

Selected respondent characteristics and training program characteristics as determinants of trainees' perceptions of self-efficacy

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ABSTRACT

This study was conducted to examine the effect of selected respondent characteristics and training program characteristics on trainees' perceptions of self-efficacy using a sample of 74 usable questionnaires gathered from employees in an electrical company in Sarawak, Malaysia. The outcomes of one-way analysis of variance (ANOVA) showed that none of the demographic characteristics of the respondents had a significant impact on their perceived levels of self-efficacy. Conversely, the results of multiple regression analysis confirmed that trainees' self-regulations did act as an important determinant of trainees' perceptions of self-efficacy. As such, the authors recommend that a positive self-talk session daily before starting work should be implemented to boost employees' self-regulation in the organizational sample.

Keywords: *respondent characteristics; training program; trainees' self-efficacy*

Introduction

Employees, managers and organizations today are frequently turning to training as a solution to problems pertaining in the work issues (DeSimone *et al.*, 2002; Pike, 2003; Wexley and Latham, 2002). Training becomes the most appropriate tools to solve the problems if the results of the trainability test show that problems can be solved through training (Ibrahim Mamat, 2001). When training is done effectively, it gives individuals opportunities to gain needed skills, knowledge, attitudes, aptitude and to gained important competencies for employees to perform in new functions and to be prepared for novel situations. This is crucial for ensuring an organization's long term survival and profitability in an increasingly competitive economic market, turbulent times and new changes in the nano-market. This view is agreed by Pont (1990) who stated that training in a work environment is a process whereby learning' opportunities are purposefully structured by the organization to achieve structured organizational objectives fast and effectively.

As such, the training field is increasingly gaining momentum as one of the most effective tools to cope with change (Rae, 2001). Training can and does address the need of moving with change by providing the necessary skills and ability to the employees' to do so (Watson, 1997).

Background of study

The emphasis on the investment in human resource training and development are recognized as vital strategies to maintain a competitive work force (Blanchard and Thacker, 2001). Owing to this aspect, organizations expect a return on their investment in terms of creating and maintaining a pool of highly skilled workforce that could contribute effectively to the organization. Training also has a positive impact on employees through an increase in job satisfaction which in turn could help increase chances for promotability in the organization (Ibrahim Mamat, 2001; Wexley and Latham, 2002). Nevertheless, it is essential to note that effective training does not only rely on the principles of training itself but also on the trainees' acceptability of the training engagement as well.

In training, it is crucial to note that it is not what is known but what is done with the new knowledge that is vital. As Pike (2003, p.6) noted, 'It's one thing to know something intellectually; it's quite another to have the emotional conviction to do it that comes from personal experience'. This emotional conviction stems from individual perceptions of self efficacy. Self efficacy is defined as an individual's belief about his or her capabilities to produce designated levels of performance that would exercise influence over events that affect their lives' (Bandura, 1977, p.8). It is a personal belief that helps determine how a person perceives information, sense and motivates oneself. In short, it is the essence of what drives a person and the reason behind why different people react in a different manner.

However, it must be noted that self efficacy can be influenced by individual self regulation (Lawshe, 1996). Self regulation is the 'exercise of influence over one's own motivation, thought processes, emotional states and patterns of behavior' (Yallow. 1982, p.57). This refers to how an individual regulates his or her own behaviors to adapt to the information that is perceived or inferred from the external environment. As such, how an individual regulates his or her own behaviors will have an impact on how he or she believes their individual capabilities are.

Statement of the problem

An effective training and development program will cater not only to meeting training objectives but to also ensure that the employees' are able to apply what was learnt into the workplace (Wexley and Latham, 2002). The employees' must be able to obtain from a training session, the knowledge of skills needed to perform effectively in their workplace and the ability to understand how to use these skills to their advantage. The transfer and retention of skills required are based on various factors: one of which predominantly is on the individual differences of the trainees' themselves (Moorhead and Griffin, 2000).

These individual characteristics of the trainees are among the most important determinants of training outcomes (Goldstein, 1986). Perceptions of self efficacy for example, would determine trainees' motivation and their conviction that they are able to benefit from a training intervention. This in turn would have an impact of how effective or how successful the training engagement is. The success of any training intervention would prove the value of the intervention to the organization and to justify the budget allocated for training in a company.

However, principles of learning and instructional systems in training have focused, for the most part, on the development of a common learning environment for all trainees (Cromwell and Kolb, 2004). Previous research had emphasized on various training factors such as the training environment (Cromwell and Kolb, 2004), the training content and materials used (Blanchard and Thacker, 2001), trainees' learning styles and individual preferences (Goldstein, 1986), managerial support (Ibrahim Mamat, 2001), peer or colleagues encouragement (Pont, 1990) in addition to trainers' effectiveness (Pike, 2003) as individual and isolated factors affecting the training intervention as a whole (Cromwell and Kolb, 2004). It is important to note that although training interventions do have value, nevertheless, they are not always successful. Sometimes carefully designed training engagements might fail because not all the training factors considered are able to profit the trainees who underwent the intervention.

