Chapter 15
Comparing Effectiveness of E–Learning Training and Traditional Training in Industrial Safety and Health

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ABSTRACT
In response to the demanding change in work environments, most companies not only depend on traditional training, but also on e-learning and emphasizing it in safety and health. The benefits and cost effectiveness of the benefits of e-learning training are trusted. Nevertheless, accidents still happen at the workplace. This has become an issue to be studied, especially on the effectiveness of e-learning training in comparison to traditional training. In this study, a framework to measure comparative effectiveness between these two learning environments was developed based on Kirkpatrick’s four-level evaluation model and a case study was applied to test all the levels of the framework. These four levels include participant reaction, learning, achievements, behavior of employees, and results. The interview results indicated that there is no difference in the rating of the effectiveness of the two training methods based on Kirkpatrick’s model.

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INTRODUCTION

This case study involved chemicals multinational industry located in Malaysia. Chemical industries are one of the hazardous trades as far as work safety is concerned. The company has moved in the direction of safety and health management in attempt to improve poor safety statistics. However, some of the areas of the company found that the improvement in employees’ performance reaches a plateau (level-off) and is difficult to improve further. They begin to ask how to make further improvement on safety and health. The answer to this continuous improvement lies on the creation of a positive safety and health culture by providing training in safety and health at work.

Therefore, the companies are reconsidering their investment in training for employee development performance, such as trainings as they begin to recognize that the knowledge, skills and competencies of their employees give them an advantage that is difficult for competitors to imitate. The company has devoted considerable expense in training, whether provided by in-house personnel or out-of-house experts.

Even though, training in itself is expensive and adding more components to it may not be a good idea in terms of financial capacity. For instance, “the company has spent about RM 300,000,00 per year for training” (HRD). The company is quite a distance among each branches around the world and all instructions coming from the head quarters at Brussels, due to the reason that company having costly in delivery of training to their employees. The company has realized they have spent a lot in training cost and at the same time, business success requires companies to reduce the cost. Therefore, the company has to be particular with all the cost involved in training besides giving priorities to trainee competency, that is related to acquisition of desired knowledge and skills and provide a foundation for the retention of knowledge and skill to the employees. Even though, the company initiated in increasing the use of e-learning training to reduce the amount of time and money spent on training, traditional training still remain for certain training.

Consequently, the company has frequently used the e-learning training to deliver most of in-house training or training via web for the other corporate.

Through online, all information related to training is gathered in one place. Every employee can access it even from long distance in order to maximize its effectiveness and subsequent return on investment to the organization and minimization of organizational resources invested in the training process. But how far could the effectiveness of e-learning training in the organization influence to employee’s skills and knowledge? The company organizations are also facing a number of challenges. Employees and instructors may have problems in using their computers when they start e-learning training. Besides, technical difficulties or operator error may hamper employees and instructors.

The employees in a company were found to be unsure as to whether they could understand the content or the information of the training program because they could access the information without being supervised. There was no skilled instructor to guide the employees. All information related to training is placed in one place such as the CD ROM, Internet Web browser or email forwarded. The training will be delivered and controlled via computer using a variety of methods, including text, sound, graphics, still photography and motion video. It is not guaranteed whether the courses provide the necessary information to learn and retain information covered. The employees just depend on the sources that are provided in the system or in the software of the computer. Any further enquiry about the information is not respond by any instruments provided or by the respective person in-charge immediately. The situation has shown that the information given is not guaranteed to meet to the training need or the training objective or whether the information is sufficient or not. Even though they could come
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