

Training Effectiveness in Times of Austerity: A Case of an Oil Subsidiary Company in Brunei

Nur Ehsan Ibrahim, Universiti Brunei Darussalam, Bandar Seri Begawan, Brunei Darussalam

Wardah Azimah Haji Sumardi, Universiti Brunei Darussalam, Bandar Seri Begawan, Brunei Darussalam

ABSTRACT

Due to the fall in oil price, many companies are looking into ways to cut cost. Despite such cost-cutting efforts fuelled by the constant pressure for companies to stay competitive, the importance of training is still widely recognised. In response to limited training funds, companies are forced to revise their training programmes and make changes in their mode of delivery as part of their austerity measure. One of the approaches taken by an oil subsidiary company in Brunei is the increased use of in-house training and online-based learning (e-learning). This article seeks to evaluate the effectiveness of such a training approach when it is adopted. This allows training to be appraised in tangible terms, i.e. how much trainees have benefited to provide evidence to justify the importance of training, in times when training is assumed to be among the first casualties.

KEYWORDS

Austerity, Brunei, Oil Subsidiary, Training Effectiveness

INTRODUCTION

Due to the drastic drop in oil price since summer 2014, from USD115 per barrel to its lowest at USD30 per barrel, the global economy is heavily impacted particularly affecting oil producing countries (Hazarika, 2016). Major oil and service companies were directly hit and are still struggling to cut losses, adjust budget to reduce operating cost and maximise their revenue. According to studies (such as Werner and Desimone, 2005; Teague, 2014) one of the very first decisions made on a budget cut is to limit employees training due to its uncertainty in determining added value on the employees' job performance. Although it is often suggested that training is an early casualty in times of economic downturn, Jewson et al. (2015) believe that it is not always as vulnerable as feared. It is argued that rather than eliminating training, economic difficulties may instead encourage companies to make changes in the mode of delivery (Felstead et al., 2012). Jewson et al. (2015) further mention that in times of limited training funds, companies may choose to reduce the frequency of courses, prioritise courses, tighten the application of eligibility criteria among potential trainees and economise on training delivery. This include the increased use of in-house training provisions, incorporation of trainer functions within the roles of regular staff, expansion of on-site and group training and enhanced

DOI: 10.4018/IJABIM.2020040107

This article, originally published under IGI Global's copyright on April 1, 2020 will proceed with publication as an Open Access article starting on February 1, 2021 in the gold Open Access journal, International Journal of Asian Business and Information Management (converted to gold Open Access January 1, 2021), and will be distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

use of e-learning. However, the question is – How effective are such approaches? This question is highly pertinent and merits investigation because the economic justification for companies to invest in training has come under the spotlight as their budgets have tightened.

The study explores this question by presenting evidence from a qualitative case study of an oil subsidiary company located in Brunei. In times of recession, the subsidiaries of the oil company worldwide are forced to cut its budget in training and development. Before the global economic downturn, it is a common practice for the company to train their employees, from new hires to upper management, at their dedicated training centre located in the parent headquarter, which is equipped with state-of-the-art training facilities and designated trainers. In order to cope with tough times, the subsidiaries are moving towards adopting the least costly human resource development (HRD) practices. This involved an increased use of in-house training and online based learning (e-learning). With such changes in the learning environment, the study attempts to find out the effectiveness of the revised training approach.

To evaluate the effectiveness of the revised training approach in the case organisation, the study adopts Kirkpatrick's (1959) training evaluation model. Reio Jr. (2017) points out that this model is the most used evaluation tool by companies due to its comprehensive strategies in evaluating organisation training. Moreover, since the model operates based on the presumption that the return of investment is one of the critical aims of training initiatives, it helps to provide the economic justification for companies to invest in training. Based on this model, the study examines the following: (i) the reactions of the employees to the training programs; (ii) the level of employee's learning; and (iii) the employee's transfer of training. This model is designed based on traditional classroom instructions and to add value to this model, this study also extends the model to e-learning training session.

LITERATURE REVIEW

Training Effectiveness

According to Ford (2014), training effectiveness focuses on the learning system as a whole thus providing a macro view of training outcomes. It involves looking at the individual, training and organizational characteristics that influence the training process before, during and after training. Training programmes need to be analysed and designed well in order to meet the individual differences of trainees, the organizational climate and objectives as well as the characteristics of task that are needed to be learned (Cannon-bowers, 1995).

Individual Characteristics

Chukwu (2016) found that individual trainee's characteristics have an influence on training effectiveness such as their personality traits, attitudes, abilities, demographic, experiences and expectation. Additional characteristics that influence training include self-efficacy, goal, orientation and motivation. According to Khalid et al. (2017), self-efficacy is one of the most influential factors that affect training effectiveness among employees. They believe that the higher the self-efficacy individuals have, the more likely the individuals to participate in training programmes because they have increased cognitive engagement and are ready to develop new skills and knowledge.

Organisational Characteristics

Organisational characteristics cover the context in which the training is implemented, which include the organisation's climate for learning, policies and trainee selection technique. According to Sanjeevkumar (2012), training environment such as training facilities, site layout, sound lighting, hardware environment, classroom climate and student involvement has an effect on training effectiveness. A study by Homer et al. (2008) investigates how two versions of a computer-based multimedia presentation, i.e. a video version (including a video of a lecture synchronized with

slides) and no video (including only the slides and an audio recording of a lecture) affect learning performance. The results suggest that having video as well as PowerPoint slides have a split-attention effect, subsequently increasing the cognitive load. An increased in cognitive load typically reduces learning performance. A study by Mayer (2001) states that multimedia learning, in which animation and narration are combined, are generally more effective in improving student performance on retention tests than when information is presented as either text or narration. A research by Zhang et al. (2006) reveals that poorly designed technology-based tools that neglect learners' self-regulation and motivational needs do not provide opportunities for users to be self-directed in their learning. Additionally, when content is delivered via video in an online environment, it is essential that students maintain visual engagement in order to benefit from instruction. The general findings suggest that when an online video-based learning environment is designed and developed, embedding supplemental functions, with potential users' needs in mind, could enhance learning by making the environment more interactive.

