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Study on efficacy of agricultural trainings in respect of improving the livelihood of disaster affected farmers

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ABSTRACT: This research paper investigates the extent of training effectiveness as perceived by the participant farmers of Nobojibon Program, a rehabilitation program for the disaster affected people of Bangladesh. The specific objectives of the study were to determine and describe the extent of effectiveness of Trainings as perceived by the participant farmers of Nobojibon Program and to explore the relationship between each of the selected characteristics of the trainees/farmers and effectiveness of training programs. Data for the study were collected by personal interviewing from 120 randomly selected farmers of six Unions of Kalapara Upazila of Patuakhali district during the period of March 01, 2015 to April 15, 2015. Here 60 male and 60 female farmers were purposively taken. Pearson's product moment correlation co-efficient were computed to examine the relationship between the concerned variables. The effectiveness of training scores of the respondents ranged from 83 to 244 with an average being 163.66 and standard deviation 35.05. It was found that more than fifty percent (50.83) of the farmers had medium level of effectiveness of training compared to 27.5 percent of them having less effectiveness and 21.67 percent, high effectiveness. Out of ten independent variables, six of them, that is years of farm size, communication exposure, innovativeness, cosmopoliteness, economic motivation and commercialization had significant positive relationships with their effectiveness of training. Four independent variables *i.e.* age, education, annual family income and organizational participation had no significant relationship with their effectiveness of training.

KEYWORDS: Living standard, SIDR, Knowledge, Skill, Technology, Salinity, Descriptive survey.

1 INTRODUCTION

Agriculture is the mainstay of growth and poverty reduction in Asia and life-blood of Bangladesh economy. The landscape of Bangladesh is an intricate design of small fields, where the green and gold of rice dominate. The scientific means to make most productive use of the resources are now available and are being developed. Farmers have also been searching for better ways to grow their crops to bring changes in their existing pattern of cultivation. For dissemination of agricultural technologies, there generally exists a communicative chain to reach the farmers. Usually, the connection is made through government and non-government extension agents or change agents as well as the input suppliers. Generally, GO-NGOs are using several communication tools to connect the farmers with modern or new technologies, such as Farmers Field Day (FFD), Participatory Rural Appraisal (PRA), Training, Method Demonstration, Result Demonstration, Simulations, Video

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Programs, Exposure Visit, Workshop Participatory Action Research (PAR), Regular Household Visit, Leaflet Distribution, Festoon & Postering, input support etc. Among all the tools "Training" is the most commonly used by GO's & NGO's development programs or projects. Village women & girls are now getting training from the well- trained extension agents at suitable time by several development programs. Some training is to develop individual's working skill and some training is related to social awareness.

Training is a term which covers a wide range of activities. Its length can vary from short term training activities, such as one day demonstration to longer- term professional courses that may last several months. Trainers are also diverse. Generally, FAO considers four main audiences: primary producers, technical specialists, professionals and students receiving technical education [1]. The development training selected as a focus of this study refers to such trainings of farmers and extension staff undertaken in conventional and or participatory models. Thus in the system, where the role of extension and communication- intervention was looked on as transferring and disseminating readymade knowledge from research to farmers, or from 'early adopters' to other farmers which is often referred to as the transfer of technology model of extension [2], [3]. A systematic approach to training consists of logically structuring and sequencing the disparate types of activities, which make up a training program. This is achieved by the concept of the training cycle/ process which delineates these activities into defined and inter-related stages ranging from initial conception and formulation of training to its final delivery and evaluation [4]. Evaluation is about assessing the effectiveness of the various aspects of training. It is an interactive process in which various stages of training are appraised from the viewpoint of their adequacy and contribution to achieving the training objectives. Evaluation can also play an important role in the re-orientation and modification of these objectives and the formulation, and launch of new training programs. Evaluation can take place at any point in time in a training program. It is a decision making tool. Providing answers to questions relevant to training. The kind of information required has to be relevant to the question and should be systematically identified [5]. In general, evaluation serves four purposes [6] appraisal of the achievement of the individual, diagnosis of the learning difficulties of the individual trainees or a group of trainees, appraisal of the effectiveness of a training program, curriculum, training materials, procedures, and organizational arrangements and assessment of the progress to help understand training problems and develop sound policy, [5]. Therefore, training programs and projects are evaluated from different angles and viewpoints trainers and their institutions, trainees (their learning, reactions, post training job performance and contribution) [4]. The term effectiveness is relative. Typically, effectiveness is determined with respect to the achievements of a goal or set of goals. Human resource development effectiveness must be determined with respect to the goals of the program being examined [1]. Murshed-E-Jahan and Pemsl [7] on their study on Bangladeshi small farmers concluded that building the capacity of farmers through training is more valuable than the provision of financial support in terms of raising production and income. Similarly, a study by Tripp et al. [8] confirms the importance of training can contribute to enhancement of farmers'skills in farming works. Studies on the effectiveness of training for farmers showed that not all programmers meet success as most failures of programmes in the developing countries were attributed to the tendency of excessively concentrating on a particular technology transfer rather than a broader spectrum of farmer empowerment including knowledge disseminations [9], [10].

