



Assessment of the Contribution of Short-Term Training in Enhancing Quality of Education: The Case of Dire-Dawa Primary & Secondary Schools

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Authors' contributions

This work was carried out in collaboration between both authors. Author ADM designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author AMD managed the analyses of the study, the literature searches and performed the statistical analysis. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JESBS/2018/37936

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Complete Peer review History: <http://www.sciencedomain.org/review-history/25314>

Original Research Article

Received 2nd November 2017

Accepted 6th February 2018

Published 28th June 2018

ABSTRACT

The major purpose of the study was to assess the contribution of the short-term training provided to educational leaders, teachers and supervisors in the region to enhance the quality of education. To this end, the study used a concurrent mixed methodology study design. The study selected 333 respondents using stratified sampling techniques. Both quantitative and qualitative data were collected from respondents using questionnaires, interviews and focus group discussion (FGD). The collected data were analyzed using both qualitative and quantitative methods using narratives and organizing data under themes and using Pearson correlation and one-sample t-test. The findings revealed that topics covered are useful and job-related, while some topics are irrelevant to the job being done. Generally, training participants found the training modality to be appropriate. Training has also resulted in improvement in student behavior. These short-term training sessions have enabled trainees to grow as professionals on top of enabling them to acquire knowledge and skills

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that can directly be applied to the job they are doing. The findings also show that there are support and requirement to implement and report by the directors and supervisors while teachers do not have the support and requirement to report on the implementation of what is learnt from short-term training. Also, almost all teachers, directors and supervisors believe that short-term training contributes to the enhancement of quality of education in the region. While some respondents don't have the belief that training improves quality of education, the majority has the conviction that the short-term training provided by the education bureau has helped improve the quality of education. Thus, in order to improve on the limitations of the short-term training, it was suggested that the region's Education Bureau should conduct a needs assessment before short-term training is organized. Trainees should be supported and held accountable for the implementation of the knowledge, skills and attitudes they have acquired from short-term training, and the Education Bureau needs to make sure that training is conducted in a comfortable environment during the organization and conduct of future training.

Keywords: Short-term training; training effectiveness; education quality; Kirkpatrick's model.

1. INTRODUCTION

Professionals develop the necessary knowledge, skills and attitudes to exercise their profession through formal learning. However, such professionals have the need of participation in training due to change in work requirements, new roles, as well as due to skill decay [1]. Organizations invest a large sum of their budget in training employees because training is a powerful lever for structuring and guiding experiences that facilitate the acquisition of effective, behavioral, and cognitive learning outcomes by employees [2]. Besides, learning outcomes can horizontally transfer to the workplace and over time transfer vertically to impact key organizational outcomes [3,4]. For these and other reasons training programs are held to enable employees to carry out their tasks in a proper manner at the standard required [5]. However, the effectiveness of training needs to be evaluated to ensure that training achieves the objectives for which it is designed and conducted.

1.1 Evaluation of Training Effectiveness

Training evaluation enables organizations to improve future training programs, justify the need as well as the cost of training programs, gather data to make management decisions about future training programs and determine if training was the appropriate solution for a specific need [6,7]. An evaluation of a training program is necessary to determine whether the training has accomplished its objectives. Unfortunately, this is often the most neglected aspect of training, especially in the public sector [8,9].

However, evaluations can be used to measure changes in knowledge, in levels of skills, in attitudes and behavior, and in levels of effectiveness at both the individual and the organizational levels [10]. To this end, several training evaluation systems were proposed by different scholars and tested as to their effectiveness. The most frequently used training evaluation systems are the CIPP Model, Kaufman's five levels, the Kirkpatrick model, and Phillips five levels [7]. However, many companies and organizational researchers who conduct training evaluations use the Kirkpatrick model [11-13] to evaluate training. According to Kirkpatrick [14], the evaluation process consists of a series of four levels to evaluate training program effectiveness. The first level is measuring the participants' reactions to the training program. Secondly, Kirkpatrick [14] suggests that learning has taken place when one or more of the following occurs: attitudes are changed, knowledge is increased, and skills are improved. Evaluating learning is extremely important because without learning a behavior change will not occur [14]. According to Pynes [10], the third level of evaluation attempts to measure the extent to which on-the-job behavioral change has occurred due to the participants having attended the training program. The behavior evaluation level attempts to quantify changes in behavior as a result of a training program. Evaluating behavior is very important because it measures how well the training actually transfers to the workplace [15]. Behavior change requires a desire to change, necessary knowledge and skills, the right job climate, encouragement, and rewards for change. Arguably the most important step is the fourth level of evaluating results. The fourth level of evaluation attempts to measure the final