Training Characteristics

The final set is the characteristic of the training itself such as instructional style, trainer quality and content relevance. As stated by Latiff (2012), overall training satisfaction depends on the evaluation of the participants' satisfaction with the training session itself. One of the key contributing factors is satisfaction with the trainer. An important attribute that a trainer should have according to Eraut et al. (2004) is the ability to facilitate group work. They state that when involving colleagues in training session, learning from peers improves the application of learning to workplace after the training sessions complete. In respect to this, Moss (1993) states that trainer needs to plan, be prepared and show enthusiasm as well as empathy to the trainees. Chukwu (2016) reveals the importance of increasing the comfort zones between the trainer and participants which can be facilitated by good interactions between trainers and trainees. There is a high correlation between the trainers' ability to keep the session lively and interesting in order to provide an effective training session. Gauld and Miller (2004) highlight the importance of trainers having sound knowledge of the subject matter which can influence the trainees' satisfaction of a training programme. The general findings underline the important role of trainers in the final return on training investment.

When the training relevance meets or exceeds trainees' expectation, Lierbermann and Hoffman (2008) argue that the trainees will become satisfied. Trainees will be less satisfied and show a negative reaction when the content are less relevant. Nikandrou et al. (2009) state that when training content is similar with the actual job, it maximises the learning transfer and this improves trainee's satisfaction. Kauffeld and Lehmann-Willerbrock (2010) also believe that employees are concerned whether the training programs are related and useful to their job requirement. Large amount of training is being focused on the enhancement of employees' skill sets but job demands are always changing therefore it is crucial that training content be regularly updated.

According to Reio Jr. (2017), every training program must be evaluated to ensure that investments on training are worthwhile and serves to improve the standard and effectiveness of the programs being offered. Experts believe that evaluation cannot be ignored as it helps to examine the effectiveness of the training program. This focuses on the learning outcomes therefore providing a micro view of training results.

Training Evaluation Model

Training programmes need to be evaluated in order to measure the effectiveness of the training both to the individual and the organisation. Evaluating training effectiveness involves a systematic process to determine the worth, value or meaning of the training programmes and the people involved (Chang & Chen, 2014). To capture these, many varieties of training evaluation model have been developed over the previous four decades and different models are used by organisations (Passmore & Velez, 2012) such as Kirkpatrick's four-level model (1998), Phillips' (2003) five-level model, Swanson's

(1994) performance improvement evaluation model and Holton's three-level HRD evaluation and research model.

An assessment of these models reveals overlapping criteria and common links to measure and evaluate a training session. This is because as pointed out by Reio et al. (2017), majority of the evaluation models found in the literature are generally based upon notions of the original four levels by Kirkpatrick. Due to its simplicity and practicality, Kirkpatrick's model remains the most common method to evaluate training and continues to be extensively used. Despite some critiques to this model, Moldovan (2016) explains that this model provides a straightforward guide defining the kind of questions that should be asked. Second, the model reduces the demand of measurement because the evaluation data are generally collected after the training session and do not require pre-training measurements. Akin to this, Shelton and Alliger (1993) add that the model provides a systematic way for training professionals to understand training evaluation due to its straightforward system describing training outcomes and the types of information that can be provided to weigh the amount to which training programs have accomplished its objectives.

Kirkpatrick's Model: This model categorizes four different levels of evaluation which addresses important questions related to the training and the people involved. The four levels are reaction, learning, behavior and results. Reaction level focuses on assessing the participants' thoughts on the training program including the content, instructors, facilities and methodology. The learning level measures how much the participants can grasp the knowledge and material delivered. This is usually measured in the form of tests and examinations. On the behavioural level, it is the examination of whether there is a behavioral change after the training program. For example, does the learner implement the knowledge that was taught during the course on their daily job? Finally, the results level is the stage where organisation questions if there are changes observed as a result of the training provided and to decide whether it is beneficial and/or detrimental to the organisation.

Kirkpatrick's model was later expanded by Phillips (1996, 2003) to include the fifth level. This fifth level of evaluation focuses on return on investment (ROI) and compares the training benefits, as expressed in financial results, with training costs. Phillips believes that there were also intangible benefits associated with training, and that those could be converted into easy to understand financial values (Ho et al., 2016).

Due to the popularity of the Kirkpatrick's model, the guidelines on its interview questions and survey questionnaires are widely available. Kirkpatrick's evaluation tool is versatile and can be adapted in many industries from hospital staff training and learning outcome in higher education (Thackwray, 2014). Detailed explanations of the different levels are as follows.

Level 1: Training Satisfaction

This level measures the satisfaction or perceptions of trainees on the training programmes. According to Kirkpatrick (1959), their satisfaction of training programmes are influenced by the instructor personality, learning environment, satisfaction with and relevance of the training content. Moldovan (2016) states that this level in practice assesses the participants response to the quality (e.g. satisfaction with the instructor) or the relevance (e.g. work-related utility) of training. This level involves the evaluator asking if the participants are pleased with the program in term of materials, instructors, facilities and content. Negative interview responses are expected from dissatisfied or disgruntled participants when evaluating this level (Curado & Martins Teixeira, 2014).

According to Arthur et al. (2003), one of the reasons why this level is widely used is because they found that it is relatively easy to gather responses from the participants. Participants are usually willing to share any complaints regarding training sessions they attended. Although this level alone is quite cheap and easy to administer, the abovementioned author argue that it may not be enough to

measure the impact of the training programme. Hence, it is recommended to employ the other three levels simultaneously in order to accurately measure the effectiveness of training.