At present, the organization in which the study had focused does not have a formal procedure for attempting to account for individual perceptions of self efficacy in their training interventions. This does have an impact on the effectiveness of the training as a method for improving work performance. This is so because perceptions of self efficacy offer inner confidence to an individual trainee that he or she is capable of gaining an edge in their work performance from the training intervention. Therefore, the main concern of the study is to determine whether there is a link between training effectiveness and a trainee's perception of self efficacy that is whether training affects a person's belief about their capability to produce results. There is a need to build a better understanding of this notion because only then can the different levels of individual trainees' self efficacy are taken into consideration into the design of the training method.

Purpose of the study

This study has two major objectives: first, is to determine the effect of difference respondent characteristics (i.e., age, academic, and length of service) on trainee's perception of self-efficacy. Second, is to examine the relationship between training context and trainee's perception of self-efficacy.

Conceptual framework and research hypothesis

The literature review has been used as foundation of developing a conceptual framework for this study as shown in Figure 1.

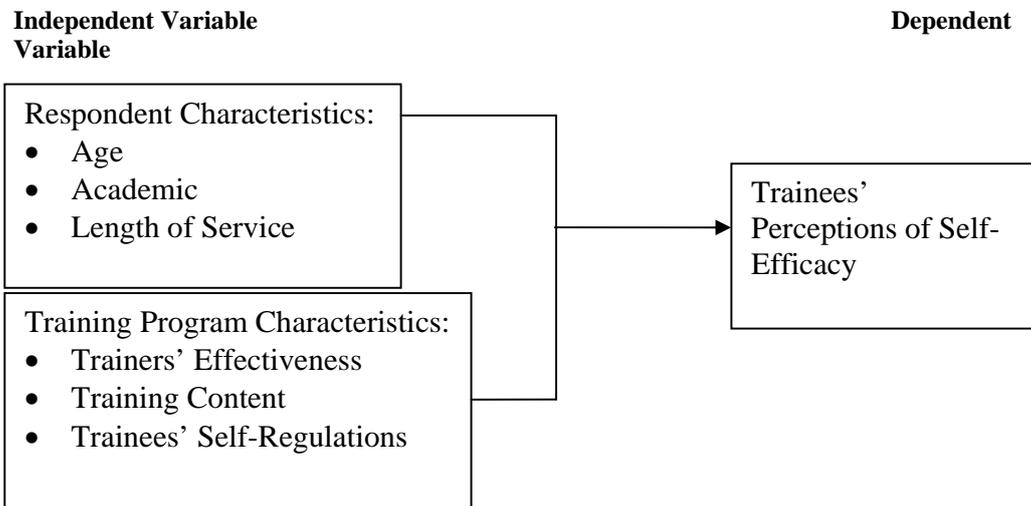


Figure 1: Respondent characteristics and training program characteristics as determinants of trainees' perceptions of self-efficacy

Based on the framework, it was hypothesized as below:

- Ho1: There is no significant difference between selected respondent characteristics (age, academic, and length of service) and trainees' perception of self efficacy.
- Ho2: There is no significant relationship between trainers' effectiveness with trainees' perceptions of self efficacy.
- Ho3: There is no significant relationship between training content and trainees' perceptions of self efficacy.
- Ho4: There is no significant relationship between trainees' self regulations and trainees' perceptions of self efficacy.
- Ho5: There is no significant relationship between trainees' supervisors and trainees' perceptions of self efficacy.
- Ho6: There is no significant relationship between trainees' colleagues and trainees' perceptions of self efficacy.
- Ho7: There is no significant dominant factors influencing trainees' perceptions of self efficacy.

Research Design

In this particular study, the emphasis is on using survey research design. The rationale for using this design is because the research conducted needs a surface overview of the findings generated in order to make the correct inferences about the population. It is also a fast, effective and adaptable way of obtaining the information or facts needed for this study. In addition, surveys enable sound information to be collected from a small sample that can be generalized to a larger population (Sekaran, 1984). Although a survey research has two principle functions, nevertheless, in this study, the survey will be used only to draw a profile of the significant characteristics of the population from which the sample is obtained from. As such, the survey is used to determine the influence of training on trainees' perceptions of self efficacy.

The survey research design involves the distribution of a questionnaire. The questionnaire helps to determine if there is a relationship between training and the level of self efficacy perceived by the employees' in study context as a result of the training. The employees have to state their feelings, preferences, opinions, beliefs and judgments whenever appropriate. The instrument was divided into two parts, namely Section A and Section B. In Section A, respondents were asked to state their personal particulars such as age, academic background and their length of service in the organization. Section B the other hand, contains statements regarding trainees' perception towards factors in training that may affect their level of individual self efficacy. This requires the respondents to state their perception towards the training intervention in terms of factors such as trainer's effectiveness, training content, managerial as well as peer support in addition to the trainees' individual self regulation. The instrument used in this research has to be reliable and valid in order to provide consistently plausible results. In order to ensure content validity of the instrument, the Cronbach Alpha test was used in the pilot tests and at least 0.70 or higher are used to ensure that the instrument would provide the necessary answers to the research questions. Sekaran (1984) suggested an alpha value is closer to positive one would indicate that the reliability of the instrument is at its highest. The findings for this study were analyzed using SPSS for Windows version 10 which included descriptive analysis, ANOVA, Multiple Regression as well as Pearson Correlation.