results that occurred because employees attended the training. Ideally, training is linked to improved organizational performance. At this level, evaluation is concerned with determining what impact the training has had on the organization [10].

Alongside its other responsibilities, the Dire Dawa Education Bureau is required to identify gaps that may exist in its workforce, and design and provide short-term training. In line with this, the bureau has conducted a needs analysis and designed and conducted several short-term training sessions for teachers and educational managers who worked in its schools from 2013 to 2015. Though it has conducted quite some short-term training sessions in an effort to improve the knowledge, attitudes and skills of teachers as well as educational managers to improve the quality of education, training program effectiveness evaluation has never been conducted to ascertain whether the required quality of education has been achieved or not. Thus, this study tried to evaluate the effectiveness of training conducted over the targeted three years and is guided by the following research questions:

- Have the training participants been able to grasp the necessary attitudes, knowledge and skills intended to be taught by the short-term training?
- Have the intended behavioral changes been achieved by those who participated in the short-term training that has been conducted?
- Is there any significant relationship between short-term training and improvement in the quality of education?
- Is there any significant relationship between short-term training and teachers' satisfaction with school leadership?

2. METHODOLOGY

This assessment of training evaluation used a concurrent mixed method study design and both quantitative and qualitative data types were considered. Both primary and secondary sources of data were gathered using questionnaires, interviews, observation, FGDs (focus group discussions) and document analysis. Respondents of the study were selected from teachers, school directors and vice-directors and supervisors using stratified random sampling methods. The collected data were analyzed using descriptive and inferential statistics while

the qualitative data were analyzed using the narrative method.

Most of the respondents (i.e., 72.8% of teachers and 91.3% of directors and supervisors) are males. As these are representative of the teacher population in the bureau and representative of the directors and supervisors who are leading the education system of the administrative region, it indicates that the education system in its leadership, as well as conduct, is influenced by male ideology and culture. On the other hand, it is possible to say that the system lacks what it was supposed to gain in terms of leadership style and culture from females as a result of being dominated by male teachers as well as educational leaders. Also, it seems that employment opportunities in the education systems of the administrative region are reserved mainly for male applicants. This indicates that the education system in the administrative region is being deprived of the skills, leadership styles and working culture of women, which may have contributed to the provision of quality in the education system in the administrative region.

Also, most of the respondents and those who work in the education system of the administrative region are well experienced as can be understood from their age. Most of the teachers (67%) and all of the directors and supervisors (100%) are above 26 years of age implying that they have ample experience in the teaching-learning process. This can also be substantiated by the fact that 50% of teachers and most of directors and supervisors (i.e., 91.3%) have worked in the education system for more than six years; this denotes that they have amassed experience that enables them to carry out their task in the manner required of them. Experience in a profession may ensure the acquisition of skills that can be applied in the work that will assist in the provision of quality education in the administrative region. Moreover, having experience in the conduct of the teaching-learning process and educational leadership may enable one to identify the gaps one has or skill development areas one needs to work on so that one can jump on the opportunity such as that provided by the Education Bureau through the organization of short-term training. Such professionals may know what they want and may be better positioned to appreciate useful opportunities or distance themselves from those time-consuming ones that do not add any value.

