

Effectiveness of Training on Project Management

Mohammed Hasan Tarik

PhD Researcher, Bangladesh University of Professionals

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Abstract: Training is the significant approach for human resource development which creates new skill in employees and contributes in achieving organizational objectives. Project Management training is extremely mandatory for improving the performance of development projects for accelerating the socio-economic development of Bangladesh. The objective of the study was to evaluate the effectiveness of Project Management training courses of NAPD examined in the light of Kirkpatrick's (1996) four levels of training evaluation model which are reaction, learning, behavior and result. The study is mainly confirmatory in nature because an in-depth analysis of data was performed to validate the Kirkpatrick model. The study followed mixed method approach comprising of quantitative and qualitative techniques. The study found that the trainees provided positive response about the training arrangements and management of NAPD, they have gained sufficient knowledge about the different modules of the Project Management training courses, the trainees developed the capacity to demonstrate the improved job behavior in their respective workplaces and they could apply the gained knowledge appropriately in the workplaces and most of them utilized the specific knowledge of Project Management in different phases of Project Management. It can be conferred that Project Management training courses organized by NAPD are considered to be effective.

Keywords: Training, Training Effectiveness, Project Management.

1. INTRODUCTION

Effective training specifies the improvement of job performance through the application of skills learned during training (Holton & Baldwin, 2003). It also involves fulfilling the conditions of employee's performance (Baldwin & Ford, 1988). Arsanmi et al. (2012) identifies that skills transfer is computable with the effective utilization of learning (skills and knowledge) in tasks environment. Rehmat et al. (2015) emphasizes on human resource development, skill generation and fulfilling organizational target by training. Goldstein & Ford (2002); Aamdor (2012) defined training as "the systematic acquisition of skills, concepts, or attitudes that must result in improved performance of the trainee". Rehmat et al. (2015) stated that training equips the employee with the unique knowledge and skill to perform the job in the desired standard. ASTD (2005) illustrates that training provides many benefits and gradually it is becoming a huge industry around the globe. Training is a continuous process to develop skill of individual staff of an organization but this development system should be aligned with the organizational strategy. Effectiveness identifies whether in any organization training gives significant input on employee's knowledge and skill so that they can perform in perfect manner. Effectiveness of training is a measure of the achievement of the intended outcomes of the training (Kraiger et al., 1993). The outcomes of this research are anticipated to contribute in re-shaping the contents and methods of the Project Management training courses so it organizes to make them more effective and useful for the participants. The purpose of this research is to modify the training courses in an efficient manner. As a result of which the participating officers can utilize the gained knowledge of the training in their respective workplace for the successful attainment of the development projects of Bangladesh.

2. METHODS

The study followed mixed method approach comprising of quantitative and qualitative techniques. Primary and secondary data were collected to conduct the study. Questionnaire tool was used to collect the primary data. Some qualitative techniques were also used like FGD and KII to validate the items of Pilot study. Taking the expert opinion from FGD and KII items of the questionnaire have been finalized. The study is mainly confirmatory in nature because an in-depth analysis of data was performed to validate the Kirkpatrick model. To collect data, purposive sampling technique was used. For this purpose, the target population was divided into different levels (i.e. trainees, trainers, nominating authorities, organizers of training institutes/universities and potential trainees) based on training system. Then the trainees of four different project management courses were selected based on different years (2012-2016). At the second phase of the sample selection the researcher tried to conduct census for determining the sample. But due to the dispersed location of Govt. offices and non-availability and posting of the trainees the purposive sampling technique was used. Reliability analysis was conducted for ensuring the goodness of measures. For the determination of the reliability of all the scales this analysis was accomplished by using Cronbach’s alpha method. Data processing and analysis were done using SPSS 22 and MS excel software. Smart PLS 3.0 software was used for hypotheses testing. To analyze the effectiveness of the Project Management training courses, the researcher used four stages of the Kirkpatrick’s (2006) model which are reaction, learning, behavior and result.