Level 2: Knowledge Gained

This level measures the learning outcomes. Typically, in knowledge-based training, pre-and post-tests are given to the trainees to gauge the amount of learning that occurred as a result of the training program. Moldovan (2016) proposes immediate skill and behavioural demonstration within and after the training session as a measure of learning criteria. The key measurement items for this level are facts, techniques or skills absorbed by the participants. The measure must be objective and quantifiable indicators of how the participants understood and absorbed the material. This level basically covers what the participants are expected to know, think, do, or produce at the end of the training program (Ho et al., 2016).

Level 3: Behavioural Outcome

This level measures how behaviour in the workplace has changed as a result of the training session. In general, this level measures the actual on-the-job performance and identifies the impact of training in terms of knowledge, skill or attitude on the work performance. In a business organisation, behavioural levels are usually assessed by supervisor rating on the employee or objectives indicators of performance such as project progress and rate of completion. Post training behaviour also describes how well the trainees handle unpredictable problems encountered in the future rather than just passing the training tests.

Level 4: Results

This level measures the extent to which business measures have improved after training. The measures include output, quality, costs, and time. However, Phillips (1996) claims that it is important to go beyond Level 4 because even if the training program results in substantial business improvement, there is still a concern that the program's costs may outweigh its business benefits.

Level 5: Return on Investment

As pointed out by Reio, Jr. et al. (2017), it is clear that Phillips' model (1996, 2003) accepted Kirkpatrick's first three levels of evaluation. However, Phillips (1996) believes that Kirkpatrick model failed to adequately elaborate on the fourth level. He attempts to further determine the organisational benefits of training by converting training results to monetary values and comparing them with the cost of training to obtain the true return on the training investment, or ROI (Phillips, 2003). The impact of his research has resulted in many HRD professionals considering Phillip's extension of Kirkpatrick's work as Phillips' ROI theory and model (Chang & Chen, 2014).

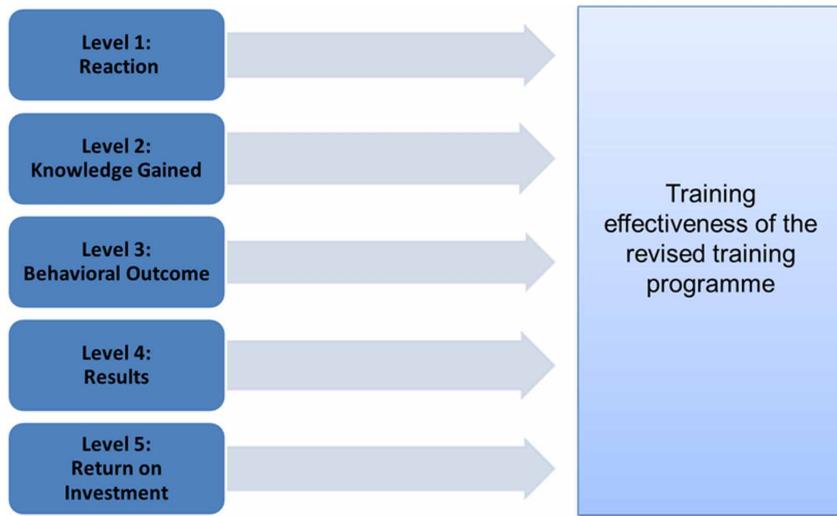
Level 4 and 5 are excluded from the evaluation of training in the case organisation due to limited access to such information. Apart from confidentiality issues, the location of its Finance Department which is situated in the parent headquarters presents challenges in accessing such information.

According to Attia and Honeycutt Jr. (2012), about 78 percent of companies evaluate training at the reaction level followed by 32 percent at learning level, nine percent at behavioural level, and only seven percent at results level based on return of investment or financial value. The results level is the least popular evaluation tool carried out by companies due to its difficulty in acquiring information.

Conceptual Framework of the Study

The conceptual framework (Figure 1) is developed based on the objective of this study which is to evaluate the effectiveness of the revised training approach in the case organisation in Brunei using Kirkpatrick's evaluation model. To measure whether the revised training programme is effective to the individual and organizational performance, this study examines the reactions, learning and behaviors of the training participants.

Figure 1. Conceptual framework



METHODOLOGY

Research Context

The case organisation is a subsidiary of a French based services company that employs around 6000 employees worldwide. The company offers a range of technologies, services and equipment designed to acquire precise data and images of Earth's subsurface. Their main customers are primarily from the oil and gas industry. Recently, it opened up a new data processing centre in Brunei providing processing services to a large oil and gas client in Brunei. Most of its employees are from a roll-over hire from a previous company that provided the same processing services to the client. Only the upper management is newly hired from its international counterparts.

The case organisation is comprised of three departments: Dept A, Dept B and Dept C. Since a majority of the employees are relatively new to the operation of the company, they have limited knowledge on how to operate the company's hardware, software and technological infrastructure. Instead of having its employees trained at the parent headquarter by designated trainers; a number of experienced employees from a subsidiary in Asia were brought in-house to conduct technical trainings in light of the limited training fund. Some online-based training was also used. Driven mostly by expatriates who have limited knowledge and experience with the local context, the revised training approach introduced needs to be evaluated to ensure its effectiveness.

Population

A population is the entire group of people, events or things that the researchers wish to investigate (Walliman, 2017). In this study, only the employees who have participated in the training sessions are considered as the study population. The case organisation employs 18 employees, however only 13 attended the training programmes during the duration of this research.