2.1 Participation in and Usefulness of Short-term Training

As in any organization, schools have defined sets of goals and objectives. To meet these goals, education bureaus hire teachers, directors and supervisors and equip them with the tools and resources to do the job as employed. At times gaps exist between employees' skills and job knowledge and those required to do their jobs. Therefore, it becomes the responsibility of the Education Bureau to decrease or eliminate that gap. The education bureau had two basic choices when it comes to providing teachers, directors and supervisors with new skills and knowledge: to train these employees itself or to send the employees to a training program. When teachers, directors and supervisors begin a training program, their training must meet the requirements of the job by providing appropriate training delivered at the proper skill level.

Consequently, for a person to judge whether short-term training is useful or not or to provide any data as to the conduct as well as the weaknesses of such short-term training one has to participate in such training, try to implement the knowledge, attitudes and skills acquired for his/her job, and identify his/her ability to solve practical problems through experience.

3. RESULTS

Thus, respondents were questioned to identify whether the sampled teachers, directors and supervisors have firsthand experience of the short-term training organized by the Bureau of Education within the last three years from 2013 to 2015. Most of the respondents, 97.4 of the teachers questioned or 304 out of 312 teachers and all or 23 of the directors and supervisors, responded affirmatively. This indicates that they are well aware of the contents as well as the usefulness of the training organized and provided by Dire Dawa Bureau of Education for the focal three years. Short-term training has the most effective for participants when it is job-related or shows how to perform certain aspects of what participants are doing. The topics of the short-term training offered by the bureau are all job related and enable the participants to work towards improving the quality of education they provide to their students.

Moreover, for short-term training to achieve the intended objective and assist in the improvement

of the quality of education provided to students, training participants themselves need to believe and find the content covered to be useful as well as the training modality through which the training is conducted to be appropriate. When the topics are job-related, experienced professionals enjoy the training offered and can easily relate and easily acquire the knowledge and skill they should acquire from the short-term training. To this end, when participants were questioned the large majority of the teachers (i.e., 88.8% of them and all or 100% of the directors and supervisors) responded that the contents covered in the short-term training are useful and are job-related. This denotes that knowledge and skills acquired from these short-term training sessions are job-relevant and can be directly applied to the day-to-day task teachers, directors and supervisors perform.

3.1 Frequency of Participation in Training

Training programs are designed to provide job-relevant knowledge, skills and attitudes to training participants. For training programs to produce the desired change in the workplace, provision of training and subsequent repetition of the training process enables the acquisition and retention of the knowledge and skills for which the training is designed. The key to efficiency in any profession is repetition. Likewise, data collected from training participants indicate that the short-term training organized by the Education Bureau was provided more at least twice under each topic selected. Such actions will strengthen the acquisition and retention of the job-relevant knowledge and skills that can directly be implemented to the job.

3.2 Educative Capacity of Training

The major objective of all training is to change participants' job-related behavior. Job-related behaviors such as better management, reduction in complaints, reduction in teacher and student absences, reduced teacher turnover, students' educational satisfaction, etc. are the ultimate objectives every training program intends to achieve. Such job-related behaviors can only be realized when training participants acquire the knowledge, skills and attitudes that the training aims to offer (i.e., when there is learning). Learning helps trainees in changing their attitudes and mindsets to make them improve knowledge and increase skills as a result of participation. Measuring the learning that takes place in a training program is important to validate the learning objectives.

Evaluating the learning that has taken place typically focuses on such questions as: What knowledge was acquired? What skills were developed or enhanced? What attitudes were changed? Trainee assessments are created to allow a judgment to be made about the trainees' capability for performance. Evaluation of whether learning has occurred or not can be identified through pre-post tests of the knowledge acquired and can be conducted before and after training. However, since such activities had not been conducted at the time of the training, a proxy indicator that can ensure whether learning has occurred or not should be taken. Accordingly, if training participants judge that training was useful, it is because the topics covered were relevant for their jobs and had filled the professional gap they had. To this end, respondents were questioned to identify whether training was useful and whether the implementation has brought changes in the job being performed.