3. RESULTS

Assessing training effectiveness using Kirkpatrick’s model

Trainee’s reaction about the training

Perspectives of Kirkpatrick’s Model	Modules	Strongly Agree n(%)	Agree n(%)	Indifferent n(%)	Disagree n(%)	Strongly Disagree n(%)
Reaction of the trainees	NAPD has satisfactory institutional facilities for the course.	71(34.1)	130(62.5)	5(2.4)	1(0.5)	1(0.5)
	Trainers use the most effective methods for creating interest for learning.	38(18.3)	133(63.9)	25(12)	12(5.8)	0(0.0)
	I recommend my colleagues to undertake such courses	97(46.6)	91(43.8)	14(6.7)	3(1.4)	3(1.4)
	NAPD maintains its schedule appropriately for the participants.	67(32.2)	119(57.2)	21(10.1)	0(0.0)	1(0.5)
	Project Management Courses organized by NAPD are important for my career	102(49.0)	82(39.4)	20(9.6)	3(1.4)	1(0.5)

For evaluating the effectiveness of the Project Management training courses in the light of Kirkpatrick’s model, first level is reaction which was measured by taking feedback of the trainees. The trainees provided their feedback on institutional facility, trainer quality, recommend to others, training schedule, method, schedule, material, location, cost, duration of the training and advertisement system in a likert scale of five different points. Table provides responses of the trainees in respect of reaction about the training. It is evident from the table that most (62.5%) of the trainees agreed that NAPD has satisfactory institutional facility. Significant portions (34%) of the trainees strongly agreed to this point. 2.4% of the trainees were indifferent to this point. Almost 64% of trainees agreed that trainers use the most effective methods for creating interest for learning. 18% of the trainees strongly agreed to this point. On the other hand 12% of the trainees were indifferent to this point and almost 6% of the trainees were disagreed to this statement. About 44% of the trainees agreed that they would

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recommend their colleagues to undertake such training courses. Most (about 47%) of the trainees strongly agreed to this point. Almost 7% of the trainees were indifferent to this point. Majority (57%) of the trainees agreed that NAPD maintains its schedule appropriately for the participants. A significant portion (32%) of them strongly agreed to this point. 10% of the trainees was indifferent to this point. Most of the trainees (49%) strongly agreed that Project Management Courses organized by NAPD are important for their career. Many of them (39%) agreed to this point. About 10% of the trainees were indifferent to this point. It is evident from the survey that the trainees provided positive responses about the training arrangements and management of NAPD. It can be inferred from the analysis that NAPD is providing adequate facilities and congenial environment for the trainees for organizing Project Management training courses.

Trainees learning from the training

Perspectives of Kirkpatrick's Model	Modules	Strongly Agree n(%)	Agree n(%)	Indifferent n(%)	Disagree n(%)	Strongly Disagree n(%)
Learning of the trainees	I have clear understanding of the content conceptual and administrative framework of Planning of the course	49(23.6)	134(64.4)	18(8.7)	7(3.4)	0(0.0)
	I have clear idea of the content Project Formulation and Financing of Project of the course	46(22.1)	126(60.6)	26(12.5)	10(4.8)	0(0.0)
	I have conceptualized the content techniques of Project Appraisal of the course	44(21.2)	134(64.4)	20(9.6)	10(4.8)	0(0.0)
	I have gathered knowledge of the content Project Implementation of the course	55(26.4)	128(61.5)	13(6.3)	11(5.3)	1(0.5)
	I have acquired knowledge of the content Project Monitoring and evaluation of the course	51(24.5)	128(61.5)	24(11.5)	5(2.4)	0(0.0)
	I have gathered new knowledge from this course	93(44.7)	101(48.6)	12(5.8)	2(1.0)	0(0.0)