Sampling Design

A stratified approach was used to sample the population for this study. The population is divided into three departments and each department is defined as one stratum. Few samples are selected to represent the stratum or the department they are chosen from. According to Blanche (2008), for a population less than 1000, the basic rule of thumb is to have a sample of 30 percent, considered sufficient to

represent the entire population. Few representatives from each department are chosen as the selected samples for this study and the percentage distribution of these sample size is summarized in Table 1.

As shown in Table 2, the sample size is sufficient to represent the population of this research. The sample chosen is also made up of at least one leader or a manager from the respective departments to also gauge management’s perspectives.

Data Collection

This research is solely qualitative in nature and the data was gathered using semi-structured interviews. The interviews contained open-ended questions to encourage flexibility of the interview and to promote better understanding between the researcher and the participants. According to Yin (2003), interviews are an effective source of case study evidence because most case studies are about human affairs. These human affairs should be reported and interpreted through the eyes of specific interviews and well-informed respondents can provide important insights to the finding.

Interviews were held at the premise of the case organisation. An email was sent out to the respondents a day before the interview to ensure respondents have ample time to recall their experience and think about their answers. This is to ensure rich and accurate responses. The responses were gathered through note-taking and were audio-taped with written consent from the participants.

A pilot study was carried out to test the reliability and the accuracy of the interview questions to ensure its applicability to the research context. The interview questions were broken down to the three levels that correspond to Kirkpatrick model i.e. training satisfaction, knowledge gained and behavioural outcome.

Table 1. Sample distribution

Strata level	Total population	Sample Size	Sample size % of total population in a stratum
Dept A	3	2	66.70%
Dept B	2	2	100%
Dept C	8	3	42%

Table 2. Summary of training session provided

	Participants	Duration	Content	Method of delivery
Training A	Dept A and Dept B Number of participants: 5	5 days	Technical Specialisation	Classroom based with practical session
Training B	All employees Number of participants: 16	3 days	Soft Skills/ Team development.	Classroom based and group activities
Training C	Dept C Number of participants: 4	2 hours	Technical Specialisation	Video conference

There are three training sessions carried out during the duration of this research and to make data collection and analysis manageable, participants were asked to evaluate the training sessions that they attended. A detailed description of the training sessions is described below.

Training A

This training session is designed to train employees of Dept A and Dept B. The objective of the 5-day training session is to train the participants in the usage of their proprietary data processing software. The first three days covered the theoretical aspect focusing on the basic theory of geophysics and seismic data process. The final two days were more practical-oriented where participants were trained on how to use the software.

Training B

This training is focused on communication skill and teamwork. A set of questions was given to each participant a week before the training commenced which focused on defining the personality of the participants. The different type of personality was color-coded: red, green, blue, and yellow, which reflect a distinct set of traits and attribute respectively. During the training session, the trainer deliberated further on the traits and attributes of each color. The participants were also taught on how to deal and work alongside colleagues with different traits and attributes in their daily routine and particularly in stressful situations. This training was mandatory and attended by every employee.

Training C

An IT specialist from a subsidiary in Asia was invited to deliver an online course via video conferencing to train employees of Dept C. The training focused on IT infrastructure and the basics of troubleshooting practices. The training session took two hours only and it was attended by four participants, including the manager. This training was initiated to overcome delays in the troubleshooting of technical problem given employees' limited skills and knowledge on the company's IT infrastructure. Due to the urgency, an on-line based training was provided.

Interview Guide

The interview questions were designed to capture participants' perspectives on each of the three training evaluation levels. Several key questions were introduced as guidance for the interview sessions in order to measure each level accurately. The key questions are summarised in Table 3.

ANALYSIS AND DISCUSSION

This section is categorised into three main themes corresponding to each evaluation level of Kirkpatrick's model i.e. training satisfaction, knowledge gained and behavioral outcome.

Level 1: Training Satisfaction

To evaluate the training satisfaction based on the reaction level of Kirkpatrick's model, this theme is further divided into three categories: satisfaction with instructors, training content and learning environment.

Satisfaction With the Trainer

The participants were asked about the instructor's attributes in terms of content delivery, clarity of instruction delivered and other attributes.

Table 3. A summary of key items used as guidance in the interviews (as adapted from Latif, 2012)

Level	Level definition	Key questions
Level 1: Training Satisfaction	The perception of trainees towards the training program or to measure trainees' satisfaction to obtain feedback on the instructor, course material and learning environment	-Was the training content relevant to daily routine? -Was the pace, style and the delivery -by the instructors appropriate? Was the presentation and materials contributed to your learning experience? -Did the class environment help you to learn?
Level 2: Knowledge Gained	The measure of how much the participants can grasp the knowledge and materials delivered	-Did the training help you with what you couldn't do before? -Explain the importance of the training to your job. - Did you learn new and valuable skills and knowledge?
Level 3: Behavioural Outcome	The examination of whether there is a behavioral change after the training programmes.	-Did you successfully apply what you learned on the job? -Do you think what you learned sustainable? -Did you notice your employees' behavior change after the training session?

Training A

The training instructor was described as humble, an avid listener, open to ideas and able to deliver the lesson in a right pace. This is evident from the participants' quotes below:

When we give an idea from our past working experience, he listened keenly and appreciated our thoughts. He also asked politely if there were any concerns.

He is down to earth which makes us feel not intimidated to approach him. We are comfortable to ask him questions anytime we want.

It appears that the trainer's characteristics helped to facilitate a good two-way communication between the instructor and the participants, enabling an interactive session.

The training session also had a practical slot which allows the participants to use the software independently. According to all the participants, this part of the training helped them to be more familiar with the software. The clear step by step instructions given by the trainer helped make the process easier. A junior staff described the session as:

I had zero knowledge on how to use the software and the instructor was very patient with my questions and gave clear step-by-step instruction until I can fully use the software.