The present investigation was mainly concerned to study farmer's opinion regarding effectiveness of the agricultural trainings provided by Nobo Jibon Program. "Nobo Jibon" is a five-year (2010-2015) program funded by USAID's Multi Year Assistance Program (MYAP) and designed to reduce food insecurity and vulnerability for over 190,000 households or 1 million individual beneficiaries . The project covers nine of the most food-insecure Upazilas in Barisal Division. The primary objective of Nobo Jibon is to help households increase production and income, with improved access to food and market opportunities. The indirect benefits of the program will spill over throughout Barisal Division as a result of broader activities in disaster preparedness, early warning and response capacity. This study tried to explain and explore the relationship of some selected characteristics of the farmers such as age, education, farm size, annual income, organizational participation, communication exposure, innovativeness, economic motivation, cosmopoliteness and commercialization with their opinions toward effectiveness of agricultural trainings. The effectiveness would be high if he extent to which the trainers and the trainees both attributed it high performance level. Many things impair the effectiveness of the communication process as well as the training programs. Some associated with the source of message, some are associated with the receiver or trainees and some are common to both, while others are associated with the channel of communication. The following specific objectives were formulated to give proper direction to the study:

- determination and description the extent of effectiveness of Trainings as perceived by the participant farmers of Nobojibon Program
- exploration the relationship between each of the selected characteristics of the respondents and effectiveness of training programs
- identification the constraints confronted by the farmers that might be reduce the effectiveness of the training

2 METHODOLOGY

Kalapara Upazilla of Patuakhli District was selected as the study area. The land area under this Upazilla is 49210.20 ha. Total cultivated land is 40940 hectares out of which single cropped area is 17685 hectares, doubled cropped area is 16800 hectares and tripled cropped area is 6045 hectares. The cropping intensity is 199.35 percent. The main crops cultivated in this Upazilla are Rice, Vegetables, and Watermelon etc. The villages were selected from four Unions namely Nilganj, Mithaganj, Baliatoli, Dhulasar, Latachapli and Lalua. The design of the study was a descriptive survey research. It was designed to describe the relationship between selected characteristics of the farmers and effectiveness of agricultural training of Nobojibon Project. Efforts also were also made to identify the barriers or problems of participants to make the training effective. Data were collected by an interview schedule with selected sample respondents rather than the whole population. All the farmers who received agricultural training from Nobojibon Project of Kalapara Upazilla constituted the population of this study. To make a representative sample, 15 percent of the farmer was selected through random sampling technique. Thus, one hundred and twenty farmers were selected as sample from a total of 800 farmers. For the study, data were collected by means of interview with the sample farmers. Data were collected during the period from 01 March' 2015 to 15 April' 2015. All possible efforts were made to explain the purpose of the study to respondents in order to get valid and pertinent information from them. In this study selected individual characteristics of the farmers were considered as independent variables; which are, Age, Education, Farm size, Annual family income, Organizational participation, Communication/Media exposure, Innovativeness, Economic Motivation, Cosmopoliteness and Commercialization. Effectiveness of the agricultural training of Nobojibon Project was considered as dependent variables of this study. After the collection of data, all information contained in the interview schedule was edited. Data were transferred to coding sheet with numerical scores given to each question. Simple statistics like frequency, percentage, mean, range, standard deviation and rank order were used to interpret the descriptive data. The SPSS20 computer programs were used to perform the data analysis. Correlation of coefficient test was used to determine the relationship between the selected characteristics of the farmers and the effectiveness of agricultural trainings.