The 2nd level of evaluation is learning assessment for measuring the training effectiveness in the light of Kirkpatrick's model. In this level knowledge acquisition level is assessed by taking trainee's feedback about contents of the curriculum. Table outlines the trainees learning from the Project Management training courses organized by NAPD. This segment elaborates understanding of the trainees about the different modules of the courses are assessed by recording their feedback. It is evident from the table that most of the trainees (64%) agreed that they have clear understanding of the content of conceptual and administrative framework of Planning of the course. A considerable number of the trainees (nearly 24%) strongly agreed to this statement. Almost 9% of the trainees were indifferent to this opinion. 3% of the trainees disagreed to this point. Majority of the trainees (almost 61%) agreed that they have clear idea of the content Project Formulation and Financing of Project of the course. A significant number of them (22%) strongly agreed to this opinion. 12% of the trainees were indifferent to this point. Almost 5% of the trainees disagreed to this statement. Maximum number of the trainees (64%) agreed that they have conceptualized the content techniques of Project Appraisal of the course. A considerable number of the trainees (21%) strongly agreed to this opinion. Nearly 10% of the trainees were indifferent to this point. 5% of the trainees disagreed with this opinion. Majority of the trainees (61%) agreed that they have gathered knowledge of the content Project Implementation of the course. A significant portion of the trainees (26%) strongly agreed to this opinion. 6% of the trainees were indifferent to this point. 5% of the trainees disagreed with this statement and 0.5% of the trainees strongly disagreed to this point. Most of trainees (61%) agreed that they have acquired knowledge of the content Project Monitoring and evaluation of the course. A considerable number of the trainees (24%) strongly agreed to this statement. 11% of the trainees were indifferent to this opinion. 2% of the trainees disagreed to this point. Majority of the trainees (48%) agreed

that they have gathered new knowledge from this course. A substantial portion (almost 45%) of the trainees strongly agreed to this statement. Nearly 6% of the trainees were indifferent to this opinion. Almost 1% of the trainees disagreed to this point. It can be concluded from the analysis that majority of the trainees mentioned that they have gathered sufficient knowledge from the different modules of the training course. Some of the trainees have difference of opinion. They were not able to grasp the concepts clearly. So NAPD need to improve the course curriculum and design for the better understanding of the concepts of Project Management training courses.

Work behavior of the trainees of the Project Management Courses

Perspectives of Kirkpatrick's Model	Factors	Strongly Agree n(%)	Agree n(%)	Indifferent n(%)	Disagree n(%)	Strongly Disagree n(%)
Behavior	I have used the materials after participating in the training course	44(21.2)	126(60.6)	23(11.1)	14(6.7)	1(0.5)
	I believe imparted knowledge is useful for my organization	74(35.6)	113(54.3)	16(7.7)	4(1.9)	1(0.5)

Table illustrates the work behavior of the trainees of the Project Management Courses. It is apparent from the table that most of the trainees (almost 61%) agreed that they have used the training materials after participating in the Project Management training courses. Training materials consist of the lecture sheets of the training course containing tools and techniques of Project Management. So utilization of the materials represents their improved work behavior. A significant portion (21%) of the trainees strongly agreed to this statement. 11% of the trainees was indifferent to this point. Nearly 7% of the trainees disagreed to this opinion. About 1% of the trainees strongly disagreed to this statement. Majority of the trainees (54%) agreed that they believe imparted knowledge is useful for their organizations which identify that after getting training in Project Management from NAPD they are capable to contribute in their respective job situation. A significant portion (almost 36%) of them strongly agreed to this statement. Nearly 8% of the trainees were indifferent to this opinion. About 2% of the trainees disagreed to this point and 0.5% of the trainees disagreed to this opinion. It is apparent from the discussion that majority of the trainees gained the capacity to demonstrate improved job behavior in the workplace. Some of the trainees have difference of opinion. They could not utilize the gained knowledge properly. So NAPD need to improve the program structure to resolve the situation.

Result revealed by the trainees in their workplaces

Perspectives of Kirkpatrick's Model	Factor	Strongly Agree n(%)	Agree n(%)	Indifferent n(%)	Disagree n(%)	Strongly Disagree n(%)
Result	Applied knowledge is more appropriate than before	70(33.7)	117(56.3)	19(9.1)	2(1.0)	0(0.0)

Table illustrates the result revealed by the trainees in their workplaces. It is deceptive from the table that maximum portions of the trainees (56%) agreed that their applied knowledge of Project Management in their workplaces is more appropriate than before the training. Almost 34% of the trainees strongly agreed to this opinion. 9% of the trainees were indifferent to this statement. 1% of the trainees disagreed to this point. So it can be conferred that most of the trainees could apply the gained knowledge appropriately in the workplace. Some of them could not utilize the knowledge properly. So NAPD needs to overcome this issue.