Training B

The main attribute of the trainer which stood out was his ability to deliver the training content. Group activities were carried out during the training session and participants felt that it helped them

experience real life imitation and application of the theories taught. Issues raised from their past experiences were addressed well with clear explanation and good recommendations. The instructor showed strong knowledge in the subject matter and managed to clarify doubts raised by the participants.

Evident from the quotes below, the instructor's ability to creatively use group activities to deliver the training content helped the participants to understand the objective of the training.

I thought I understood fully what (was covered) during the lecture but I have deeper understanding on the subject matter after we had gone through with the group activities. I can see clearly now how people act differently in a stressful situation and how to handle them.

We were so busy paying attention to the minor details of the group activities until we forgot to see the bigger picture, the true objective of the group activities. We did not realize we were out of track until the instructor stopped everyone and explained the reason behind our distraction.

Training C

The participants reported low confidence with the new skills acquired. As mentioned by a senior staff:

It takes us maybe a few weeks to confidently perform the operation, we had to discuss among ourselves and we learned through mistakes that we made.

Another participant reported the inadequacy of the training setup:

The video conference was quick and brief. The instructor should come here and show how to do things. The video streaming was also quite slow, we could not see the training material clearly and sometimes we could not hear what he was saying.

Based on the above account, satisfaction of the participants towards the trainer appears to be determined by the instructor's attributes - approachableness of the instructor (not intimidating and humble), ability to use training materials and clarity of instruction. These observations are supported by Ghosh (2012) in which the comfort level between the participants and the instructor, ability to use teaching aids and familiarity with the subject matter are stated to be critical in carrying out an effective training. A research done by Eraut et. Al. (2004) also states that asking questions is the key to learning which can be easily facilitated by a trainer who is approachable, not intimidating, patient, and appears calm while teaching.

Relevance of Training Content

Training A

The training session was divided into two – Theory and Practical. All new employees were required to attend this training to equip themselves with basic knowledge and skills to perform daily work tasks. The participants vary from fresh graduates to those who have few years of experience in the processing field.

According to a junior staff who has limited working experience:

I have no idea what seismic processing is because my degree is in Geology. This training really helped me a lot to understand the geophysics theory and seismic processing. The material was not taught when I was back in the university. I am sure this will help me in the future.

Another participant who has 3 years' experience as a geophysicist described the training as:

(The training) is a recap or a revision session. I learned this before when I started working few years back but it is nice to be reminded on the basic concepts. It does help a lot when you come across issues in seismic processing as knowing the theories will give you a short cut to find the answer to the problems.

Training B

All the participants agreed that the knowledge they acquired gave them new perspectives on how to handle and treat people at work in different situations. The participants believed that the training is useful in their every day job because of the nature of their task where team-based projects are typical. This is evident from the quotes below:

Most of the time we are working with people that have different characters. Some might be aggressive and assertive. This training taught us how to react and behave when encountering these characters, instead of fighting fire with fire and make the situation worse.

When I was working in Perth and Singapore, the employees there are mostly competitive and aggressive. Being a manager, it is important for me to handle my subordinates accordingly based on their characters.

This training focuses on generic skills which are important regardless of the employee's areas of specialization. This explains its high relevance.

Training C

When this centre was set up, all of the IT infrastructure was a stranger to us. We had no confidence on how to operate it. This training helped to provide us some guidance in case problem rises in the future. But our work experience and discussion with team members have also helped us a lot to solve the problem.

All of the participants agreed that the training material was relevant and useful but many stated that their past experience helped them to solve the job problems. From this, it can be inferred that the actual application of the skills was not immediate.

Based on the above account, it is fair to suggest that training contents are effective when it is relevant to their everyday tasks and work-related problems such as seismic processing problems, peer-to-peer disputes and IT related technical difficulties. This is supported by a quantitative study done by Liebermann (2008) that emphasizes the importance of the practical relevance to daily job as the crucial factor that influences trainees' satisfaction. A study by Bates (2004) states that the key aspect of training design is creating a training program that directly addresses individual and organisational problems.

Learning Environment

Half of the respondents worked with a company in related fields before employed by the case organisation. According to these participants, their former workplace has a better training budget allocation which saw many employees sent to training centers abroad that offer better training facilities in terms of classroom condition, university-like compound as well as training materials. Training

abroad also gave the employees more exposure to working with international collaborators which gave them an opportunity to acquire wider perspectives.

Due to limited fund however, trainings are now conducted locally. The trainings are usually carried out in the management office, with limited training facilities.

Training A and B

The participants reported that the training facilities impacted their motivation significantly but not so much on their actual training satisfaction.

It depends; being sent abroad made me excited and motivated to attend the training. But when it comes to the actual learning, it all boils down to how the training content was delivered. Although having a nice environment helped a bit with the stress.

I understand why (the company) now conducts the training here in Brunei, it is to save budget. In my opinion, I still learn what the instructor was trying to deliver. And doing it in Brunei, you get to discuss with your team member whom you work with every day. But I really miss the chance to travel the world to attend training courses.

Training C

The main concern brought up by the participants was the importance of hands-on training and the presence of an instructor.

The major issue was not because of the venue. I just dislike the training format - video conferences. I still prefer the traditional method where the instructor would guide us and give us hands-on training, that is when we learn better.

It would be more helpful if the trainer comes to Brunei so he can show us the ways to solve real problems. So we can learn while we observe him.

Based on the above account, it appears that simulation of real-world condition would help increase employees competencies. According to studies (such as Melnyk et al., 2014 and Glaser, 1991), employees gained competencies in dealing with complex practical problems and gaining experience with practical examples of real problems is an important condition for an effective preparation for any profession.

The Reactions of the Employees to the Training Programs

Overall, the participants from training A and B gave good feedback on the training session based on their evaluation of the instructors and the relevance of the training content to their daily job task. The participants also found that the training session was also appropriate regardless of the duration of their working experience. The combination of a good instructor and relevant training content masked the effect of learning environments towards the participants' satisfaction.