3 RESULTS AND DISCUSSION

3.1 SELECTED CHARACTERISTICS OF THE FARMERS

The findings of the selected characteristics of farmers (namely, age, level of education, farm size, annual family income, organizational participation, communication exposure, innovativeness, economic motivation, cosmopoliteness and commercialization) on use effectiveness of agricultural training are presented below.

Age: The observed age of the farmers ranged from 19 to 70 years. The mean age was 38.47 years with standard deviation of 10.96. The farmers are classified into three categories and distribution of the respondents is shown in Table 1. Analysis of data indicate that the highest portion (49.17 percent) of the respondents fell in the young category while 38.33 percent and 12.5 percent respondents fell in middle and old age category respectively. Thus 87.5 percent of the respondents fell in the young to middle age category. Noor and Dola [11] also observed bigger chunk of the farmers representing a total of 190 or 58.8% young adult's farmers to be of 40 years and below. Therefore, it is expected that effectiveness of training would be reflected more in the young to middle age group compared to old age group.

Table 1. Distribution of respondents by their age scores

Categories (years)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Young (< 35)	59	49.17	38.47	10.96
Middle-aged (36-50)	46	38.33		
Old (>50)	15	12.5		
Total	**120**	**100**		

Education: The year of schooling of the farmers ranged from 0 to 12 and the mean was 5.84 with standard deviation of 2.77. On the basis of scores obtained, the respondents were grouped according to national standard of classification. The categories and distribution of the respondents with their number, percent, mean and standard deviation are shown in Table 2.

Table 2. Distribution of respondents by their years of schooling scores

Categories (years)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
No Education	02	1.67	5.84	2.77
Primary (1-5)	71	59.17		
Secondary (6-10)	43	35.83		
Higher secondary (11-12)	4	3.33		
Total	**120**	**100**		

Analysis of data indicate that highest portion (59.17 percent) of the respondents had primary education, while 35.83 percent had secondary level of education and only 3.33 percent had higher secondary level of education. The majority of the farmers were found literate (from primary level to above secondary level). Education helps an individual to get useful information for solving their various problems by reading newspaper, books, leaflets and observing through various media like demonstration, film show, exhibition etc. Now-a-days there is a great scope of being benefited from different kinds of printed materials which can reach easily to the educated farmers.

Farm size: The farm size of the farmers in the study area varied from 0.006 to 1.27 hectares. The average farm size was 0.21 with standard deviation 0.19. Based on their farm size scores, the farmers were classified into three categories and shown in Table 3 with number, percent, mean and standard deviation. Data computed in the Table 3 show that the highest proportion (66.67 percent) of the respondents had small farm as compared to 31.67 percent medium sized farm and 1.66 percent of the respondents fell in large farm category. Only 1.66 percent of the farmers had big farm. Thus, almost all the farmers possessed medium and small farm. Noor and Dola [11] also found majority of small farmers during their case study. This finding also has the similarity with findings of Islam [12]. In Bangladesh small farmers live on a subsistence level and this may be one of the vital reasons for their low motivation towards adoption of improved farming practices in their farm.