Knowledge utilization area of the trainees in the workplaces

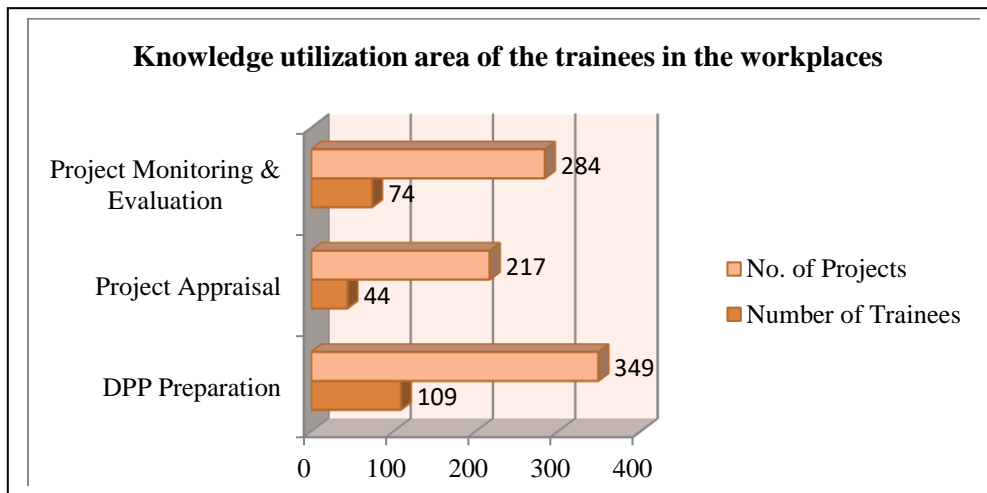


Figure outlines the knowledge utilization areas of the trainees in the workplaces. It is vivid from the graph that among the trainees who could utilize the gained knowledge in the workplaces, majority of the trainees (109) were engaged in DPP preparation of their organizations. It is remarkable that they were involved with DPP preparation of 349 projects. Many of the trainees (74) were involved with the project monitoring and evaluation of 284 projects. This is also a quite a big number of projects. A significant number of the trainees (44) were involved with the project appraisal of 217 projects. So it can be conferred from the analysis that the trainees were involved with the different phases of the project with a huge number of projects after receiving the training on Project Management courses of NAPD.

4. DISCUSSION

The development of Bangladesh depends on the successful attainment of the development projects. Hamiduzzaman (2012) illustrated that successful implementation of project is vital for socio-economic development of the developing countries like Bangladesh. All the government, semi-government and autonomous organizations are directly conducting various development projects. Efficient management and implementation of a plan is very much crucial for a developing economy like Bangladesh. For this reason project management is an important problem area for Bangladesh. After critical review of the literature it is found that many development projects were incomplete or abandoned and many of the projects faced time and cost overrun in Bangladesh. Rahman and Bach (2015) identified that there are some deficiency in project planning phase in public sector projects than the private sector projects. Hamiduzzaman (2012) revealed that planning and managing development projects have been considered as one of the foremost dilemmas in developing countries like Bangladesh. Ahmed (2010) identified that Project management inefficiency and deficiency of human resource development are identified as the major reasons for failure and lower speed of project implementation. Successful accomplishment of development projects depends upon the expertise of the project management professionals which can be achieved through proper training. The capacity development through effective Project Management training courses can create a positive impact on the project success as well as country's development. Whether training is not operative, skill and expertise will not be developed which will ultimately hamper projects' success. It is needed to assess whether the learning atmosphere created by the training organization is successful or not, whether any skill or expertise has been developed or not. For developing a project and implementing it in an efficient manner, Project Management training is a vital instrument. Sindhvad (2009) identified that training plays a significant role in Project Management performance. Project Management training thus, enhances project's quality. Ahmed (2010) depicted that the project personnel must have training for proper Annual Development Program implementation. To explore the gap between training & work practices training evaluation is necessary. Currently it is a prime agenda for the National Academy for Planning and Development to assess the training courses on Project Management to identify the efficacy of the programs. Nageswaramma & Padmaja (2017) stated that there is great need to evaluate the training program as organizations are increasingly adopting training programs. Borate et al. (2014) identified that training effectiveness assessment is conducted to observe how well the goals have been achieved and whether it is the best method to accomplish the goals. There is a close link between projects' success and development of the country because projects are implemented to serve specific purposes of the organizations and for delivering