Only participants from Training C were not satisfied due to the setup of the training session via video-conferencing. In this case, the learning environment restricted the instructor's performance and quality of the delivered content.

Level 2: Knowledge Gained

The manager of each department was also interviewed to get their perspective and feedback on their employees after the training was completed. The participants were also asked if they see any significant improvement or changes in knowledge, practices and skills before and after the training.

Training A

From the managers' viewpoint, positive outcome of the training session was evident. According to one of the managers:

This training saves a lot of my time on teaching (my staff) the basic stuff such as the way to use the software. My team is able to confidently and independently use the software with minimal help.

The trainees perceived the training session as important on how to use the software effectively. As described by the participants:

Before I joined (the company), I used a completely different software. Knowing how to use the tools properly are essential to our jobs, we will work more efficiently and will be more focused on the actual task. I do not have to experiment around with the software, which saves me a lot of time.

Although the training was basic, it helps me a lot every day and I feel comfortable using the software. The theory session also taught me a lot because I have no Geophysics background.

Training B

This session focused on soft skills training, aimed to train employees to work well with each other, avoid disputes and tensions. The participants believed that they are now more aware of the different attributes, weakness and strength of each personality. As commented by one of the participants:

Now that I know people can be simplified to four (personality) colors, I am more aware of everyone's behavior and how to work with them properly. This course also taught me how to approach people differently according to their personality colors.

Training C

Prior to this training, the participants had limited knowledge on how to troubleshoot issues they encountered. Most of the issues are fixed remotely from a subsidiary in a neighbouring country. The participants showed a lack of confidence in applying what they have learned from the training session, evident from the quotes below:

We still have to discuss with our team members on how to fix any issues we encountered. We still send email to the IT technician from [neighbouring country] to fix the problem. I am still not confident how to fix it on my own.

When we are not sure, we still have to email the technician from [neighbouring country] on what to do. We are also scared to try new stuff on our own as they might not like it very much.

The training was mostly theoretical and no hands-on session. One more issue we faced – the IT technician do not trust us, they do not think we can fix issues that came up. If we try to experiment or make changes, the technician from [neighbouring county] would react negatively. We were not given the chances.

Taking into account these observations, it is fair to suggest that their confidence were also hindered by the lack of trust and empowerment by the IT support from the subsidiary company.

The Level of Employee's Learning

Participants from Training A and B reported that they are able to acquire the skills delivered by the training session. They showed that they gained new knowledge and skills that they did not have prior to the training session. The participants' responses also provided evidence that the objectives of the two training sessions were met.

However, Training C failed to deliver its objectives. The participants claimed that they failed to acquire new knowledge after their training session. This could be inferred from their lack of confidence and dependency on support from another subsidiary company.

These observations provided evidence that participants learned and acquired new knowledge as well as technical skill more effectively when training session was delivered in a traditional classroom-based session. Trainees of the online training session via video conference failed to fully grasp the knowledge that was delivered.

Level 3: Behavioural Outcome

This level evaluates the overall observable behavioral change of the participants as a group after the training session. These behavioral changes are characterized as the ability of participants to apply what they learned on the job, the sustainability of the skills acquired and lastly the participants themselves are aware of their behavioral change.

At the time of the data collection, it has been about three months since the participants completed their trainings. For the respective training sessions, the participants from the corresponding departments were interviewed to acquire their feedback in two key items:

1. Ability to apply the newly acquired skills on the job and whether they are noticed by immediate peers;
2. Support for their training application and post-training development.

To further evaluate this level, feedback from people whom are affected by the participants' performance is also equally important; the managers from the participants were also interviewed to gather their perspectives on any behavioral change. For this section, the change in behavior will be discussed according to the respective departments.

Dept A and Dept B

Training A was designed and intended for these two departments. For the first key question, a junior staff stated:

Of course, before I joined this company, I do not know anything about the software as it is not commercialized or used quite often in public. Even my university taught seismic processing using much simpler software.

A more experienced geophysicist stated:

Although the software has few similarities with the software I used from the previous company I worked with, this training helped me a lot to adapt to the new job and perform my daily task effortlessly.

A manager commented:

I am glad that this relatively short training session could effectively train my newly hired team members to do their task independently.

From their responses, it can be concluded that the participants are aware of their change in behavior evident from their ability to apply the acquired skills on the job and their behavioral changes are also noticed by their managers.

For the second key questions, a junior staff stated:

After we completed the training, we learned a lot more while on the job. Our supervisors also provided us some tips and knowledge that were not taught and demonstrated during the training. Over time, we gained more confidence from their support.

A more experienced staff commented:

I think for me, I was given the responsibility right away and there was limited time for me to experiment around. But my project leader told me that I can just ask him questions when I encounter software hiccups. He does not want me to spend unnecessary time meddling with the software. I got a good support from him.

The statements by the participants concluded that they have received enough support from their supervisors which helped enhance their skills further once they completed their training.

Dept C

For the first key question, one of the participants stated:

I cannot apply what I learned immediately right after the training. We still need to discuss with our team members. Maybe after 2-3 weeks, I can confidently do it on my own but there are still some issues that I cannot solve. And we still need to seek help from [neighbouring country].

One of the manager responded:

I am not happy with the short online training; it was not impactful for my team. The training helped a little but my team members still constantly look for support from [neighbouring country]. This is why I requested from the management to have the instructor to come here and do a proper training session.

From the responses above, the participants were not able to immediately apply what they learned to their job. Responses from the participants suggested that they did not observe significant increase in capability from the training session.

For the second question, one of the participants stated:

Although I am not confident to trouble shoot, the technician from [another subsidiary] was very helpful. He explained the procedure via email or sometimes by phone. But I dislike their lack of trust which hindered us to use our own experience to experiment with the IT system.