Table 3. Distribution of respondents by their farm size scores

Categories (ha)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Marginal (0.02-0.19)	22	18.33	0.21	0.19
Small (0.02-1.00)	58	48.33		
Medium (1.01-3)	38	31.67		
Large (>3)	02	1.67		
Total	**120**	**100**		

Annual family income: Annual family income of the respondent was measured in 'thousand Taka' per year. It was ranged from 65 to 695 with an average of 234.91 and standard deviation of 136.97. The distribution of the farmers in different categories on the basis of their annual income has been shown in Table 4 with number, percent, mean and standard deviation. It is observed that the highest proportion (75 percent) of the respondents had low income while 18.33 percent, 6.67 percent had medium and high income respectively. Since the greater proportion (75 percent) of the farmers had low annual family income, it is logical to assume that they might have very low access to modern high cost technologies. This is so because income is associated with purchasing power of an individual. This may lead to the farmers not to use more modern cultural practices and ultimately training will be less effective by them. The gross annual income of a farmer is an important indicator of how much he can invest in his farming. Naturally, the person with more annual income can invest more in his farming and as a result he may adopt more modern technologies. Farmers with low annual income generally invest less in their farms. It is therefore, a considerable portion of the farmers face difficulty in following standard recommendation due to less economic ability of the farmers.

Table 4. Distribution of respondents by their annual family income scores

Categories (Taka '000')	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Low (≤275)	90	75	234.91	136.97
Medium (276-485)	22	18.33		
High (>485)	8	6.67		
Total	**69**	**100.0**		

Organizational participation: The organizational participation scores of the respondents ranged from 4 to24, the mean and standard deviation were 9.09 and 6.94 respectively. The respondents were classified into three categories. The categories and distribution of the respondents are shown in Table 5 with their number, percent, mean and standard deviation.

Table 5. Distribution of respondents by their organizational participation scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Poor Participation (≤11)	88	73.33	9.09	6.94
Medium Participation (12-20)	27	22.5		
High Participation (≥20)	5	4.17		
Total	**120**	**100**		

Analysis of data indicate that the highest proportion (73.33 percent) of the respondents fell in the poor participation category while 22.5 percent and 4.17 percent respondents fell in medium and high organizational participation category respectively. Organization participation of a farmer was quantified by membership in different organization for a particular period of time. A great majority of the farmers in the study area were found to have poor participation. Participation in different organizations brings an individual to come in contact with persons of different occupational and social status. This may broaden his outlook and vision. Organizational participation helps in identifying the problems and find out their solution. Informal exchange of ideas in organizational participation helps in decision making on various issues including farming. Knowledge, skills, leadership capacities etc of a farmer might be improved as a result of organizational participation.

Communication Exposure: The communication exposure of the respondents in the study area ranged from 8 to 42 and the mean was 21.18 with standard deviation of 8.04. The distribution of the respondents in different categories on the basis of their media exposure has been shown in Table 6 with number, percent, mean and standard deviation. The highest proportion (49.17 percent) of the respondents had medium communication exposure as compared to 36.66 percent low and 14.17 percent low communication exposure. Communication exposure is important for receiving up to date farm information. Overwhelming portion (85.83%) of the respondents had low to medium communication exposure. The poor communication exposure to various sources of information is likely to be the root cause of inadequate knowledge. Noor and Dola [11] also reported increasing of farmers in networking (27% of the respondents) after the training.

Table 6. Distribution of respondents by their communication exposure scores

Categories (years)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Low (<17)	44	36.66	21.18	8.04
Medium (18-29)	59	49.17		
High (>29)	17	14.17		
Total	**69**	**100**		

Innovativeness*:* The innovativeness of the respondents in the study area ranged from 3 to 18 and the mean was 9.84 with standard deviation of 3.47. The distribution of the respondents in different categories on the basis of their innovativeness has been shown in Table 7 with number, percent, mean and standard deviation. Analysis of data indicate that the highest

proportion (50 percent) of the respondents fell in the moderately innovative category while 37.5 percent fell in less innovative and 12.5 percent in the highly innovative category respectively.