When trainees think that topics covered are useful and job-related that means they can fully be engaged during training and grasp the knowledge, attitudes and skills being taught and they may be more likely to implement these on the job they are conducting. This means that due to the training offered there may be behavioral change observed in the training participants. Accordingly, respondents were questioned as to whether the short-term training was useful or not. To this query, 85.9% of the teachers and all (100%) of the directors and supervisors responded affirmatively. This indicates that the short-term training and the topics they covered were relevant to trainees' jobs. If the topics were adjudged to be useful, we could assume they can be more readily transferred to the job. However, it is important to notice that a small number of respondents replied that the training was useless or not related to their jobs. Since such trainees may have a different need that was not addressed by the training topics covered, it warrants that there is a need to be addressed. Thus, identifying, analyzing and addressing their needs are important.

The ultimate purpose of training is to produce the desired result that can bring about a desired change to the job or fill a gap that has been identified when the training was designed. For this to be realized, knowledge, attitudes and skills grasped from the training should be transferred to the job. If knowledge and skills acquired from training are transferred to the job

being done, this should bring about change or improvement on the job. Consequently, respondents were questioned to verify whether there was a change in one of the school variables - student behavior. To this, 81.4% of teachers and 95.7% of directors and supervisors replied that due to the implementation of knowledge, attitudes and skills grasped from the training, they had seen changes in student behavior. One important result expected from such short-term training organized and conducted by the Education Bureau is an improvement in student behavior, the achievement of which was verified from responses from study participants.

3.3 Behavioral Changes

Any training is aimed at bringing about behavioral change to participants through the acquisition of knowledge, skills and attitudes. Change in behavior requires the change in the way day-to-day activities are performed due to the knowledge, skills and attitudes acquired from training. For training to change behavior, it must ensure the impartation of the knowledge, skills and attitudes it aimed to transfer. Change in behavior can be identified through personal accounts of training participants using questionnaires or interviews and on-the-job observation of those who have undertaken training. This study tried to identify whether there is a change in behavior or not through questionnaires and interviews.

The behavioral changes observed in those teachers, directors and supervisors who have gone through the short-term training programs as well as the contribution of training programs to improve participants' professional capacity were ascertained by respondents. These respondents believe that they have acquired knowledge, skills and changed their attitudes due to the short-term training they attended. The best way to evaluate the acquisition of knowledge is to conduct a pre/post test but in the absence of such tests, personal accounts of participants of training are a good indicator of the acquisition of knowledge, skills and attitudes from training. Further, they have affirmed that short-term training has enabled them to grow as professionals on top of being able to acquire knowledge, attitudes and skills that can directly be applied to the job they are doing. Accordingly, the majority of teachers (82.7%) and directors and supervisors (95.7%) affirmed that due to the short-term training they were able to acquire the knowledge, skills and

attitudes they needed to carry out their responsibility in a better way. Similarly, the majority of teachers (83%) affirmed that the short-term training attained the required standards to be able to assist participants to acquire the targeted knowledge, skills and attitudes. However, other respondents (55 in number or 17.6% of teacher respondents) claim that they haven't acquired knowledge, skills and attitudes from the short-term training. Such problems exist when training does not address the needs and interests of some trainees as well as when trainings are not based on the needs assessment conducted to identify the skill gap teachers have. Thus, such concerns need to be addressed by the Education Bureau when future short-term training is organized and conducted. On top of providing the required job-related knowledge and skills, training can also be used to enable participants to grow in their profession through the provision of skills and motivation of learning by themselves as well as provision of general skill that can be applied beyond the current job requirements. To this effect, when respondents were questioned, 81.7% of teachers and 95.7% of directors and supervisors claim that the short-term training sessions have enabled them to acquire knowledge and skills that can be applied beyond the current job requirements. When training has such benefits, training participant will be more interested to attend and thereby more easily grasp the knowledge, attitudes and skills these training sessions are designed to provide.