One of the manager commented:

I noticed that my team members were not satisfied and did not improve much. But the management is aware of my feedback on the training and they are sending an instructor in November to deliver a 5-day course. Hopefully my team members will benefit a lot from this. The management responded well so that is a good support from them.

The Employee's Transfer of Training

The participants from Dept A and Dept B were aware of their own behavioral change and these changes were also noticed by those impacted from their performance i.e. their managers.

However, participants from Dept C did not share similar findings. They did not notice any significant change in their behavior mostly due to their lack of satisfaction with how the training session was carried out. Their manager also shared the same view and did not observe any significant change in the staff after the training session.

CONCLUSION

This paper aims to evaluate the effectiveness of the revised training approach in an oil subsidiary company in Brunei. Using the Kirkpatrick's four levels of evaluation model, this paper specifically examines: (i) the reactions of the employees to the training programs; (ii) the level of employee's learning; and (iii) the employee's transfer of training. The findings of this study showed that most of the respondents were happy with the content of the modules, the learning environment and the trainers. The findings also presented evidences that respondents had improved their knowledge level and were able to apply the knowledge and skills learned in the training to their job. Such is the case for classroom based training. However, the findings on the online training reveal employees were not happy with the content of the modules, the learning environment and the trainers. The findings also showed some evidences that respondents had not improved their knowledge level and were unable to apply the knowledge and skills learned in the training to their job.

In order for the company to deliver an effective online training programme to its subsidiary companies, it is recommended to deliver the training via an interactive multimedia platform where participants are free to navigate the training session. According to studies (such as Hani, 2018; Wibawa, 2016; Powley, 1994), participants preferred interactive video or multimedia instruction because they can re-watch the video when they failed to understand the content. These researches also provided evidence that linear instructional videos have less positive effect compared to interactive video instructions in e-learning. Although the company already has a vast library of interactive video session online, however most of them are only catered for the specialized department. The company should consider investing in a broader online training library accessible by other non-specialized departments as well. With such move, it is anticipated that the company can cut down their budget, and at the same time improve the quality of their training programmes. Such revised approach presents an effective strategy which can be considered by organisations especially in countries facing slow economic growth given the unpredictable energy price movements such as Brunei.

REFERENCES

- Amin, A., Saeed, R., & Lodhi, R. N. (2013). The impact of employees training on the job performance in education sector of Pakistan. *Middle East Journal of Scientific Research*, 17(9), 1273–1278.
- Arthur, W. Jr, Bennett, W. Jr, Edens, P. S., & Bell, S. T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *The Journal of Applied Psychology*, 88(2), 234–245. doi:10.1037/0021-9010.88.2.234 PMID:12731707
- Attia, A. M., & Honeycutt, E. D. Jr. (2012). Measuring Sales Training Effectiveness at the Behavior and Results Levels Using Self- And Supervisor Evaluations. *Marketing Intelligence & Planning*, 30(3), 324–338. doi:10.1108/02634501211226294
- Bates, R. (2004). A Critical Analysis of Evaluation Practice: The Kirkpatrick Model and the Principle of Beneficence. *Evaluation and Program Planning*, 27(3), 341–347. doi:10.1016/j.evalprogplan.2004.04.011
- Cannon-Bowers, J. A., Tannenbaum, S. I., Salas, E., & Volpe, C. E. (1995). Defining team competencies and establishing team training requirements. In R. Guzzo & E. Salas et al. (Eds.), *Team effectiveness and decision making in organizations* (pp. 333–380). San Francisco, CA: Jossey-Bass.
- Chang, N., & Chen, L. (2014). Evaluating the Learning Effectiveness of an Online Information Literacy Class Based on the Kirkpatrick Framework. *Libri*, 64(3), 211–223. doi:10.1515/libri-2014-0016
- Chukwu, G. M. (2016). Trainer attributes as drivers of training effectiveness. *Industrial and Commercial Training*, 48(7), 367–373. doi:10.1108/ICT-02-2016-0013
- Curado, C., & Martins Teixeira, S. (2014). Training evaluation levels and ROI: The case of a small logistics company. *European Journal of Training and Development*, 38(9), 845–870. doi:10.1108/EJTD-05-2014-0037
- Felstead, A., Green, F., & Jewson, N. (2012). An Analysis of the Impact of the 2008-09 Recession on the Provision of Training in the UK. *Work, Employment and Society*, 26(6), 968–986. doi:10.1177/0950017012458016
- Ford, J. K. (Ed.). (2014). *Improving training effectiveness in work organizations*. Psychology Press. doi:10.4324/9781315806662
- Gauld, D., & Miller, P. (2004). The qualifications and competencies held by effective workplace trainers. *Journal of European Industrial Training*, 28(1), 8–22. doi:10.1108/03090590410513866
- Ghosh, P., Prasad Joshi, J., Satyawadi, R., Mukherjee, U., & Ranjan, R. (2011). Evaluating effectiveness of a training programme with trainee reaction. *Industrial and Commercial Training*, 43(4), 247–255. doi:10.1108/00197851111137861
- Glaser, M. A., & Bardo, J. W. (1991). The impact of quality of life on recruitment and retention of key personnel. *American Review of Public Administration*, 21(1), 57–72. doi:10.1177/027507409102100104
- Hamtini, T. M. (2008). Evaluating E-Learning Programs: An Adaptation of Kirkpatrick Model to Accommodate E-learning Environments. *Journal of Computational Science*, 4(8), 693–698. doi:10.3844/jcssp.2008.693.698
- Hani, M. (2018). *Blended Learning in Tertiary Level of Bangladesh: Private Universities in Focus* [Doctoral dissertation]. East West University.
- Hazarika, I. (2016). An Analytical Study on the Impact of Recent Oil Price Plunge on Highly Oil Dependent Economies and Oil Exporting Countries. *International Journal of Trade, Economics and Finance*, 7(5), 202–205.
- Ho, A. D. D., Arendt, S. W., Zheng, T., & Hanisch, K. A. (2016). Exploration of hotel managers' training evaluation practices and perceptions utilizing Kirkpatrick's and Phillips's models. *Journal of Human Resources in Hospitality & Tourism*, 15(2), 184–208. doi:10.1080/15332845.2016.1084861
- Jewson, N., Felstead, A., & Green, F. (2015). Training in the public sector in a period of austerity: The case of the UK. *Journal of Education and Work*, 28(3), 228–249. doi:10.1080/13639080.2014.900169
- Kauffeld, S., & Lehmann-Willenbrock, N. (2010). Sales training: Effects of spaced practice on training transfer. *Journal of European Industrial Training*, 34(1), 23–37. doi:10.1108/03090591011010299