Table 7. Distribution of respondents by their innovativeness scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Less Innovative (≤8)	45	37.5	9.48	3.47
Moderately Innovative (09-13)	60	50		
Highly Innovative (>13)	15	12.5		
Total	**120**	**100**		

Economic Motivation: The economic motivation of the respondents in the study area ranged from 15 to 31 and the mean was 22.79 with standard deviation of 3.27. The distribution of the respondents in different categories on the basis of their economic motivation has been shown in Table 8 with number, percent, mean and standard deviation. Analysis of data indicate that the highest proportion (66.67 percent) of the respondents fell in the moderately motivated category while 30 percent fell in highly motivated and 3.33 percent in the less motivated category respectively. Thus more than three-fourth (96.67 percent) of the farmers had medium to high economic motivation. This means, farmers at large keenly interested to maximize economic gain from farming. The economic motivation helps farmers to make decisions to adopt and continue practicing improved technology for making economic gain from farming. The economic motivation is a positive force towards change and more particularly for farming. Although majority of the farmers was economically motivated to maximize profit from their farming activities. The economic motivation of the farmers creates an atmosphere of communication and information in the farming communities. For getting economic benefit from farming the farmers try to increase their knowledge, skill and improved adoption behavior. Hence it is expected that economic motivation of the farmers might increase the knowledge, skill and practice of technology appropriately and ultimately training will be more effective.

Table 8. Distribution of respondents by their economic motivation scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Less Motivated (≤16)	4	3.33	22.79	3.27
Moderately Motivated (17-24)	80	66.67		
Highly Motivate (≥25)	36	30		
Total	**120**	**100**		

Cosmopoliteness: The Cosmopoliteness of the respondents in the study area ranged from 02 to 12 and the mean was 6.19 with standard deviation of 2.63. The distribution of the respondents in different categories on the basis of their Cosmopoliteness has been shown in Table 9 with number, percent, mean and standard deviation.

Table 9. Distribution of respondents by their Cosmopoliteness scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Less Cosmopolite (≤6)	65	54.17	6.19	2.63
Moderately Cosmopolite (7-10)	50	41.67		
Highly Cosmopolite (>10)	5	4.16		
Total	**120**	**100**		

Analysis of data indicate that the highest proportion (54.17 percent) of the respondents fell in the less cosmopolite category while 41.67 percent fell in moderately cosmopolite and 4.16 percent in the highly cosmopolite category respectively. Thus more than three-fourth (95.84 percent) of the farmers had low to moderate cosmopoliteness. Cosmopoliteness has favorable effect on knowledge, skill and practice of recommended technology which is ultimate training effectiveness. Through visiting different locations one can see others using several technologies which will encourage him to

do so. Visiting several locations broaden one's outlook. Thus cosmopoliteness might be a strong factor for training effectiveness.

Commercialization: The score for commercialization of the respondents in the study area ranged from 00 to 96 and the mean was 53.81 with standard deviation of 28.14. The distribution of the respondents in different categories on the basis of their commercialization has been shown in Table 10 with number, percent, mean and standard deviation. Analysis of data indicate that the highest proportion (45 percent) of the respondents fell in the highly commercial category while 31.67 percent fell in moderately commercial and 23.33 percent in the "no" to "less commercial" category respectively. Thus about three-fourth (76.67 percent) of the farmers had medium to high commercialization. The farmers having more commercial tendency have more urged to use latest technologies**.** So, commercialization has favorable effect on knowledge gaining**,** skill developing and practice of recommended technology which is ultimate training effectiveness.