specifically defined benefits. Successful implementation of development projects lead to socio-economic development of Bangladesh. Literature suggests that Bangladesh faces challenges in implementing projects of national and international sectors (Ahuja et al., 1994). Lower speed of Annual Development Program (ADP) implementation occurs owing to the gap in coordination and policy formulation. Lack of skilled manpower is considered as one of the key reasons which affect the performance of projects of development sector ultimately causes time and cost overrun of the projects. So it is a prime need for skilled project management professionals in the govt. organizations for overall development of the country. Expertise in project management can contribute to improved project implementation. Capacity building through Project Management training is a vital agenda for successful Project Implementation. Paris Declaration had also put emphasis on capacity building for success of the development interventions (Rehman et al., 2011). Training contributes positively on the employees' enactment by the development of the knowledge, skill and attitude. To measure the training effectiveness using Kirkpatrick's (1996) model the first level of evaluation is to identify trainees' reaction about the different aspects of training. Most of the trainees were satisfied with the institutional facility, trainers and schedule of NAPD organized training courses. Potential trainees' reaction about the different aspects of training is important for comparison with the trainees of NAPD. The potential trainees have participated in the training courses organized by other training institutes. They have every chance to participate in the future training courses of NAPD. The analysis shows that most of the potential trainees opined positively about all the aspects of reaction level measurement. Trainers directly interact with the trainees. They are involved with the knowledge acquisition of the trainees. Their reaction is much more important for the successful accomplishment of the training courses. Trainers suggested some recommendations for making the sessions more effective for the Project Management training courses. Nominating authorities of different organizations select the participants to get training on Project Management in NAPD. They also act as the supervisors of the trainees in their workplaces. The feedback of nominating authorities is very much essential to evaluate the post training utilization of the gained knowledge. Majority of the nominating authorities were satisfied with the training management process of NAPD. Reaction of training organizers of other organizations is necessary for comparing the issues of training management and utilization aspects with NAPD for the effectiveness of the course. Majority of them were satisfied with the course curriculum of NAPD. The second level training evaluation is learning which mainly determines the knowledge acquisition level of the trainees. As their reaction about the training was positive, their learning was also fruitful which satisfies the Kirkpatrick's (1996) model. Some of the trainees were not able to grasp the concept properly. So the course design of training should be modified in a way that all the trainees can learn equally and altogether. The third level of training evaluation is evaluating the trainees' job behavior after the training. The study signifies that their ways of accomplishing the respective jobs have improved. As their learning was adequate so they could gain the capacity to demonstrate improved job knowledge which justifies the model. This represents that present state of effectiveness of the Project Management training courses organized by NAPD which can fulfill the need and aspiration of the trainees in the accomplishment of the Project Management training courses. The fourth phase of evaluation of training is the assessment of the result of the training course which evaluates the positive impact of training to the organization. It is evident that as the trainees could demonstrate the improved job behavior they were able to contribute for bringing benefit to their organizations which satisfies the model. Most of the nominating authorities found considerable improvement in the trained officers in respect of Project Management. This analysis is a contributing factor for the effectiveness of the Project Management courses organized by NAPD. Effectiveness of the training course was evaluated by the practical contribution of the trainees to the development projects. The trainees were involved with huge number of projects in different phases of project management. There is an effect of result on training effectiveness. Yet some of the trainees could not bring positive result in their workplaces. The outcomes of the inferential analysis demonstrate that there are substantial affirmative influences between reaction and learning, learning and behavior, behavior and result, result and training effectiveness which satisfy the research hypotheses. These results validate the Kirkpatrick's (1996) four stages of evaluation framework of training. It can be safely said that the present state of training provided by NAPD is sufficient to manage projects.

5. CONCLUSION

Training evaluation is vital for assessing the value of training whether it contributes in raising the productivity. The study conducted a three sixty degree evaluation by collecting views from all the parties involved in the training system including trainees, trainers, nominating authorities, training organizers and potential trainees for multiple issues of training effectiveness. According to the majority of the respondents' perception and four stages of evaluation framework of training of Kirkpatrick (1996), the Project Management training courses organized by NAPD are considered to be effective. Major

implication of this study is that some of trainees were indifferent about the facility of NAPD and could not grasp the contents of Project Management properly. As a result they could not contribute properly in their workplaces. The extended version of Kirkpatrick's model proved by this study can be utilized by the future researchers to test and validate the model.

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