3.4 Administrative Support

The knowledge, skills and attitudes acquired from training can only be implemented when the necessary conditions for the implementation of such knowledge, skills and attitudes are fulfilled. Trainees can't change their behavior until they have the opportunity and are required to do so. For change to occur, the trainee must have a desire to change; the trainees must know what to do and how to do it; the trainee must work in the right environment; and, the trainee must be rewarded for changing. Since it can be ascertained from the data collected that trainees know what to do and how to do it and have the desire to change, here the researchers' present data collected to verify whether trainees are working in the right work environment. A suitable/right work environment or culture must be created for trainees to implement the knowledge, skills and attitudes they acquired from training effectively. Work environments may

be characterized as any of: a preventing environment, a discouraging environment, a neutral environment, an encouraging environment or a requiring environment. In an encouraging environment, educational leaders or trainees' supervisors encourage trainees to learn and apply the learning on the job. In such environments, the supervisor discusses how the behavior should be applied and provides assistance for it to be realized. This kind of work environment enables the implementation of behavior learned. The other suitable work environment is a requiring work environment in which the supervisor knows what the subordinate learned and makes sure that the learning transfers to the job and the supervisor sees to it that behavior is implemented. The encouraging environment and the requiring environment are suitable environments for the implementation of job-related behaviors learned due to short-term training.

Requiring and supportive work environments are crucial to support behaviors for trainees so that they implement the knowledge, attitudes and skills they acquired in short-term training. To this effect, respondents were asked whether they get support from their superiors for the implementation of what is learned and if reporting is demanded from superiors on the implementation of what was learned during training. However, the majority of teachers (59.3%) claimed that there is no management support to implement what is learned while the majority of directors and supervisors (69.6%) claimed that there is support from superiors to implement behavioral change due to training. Also, when questioned as to the requirement for reporting on implementation results, 52.6% of teachers claimed that there is no requirement, while 60.9% of directors and supervisors claimed that there is a requirement to report on results of implementation. This indicates that though directors and supervisors are required to report on training implementation results and get support from their superiors, they, in turn, do not require their subordinates to report on implementation results and do not provide support to their subordinates.

3.5 Contributions to Quality Education

The overall purpose of organizing and conducting short-term training is to fill the knowledge, attitude, and skill gaps teachers, directors and supervisors may have so that ultimately the quality of education is improved

through the creation of a better-equipped workforce. Providing training that familiarizes trainees with the skills required to implement quality enhancement programs and knowledge, attitudes and skills that enable them to improve their professional competence, also enables trainees to proffer quality education to their students. To this end, respondents were questioned to figure out whether they believe that the training that was provided affected the quality of the education provided in the administrative region.

When trainees believe that the short-term training has superior objectives than meeting or solving simple technical difficulties, they may be more committed to the acquisition of skills and knowledge that these training sessions provide and more inclined to implement what is learned from this training. With this in mind, respondents were questioned to figure out how they view the short-term training. The large majority (81.7%) of teacher respondents and almost all (95.7%) of directors and supervisors believed that the short-term training contributed towards the improvement of the quality of education provided to students in the administrative region. However, a small number of respondents believed that it had no contribution at all to the quality of education. Though their number was small, due to the pivotal role that teachers play in ensuring the quality of education, this calls for urgent action to make these teachers aware of the effect training has on the quality of education. This implies that due to the superior objectives these trainees believe that short-term training has, they tend to be committed more and try to work hard to realize the related objectives.

3.6 Hypotheses Testing

In order to determine whether the short-term training organized and conducted by the Education Bureau had a significant effect on the behavior of the training participants and determine whether they have produced job-related performance improvements, hypotheses were developed and tested using the quantitative data that was collected. In order to analyze the hypotheses that were developed, a Pearson correlation was used and its significance was determined at an alpha level of 0.5.

H1: There is a significant relationship between short-term training and improvement in the quality of education.

H2: There is no a significant relationship between short-term training and improvement in the quality of education.

To test these hypotheses, data on directors' and supervisors' frequency of training participation was correlated with data for satisfaction with the leadership of teachers that was collected using the questionnaire.