Table 10. Distribution of respondents by their commercialization scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
No Commercialization (0)	11	9.16	53.81	28.14
Less Commercial (≤32)	17	14.17		
Moderately Commercial (33-66)	38	31.67		
Highly Commercial (>66)	54	45		
Total	**120**	**100**		

3.2 RELATIONSHIPS BETWEEN INDEPENDENT AND DEPENDENT VARIABLES

The selected independent variables included age, years of schooling, farm size, annual family income, organizational participation, communication exposure, innovtiveness, economic motivation, cosmopoliteness and commercialization. The dependent variable was effectiveness of agricultural trainings. Pearson's product moment co-efficient of correlation 'r' was used to test the null hypothesis concerning the relationships between two variables. Five percent level of probability (0.05) was used as the basis for rejection of null hypothesis. The results of the test of co-efficient of correlation between the independent and dependent variables have been shown in Table 11. However, the relationships have been presented in the following sub-sections dealing with one of the characteristics of the farmers with their effectiveness of agricultural trainings.

Table 11. Correlation between independent and dependent variables

Dependent variable	Independent variables	Computed 'r' values
Effectiveness of Agricultural Training as Perceived by Participant Farmers	Age	-0.025^{NS}
	Level of Education	0.103^{NS}
	Farm size	0.277**
	Annual Income	0.141^{NS}
	Organizational participation	0.113^{NS}
	Communication Exposure	0.376**
	Innovativeness	0.283**
	Economic Motivation	0.254**
	Cosmopoliteness	0.238**
	Commercialization	0.344**

**Significant at 5 percent level of probability*
*** Significant at 1 percent level of probability*
NS: Not Significant

Age and Effectiveness of Training: The relationship between age of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between age of the farmer and their effectiveness of training." The computed value of the coefficient of co-relation between the concerned variables was found to be -0.025 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=-0.025) found to be smaller than the tabulated value with 118 degrees of freedom at 0.05 level of probability.
b) The null hypothesis was accepted.
c) The trend of relationship between the concerned variables was negative.
d) The relationship between the two variables was not significant.

Based on above findings it may be concluded that the age of the farmers had no significant relation with effectiveness. This finding indicated that with the increased age of the farmers, there was a corresponding decrease in their training effectiveness. Sharif [13] also found no significant relationship between age of the respondents and training effectiveness in his respective study. Thus the present findings show consistency with findings of previous studies.

Education and Effectiveness of Training: The relationship between educational qualification of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between educational qualification of the farmer and their effectiveness of training." The computed value of the coefficient of co-relation between the concerned variables was found to be 0.103 as shown in the table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.103) found to be smaller than the tabulated value with 118 degrees of freedom at 0.05 level of probability.
b) The null hypothesis was accepted.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was not significant.

Based on above findings it may be concluded that the educational qualification of the farmers had no significant relation with effectiveness. This finding also indicated that with the increased educational qualification of the farmers, there was a corresponding increase in their training effectiveness. Sharif [13] also found no significant relationship between age of the respondents and training effectiveness in his respective studies. Thus the present findings show consistency with findings of previous studies.

Farm Size and Effectiveness of Training: The relationship between farm size of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between farm size of the farmer and their effectiveness of training." The computed value of the coefficient of co-relation between the concerned variables was found to be 0.277 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.277) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the farm size of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmer having large farm were more likely to perceive training effectively. Akter [14] also found significant relationship between farm size of the respondents and training effectiveness in her respective studies. Sharif [13] also found significant relationship between farm size of the respondents and training effectiveness in his respective studies. Thus the present findings show consistency with findings of previous studies.

Annual Income and Effectiveness of Training: The relationship between annual family income of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between annual family income of the farmer and their effectiveness of training." The computed value of the coefficient of co-relation between the concerned variables was found to be 0.141 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.141) found to be smaller than the tabulated value with 118 degrees of freedom at 0.05 level of probability.
b) The null hypothesis was accepted.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was not significant.

Based on above findings it may be concluded that the annual family income of the farmers had no significant relation with effectiveness. This finding also indicated that with the increased annual family income of the farmers, there was a

corresponding increase in their training effectiveness. Sharif [13] also found no significant relationship between annual family income of the respondents and training effectiveness in his respective studies.