- Khalid, K., Eldakak, S. E., & Puteh, F. (2017). The effect of self-efficacy, OJT and classroom training on training effectiveness in Malaysian Construction Industry. *Journal of Engineering and Applied Sciences (Asian Research Publishing Network)*, 12(3), 6371–6376.
- Kirkpatrick, D. L. (1959). Technique for evaluating training programs. *Journal of American Society of Training Directors*, 13, 11–12.
- Latif, K. F., Shahid, J. & Shaheen, N. (2012). Association of Training Satisfaction with Employee Development Aspect of Job Satisfaction. *Journal of Managerial Sciences*, 7(1), 159–178.
- Liebermann, S., & Hoffmann, S. (2008). The impact of practical relevance on training transfer: Evidence from a service quality training program for German bank clerks. *International Journal of Training and Development*, 12(2), 74–86. doi:10.1111/j.1468-2419.2008.00296.x
- Melnyk, B. M., Gallagher-Ford, L., Long, L. E., & Fineout-Overholt, E. (2014). The establishment of evidence-based practice competencies for practicing registered nurses and advanced practice nurses in real-world clinical settings: Proficiencies to improve healthcare quality, reliability, patient outcomes, and costs. *Worldviews on Evidence-Based Nursing*, 11(1), 5–15. doi:10.1111/wvn.12021 PMID:24447399
- Moldovan, L. (2016). Training Outcome Evaluation Model. *Procedia Technology*, 22, 1184–1190. doi:10.1016/j.protcy.2016.01.166
- Moss, G. (1993). *The Trainers Desk Reference* (2nd ed.). London: Kogan Page.
- Nikandrou, I., Brinia, V., & Bereri, E. (2009). Trainee perceptions of training transfer: An empirical analysis. *Journal of European Industrial Training*, 33(3), 255–270. doi:10.1108/03090590910950604
- Passmore, J., & Velez, M. J. (2012). SOAP-M: A training evaluation model for HR. *Industrial and Commercial Training*, 44(6), 315–325. doi:10.1108/00197851211254743
- Phillips, J. (1996). *Measuring the Results of Training, The ASTD Training and Development Handbook* (R. Craig, Ed.). New York: McGraw-Hill.
- Phillips, J. (2003). *Return on Investment in Training and Performance Improvement Programs*. Burlington: Butterworth-Heinemann.
- Reio, T. G. Jr, Rocco, T. S., Smith, D. H., & Chang, E. (2017). A Critique of Kirkpatrick's Evaluation Model. *New Horizons in Adult Education and Human Resource Development*, 29(2), 35–53. doi:10.1002/nha3.20178
- Sanjeevkumar, V., & Yanan, H. (2012). A Study of Determinants of Training Effectiveness in Kedah State Development Corporation. *Review of Management*, 2(1/2), 18–34.
- Schmidt, S. W. (2007). The relationship between satisfaction with workplace training and overall job satisfaction. *Human Resource Development Quarterly*, 18(4), 481–498. doi:10.1002/hrdq.1216
- Schön, D. A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.
- Shelton, S., & Alliger, G. (1993). Who's afraid of level 4 evaluation? A practical approach. *Training & Development*, 47(6), 43–47.
- Teague, P., & Roche, W. K. (2013). Recessionary bundles: HR practices in the Irish economic crisis. *Human Resource Management Journal*, 24(2), 176–192. doi:10.1111/1748-8583.12019
- Thackwray, B. (2014). *The Effective Evaluation of Training and Development in Higher Education*. London: Routledge. doi:10.4324/9781315041896
- Walliman, N. (2017). *Research Methods: The Basics*. London: Routledge.
- Wibawa, B. (2016). Electronic, Mobile And Ubiquitous Learning In Higher Education. *Electronic and Mobile Learning*, 1.
- Yin, R. K. (2009). *Case study research design and methods*. California: Sage Publications.
- Zhang, D., Zhou, L., Briggs, R. O., & Nunamaker, J. F. Jr. (2006). Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. *Information & Management*, 43(1), 15–27. doi:10.1016/j.im.2005.01.004

Nur Ehsan Ibrahim obtained his Master of Management degree from Universiti Brunei Darussalam in 2018 and received his BSc Geophysics from Imperial College London in 2013. He has been working in the oil and gas industry since 2014.

Wardah Azimah Haji Sumardi is a lecturer specialising in Human Resource Management at the School of Business and Economics, Universiti Brunei Darussalam, where she has been a faculty member since 2007. She received her PhD in Business and Management and MSc in Human Resource Management and Industrial Relations from Alliance Manchester Business School, University of Manchester, United Kingdom. She earned a bachelor's degree from Universiti Brunei Darussalam in Business Administration. She also received a diploma in Business Administration from the University of Kent, United Kingdom.