards the measurement of training effectiveness index. It is also to be mentioned that all thirteen variables put together can explain 55% (R²=0.5498) of the total effect. This demands inclusion of more variables for being studied across the heterogeneous micro situations to generate higher level of explicability.

Table 3. Step Down Regression Analysis

Step 1. Variable: X₁₀ entered.

Dependent variable: y

Var.	Regression Coefficient	Std. Error	f(1, 35)	prob.
X ₁₀	1.3529	0.5425	6.219	.01751
Constant	48.2353			

Std. Error of Est. = 7.1498
 R² = 0.1509
 Multiple R = 0.3884

Step 2. Variable: X₉ entered.

Dependent Variable: Y

Var.	Regression Coefficient	Std. Error	f(1, 34)	Prob.	Partial r ²
X ₉	-1.1129	0.4212	6.982	.01236	.1704
X ₁₀	1.3881	.5016	7.660	.00907	.1839
Constant	66.8964				

Std. Error of Est. = 6.6074
 Adjusted R² = 0.2541
 R² = 0.2955
 Multiple R = 0.5436

Step 3. Variable: X₈ entered.

Dependent Variable: Y

Var.	Regression Coefficient	Std. Error	f(1, 3β)	Prob.	Partial r ²
X ₈	2.8985	1.1461	6.396	0.01640	0.1624
X ₉	-1.2022	0.3929	9.364	0.00437	0.2210
X ₁₀	1.2556	0.4689	7.171	0.01146	0.1785
Constant	63.7334				

Std. Error of Est. = 6.1383
 Adjusted R² = 0.3563
 R² = 0.4099
 Multiple R = 0.6402

From placing the variables into a step down model of regression analysis, it is found that after step 3, three variables viz. status of TL materials used (X₈), training limitation (X₉), feedback from training (X₁₀) summatedly had explained 40.99 per cent of the total effect. Thus, rest 10 variables were explaining only about 14 per cent of the total effect. It is interesting to note that in the step down model, teaching learning materials used by the teacher had come up innovatively to characterize the agglomerated effect of these three variables on training effectiveness index in the study area.

Conclusion

Now-a-days, a considerable amount of time, money, and energy is invested in in-service education or training. Yet, the design features and implementation conditions in schools that make in-service training effective, is still limited. To examine the outcomes of in-service training, the impact analysis of a sample of teachers who participated in individual-based and school-focused in-service training were regressed on school characteristics, features of in-service programmes, implementation characteristics, and types of in-service training. Findings from this study suggest that sample size should be large in order to explore more number of variables towards impact of training of teachers. Variables like education of teacher, attachment towards social commitments and degree of participation, concept of using of TL materials, factors identified for training limitations, and uses of training outcomes in classroom practices are subject to alteration to increase training effectiveness index.

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