Organizational Participation and Effectiveness of Training: The relationship between organizational participation of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between organizational participation of the farmer and their effectiveness of training." The computed value of the coefficient of co-relation between the concerned variables was found to be 0.113as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.113) found to be smaller than the tabulated value with 118 degrees of freedom at 0.05 level of probability.
b) The null hypothesis was accepted.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was not significant.

Based on above findings it may be concluded that the organizational participation of the farmers had no significant relation with effectiveness. This finding also indicated that with the increased organizational participation of the farmers, there was a corresponding increase in their training effectiveness. Sharif [13] also found no significant relationship between organizational participation of the respondents and training effectiveness in his respective studies.

Communication exposure and Effectiveness of Training: The relationship between communication exposure of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between communication exposure of the farmer and their effectiveness of training. The computed value of the coefficient of co-relation between the concerned variables was found to be 0.376 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.376) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the communication exposure of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmer having more communication exposure were more likely to perceive training effectively. A farmer may get required information from various communication sources such as mass media, individual contact, poster, papers, group discussion, training, farmers' field days etc. the farmers having more frequent contact with several types of information sources are getting more scopes to gain knowledge on different technologies. So it can be said the higher the communication exposure, the higher would be the perception of effective training. Sharif [13] also found significant relationship between communication exposure of the respondents and training effectiveness in his respective studies. Thus the present findings show consistency with findings of previous studies. Fardous [15] found that media exposure of the farmers had significant positive relationships with training effectiveness in their respective studies. Akter [14] found that media exposure of the farmers had significant positive relationships with training effectiveness their respective studies.

Innovativeness and Effectiveness of Training: The relationship between innovativeness of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between innovativeness of the farmer and their effectiveness of training. The computed value of the coefficient of co-relation between the concerned variables was found to be 0.283 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.283) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the innovativeness of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmer having more innovativeness were more likely to perceive training effectively. Innovative farmers have a fertile mind to receive any message very fast. They have curiosity to test anything firstly than others. They are always seeking something newer, something better than present, and something more effective

than they have. That's why innovative farmers make the training effective by adopting most of all technologies rapidly. Akter [14] found that innovativeness of the farmers had significant positive relationships with training effectiveness in her respective study.

Economic Motivation and Effectiveness of Training: The relationship between economic motivation of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between economic motivation of the farmer and their effectiveness of training. The computed value of the coefficient of co-relation between the concerned variables was found to be 0.254 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.254) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the economic motivation of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmers were more economically motivated were more likely to perceive training effectively. Economic motivation attaches greater importance to profit maximization on immediate or long run basis. Modern varieties along with recommended improved cultural practices deserve huge scope of profit maximization. Economic motivation of a famer is one of the pre-requisite conditions for improving farming behavior such as knowledge, skill, attitude and adoption of technologies. Economically motivated farmers have more intention to search new improved technologies always. To get economic benefit such farmers increase their contacts with different information sources for searching new technologies. They provide more attention to any new message and try out them accordingly. Hence it is expected that the economic motivation of the farmers might increase the effectiveness of training. Sharif [13] also found significant relationship between economic motivation of the respondents and training effectiveness in his respective studies. Thus the present findings show consistency with findings of previous studies.

Cosmopoliteness and Effectiveness of Training: The relationship between cosmopoliteness of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between cosmopoliteness of the farmer and their effectiveness of training. The computed value of the coefficient of co-relation between the concerned variables was found to be 0.238 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.238) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the cosmopoliteness of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmers were more cosmopolite was more likely to perceive training effectively. Cosmopoliteness has favorable effect on knowledge, skill and practice of recommended technology which is ultimate training effectiveness. Through visiting different locations one can see others using several technologies which will encourage him to do so. Visiting several locations broaden one's outlook. Thus cosmopoliteness might be a strong factor for training effectiveness.