The strength of the relationship between directors' and supervisors' frequency of training participation and teachers' leadership satisfaction with their supervisors was strong ($r = .852$ which was significant to the .05 level of significance since $p < 0.05$). Therefore, no evidence supports the null hypothesis. This means the alternate hypothesis is retained. This further implies that there is a significant relationship between the frequency of participation in short-term training and the leadership satisfaction of teachers. This further indicates that as the amount of participation in short-term training by directors and supervisors increases, their effectiveness as educational leaders also increases, resulting in an improvement in the quality of leadership they exhibit and resulting in an improvement in quality education. This also is a good indicator that training is helping to improve the performance of educators and leaders.

In support of this, Bush [16] contends that effective leadership and management are vital if schools and colleges are to be successful organizations, providing good learning environments for students and staff. Many researchers [16-18] claim that the second most important determinant of quality of education in schools is the leadership of the school. Huber [19], cited in Bush [16], drawing on school effectiveness research, claims that 'schools classified as successful possess a competent and sound school leadership' and adds that 'failure often correlates with inadequate school leadership'. Leithwood et al. [18], argue that school leadership is second only to classroom teaching as an influence on pupil learning. Leadership explains about 5 to 7 percent of the difference in pupil learning and achievement across schools and about one-quarter of the total difference across schools [17]. Leithwood et al. [18] also note that there would be a 10% increase in pupil test scores arising from an average head-teacher improving their demonstrated abilities across leadership responsibilities. They conclude that there is not a single documented case of a school successfully

turning around its pupil achievement trajectory in the absence of talented leadership [16,18].

Moreover, in order to see whether there is a difference in the ratings of teachers and directors on the instructional leadership activities of directors & supervisors, data on instructional activities of directors were analyzed using a t-test. The analysis uncovered a significant difference between directors' and teachers' ratings of instructional leadership activities at the 95% confidence level. This indicates that directors' instructional leadership activities are not consistent with teachers' instructional leadership ideology.

4. CONCLUSIONS

Training effectiveness evaluations were conducted throughout the provision of training as well as after some time lapse to see that these sessions have produced some results in the work area. This enables assessment of the effectiveness of training at the four different levels designed by Kirkpatrick [14] for evaluating training. These four levels are reaction, learning, behavior and results. The study tried to address three of these evaluation levels, namely learning, behavior and results by asking teachers and educational leaders to report on their learning or acquisition of knowledge, skills and changes in attitude; behavior or the application of what is learned from training on the job; and, results or problems solved or improvements achieved as a result of changes in behavior or implementing what is learned during training. The assessment at these three levels revealed that training had moderate achievement realized in all of the three levels of evaluation. These results indicate that future training requires adequate planning before their provision and that evaluation of effectiveness should be conducted from the beginning to achieve stronger learning impacts. In general, the assessment revealed that even though there remains work to be done, short-term training sessions that were organized by the Education Bureau have enabled the acquisition of new knowledge, attitudes and skills, resulting in changes in behavior and producing some results, which collectively have contributed to the improvement of the quality of education in the administrative region.

5. RECOMMENDATIONS

Based on the findings of the study the followings are recommended:

- Short-term training has most effect when it is conducted based on the needs of employees. To this end, conducting a needs assessment before short-term training is organized can help to identify needs of teacher, directors and supervisors so that those needs are inculcated and addressed by the training. Thus, the Education Bureau needs to conduct needs assessments before organizing short-term training in the future.
- Training effectiveness assessments are most effective when they are preplanned and conducted from the beginning before training is started. Such assessments enable the identification of the effects that trainings has on participants by assessing the acquisition of knowledge through pre/post-tests before and after training, the reaction of participants during or after trainings and the subsequent assessment of the change in behavior, and any results obtained due to training. Thus, there should be proper pre-planning of how and when to conduct training effectiveness evaluation before training is organized.
- Changes in behavior can be practiced and sustained when there is adequate administrative support from superiors. Trainees should be supported and held accountable for the implementation of the knowledge, skills and attitudes they have acquired from short-term training. If this is not done, learned behaviors could be forgotten and training could lose its impact, negating the investment. Therefore, the education bureau needs to make sure that there is adequate administrative support in order to implement what is learned from short-term training.

CONSENT

As per international standard or university standard, students' written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
<http://www.sciencedomain.org/review-history/25314>