Commercialization and Effectiveness of Training: The relationship between commercialization of the farmers and their effectiveness of training was determined by the hypothesis "there is no relationship between commercialization status of the farmer and their effectiveness of training. The computed value of the coefficient of co-relation between the concerned variables was found to be 0.344 as shown in the Table 11 and following observations were made regarding the relationship between two variables.

a) The computed value of "r"(r=0.344) found to be larger than the tabulated value with 118 degrees of freedom at 0.01 level of probability.
b) The null hypothesis was rejected.
c) The trend of relationship between the concerned variables was positive.
d) The relationship between the two variables was significant.

Based on above findings it may be concluded that the commercialization status of the farmers had significant & positive relationship with effectiveness of training. It indicates that farmers were more commercial were more likely to perceive training effectively. Commercialization increases the urge for more production as well as more implementation of modern technologies. Generally a farmer, who produces crops in a commercial scale, will take care more to produce more with minimum production cost. These types of farmers are more potential farmer to receive any training effectively.

3.3 RELATIONSHIPS BETWEEN INDEPENDENT AND DEPENDENT VARIABLES

The score for Effectiveness of Training of the respondents in the study area ranged from 83 to 244 and the mean was 163.66 with standard deviation of 35.05. The distribution of the respondents in different categories on the basis of their commercialization has been shown in Table 12 with number, percent, mean and standard deviation.

Table 12. istribution of respondents by their training effectiveness scores

Categories (score)	Farmers		Mean	Sd. dev.
	Frequency	Percent		
Less Effective (≤137)	33	27.5	163.66	35.05
Moderately Effective (138-191)	61	50.83		
Highly Effective (>192)	26	21.67		
Total	**120**	**100**		

Analysis of data contained in Table 12 indicate that the highest proportion (50.83 percent) of the respondents fell in the Moderately Effective category while 27.5 percent fell in Less Effective and 21.67 percent in the Highly Effective category respectively. Thus more than three-fourth (72.50 percent) of the farmers had medium to high effectiveness of training. On the other hand less than one fourth of the respondent fell in less effective category.

3.4 PROBLEMS FACED BY FARMERS

Through interview schedule researcher enlisted and ranked five main problems which were faced by the participant farmers and which might be the hindrance to make the training effective.

Table 13. Distribution of Problems faced farmers in a rank order

SL	Problem	Rank
01	Salinity of soil and water.	1
02	Scarcity of sweet water about six month of a year.	2
03	Small scale farming.	3
04	Unstable weather of coastal area.	4
05	Regular high tide inundates the vegetables field.	5

4 CONCLUSION

In Bangladesh, almost all of the ongoing development programs are Training based. They are spending a greater portion of their budget for farmers training. Since the study tries to address the problems related to inadequacies of the process at all levels, especially at grass root levels, and as no study was undertaken in the region concerning the issue, it is hoped that this study will be relevant and will make significant contribution. Size of the farm is an important factor for increasing effectiveness of training. When in a training small farmer and large farmers sit together, that training definitely will not effective for any one side. So training should be for homogeneous farmers regarding farm size and training contents also must be farmers specific. Farmers shared that at Kalapara saline water is the main obstacle for agricultural activities. Fresh water is unavailable about 7-9 months of a year. So authority should launch several projects for conserving fresh water. If the farmers get fresh water over the year round the cropping intensity will be increase at a remarkable stage. Kalapara Upazilla is one of the most disaster prone areas in southern Bangladehs. So farmers need appropriate adaptive technologies against natural disasters. The farmers who are more economically motivated stated the training as effective. There was a significant relationship between economic motivation and effectiveness of training. So authority should emphasize to increase

economic motivation of the farmers. This can be done during training by lecture and in training follow up through household visit by change agents. In this study only twenty technologies were considered while conducting such studies in the future, the other aspects might be included. To make training effective the trainer or change agent attributes are the crucial factors which were not included in this study. In future it should be considered. This study considered only 10 characteristics of the farmers. There might be other characteristics which might have relationship with effectiveness of training of the farmers. Further studies may be conducted with variables other than these 10 characteristics. The study was conducted at Kalapara Upazilla of Patuakhali district. Similar studies might be carried out in other areas of Bangladesh.

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