Population and sample

The organization in focus for this particular study is responsible for the generation, transmission and distribution of electricity in the State of Sarawak in Malaysia. The company's vision is to become a world class utility organization which is acknowledged to be excellence-driven, result oriented, customer and community sensitive. Their mission is to supply reliable electric power at lowest possible cost for development of the State and to contribute to the improvement of quality of life of the people in Sarawak. This company which has slightly over 2000 employees seeks to continuously enhance efficiency through providing pro-active training interventions as well as other human resource development programs. The corporation has its own training centre which provides internal training their employees. These training programs are conducted year round and are based on the various training needs of its employees. They range from courses such as administration and management, information technology, electrical and mechanical to safety. In

this study, the sample is calculated using the model introduced by Luck, Taylor and Robin (1987) and 74 employees were involved.

Research findings and discussion

This section strives to present the relevant arguments that will support the findings of each hypothesis in the research. It will be presented according to the sequence of each hypothesis as stated before. An apt discussion of the whys of a specific research finding is important for it can facilitate understanding and concurrently future development of suggestions to improve a certain situation or a particular circumstance.

The influence of training on perceived self efficacy in terms of demographic characteristics

Ho1 states that there is no significant difference between age group and the relevant perception of self efficacy. These assumptions were accepted after the ANOVA analysis showed that there was no significant relationship between the two variables as the above as shown in Table 1.

Table 1: Results of analysis of variance of respondents' age and perceived self efficacy

	Sum of squares	Df	Mean square	F	Sig.
Between Groups	50.404	6	8.401	1.329	.257
Within Group	423.447	67	6.320		
Total	473.851	73			

Therefore, it is inferred that self efficacy does not come as a result of age 'seniority' but learnt through one's experience and exposure to different situations or scenarios over the life span. This coincides with Bandura's (1977) research on the various sources of self efficacy which included mastery experiences. This term is taken to mean that when an individual faces a challenging experience and successfully masters it, he or she will report a higher self belief i.e. self efficacy simply because he or she had successfully achieved a goal that is perceived to be difficult in the first place. Thus, the more an individual has the chance to go through successful mastery of various life experiences, the higher their perceived self efficacy will be. This is also agreed by research which states that an individual will have a higher ability in resolving crises if their individual self efficacy is high (Betz and Hackett, 1966; Cassidy and Eachus, 1998).

In Ho2, it is stated that there is no significant difference between academic background and the relevant perception of self efficacy. Consequent examination by using ANOVA applauded this notion for it was found that there is no relationship between the noted variables as shown in Table 2.

Table 2: Results of analysis of variance of respondents' academic background and perceived self efficacy

	Sum of squares	Df	Mean square	F	Sig.
Between Groups	68.23	5	13.646	2.288	.055
Within Group	405.620	68	5.965		
Total	473.851	73			

One reason for this would be the fact that in addition to learning, individuals must also consider the factor of models to emulate from one's own environment. This is concurrent to the findings found from research by Gist (2001) whereby self efficacy in an individual is heightened by the emergence of a model to imitate in doing a task for example. She continued that the sense of self efficacy is increased when there is a lot of perceived similarity between the individual and the model. This is one of the basis for the notion that self efficacy can and does function as a mediator by factors such as training and job performance (Cassidy and Eachus, 1998; Gist and Mitchell, 1992; Nahl, 1996; Ron, 1999; Watson, 1997).

Ho3 which stated that there is no significant difference between length of service and the relevant perception of self efficacy and this hypothesis was found not significant at $F(4,69)=2.291$ with $p=0.068$ as in Table 3.

Table 3: Results of analysis of variance of respondents' length of service and perceived self efficacy

	Sum of squares	df	Mean square	F	Sig.
Between Groups	55.560	4	13.890	2.291	.068
Within Group	418.292	69	6.062		
Total	473.851	73			

A thought to consider in this conception would be that perceptions of self efficacy in the workplace depends more on the social support that one has in terms of colleagues rather than the amount of time spent on the job. This is in line with the study conducted by Pajares (2002) when it was said that positive persuasions by others can empower a sense of higher self efficacy in individuals. As such, when the people at work provide positive feedback or encouragement to an individual, the individual will ultimately begin to believe that they have the ability to perform a task and thus will try to their best at it. This perception can actually be accredited to the theory of locus of control whereby it is the 'extent of which people feel that events are within their control' (McShane and Von Glinow, 2003, p.61). In this context, peers that function as a support 'team' for an individual actually raises the individual's feelings of control over the events currently occurring in their lives. When individuals perceive that he or she actually does have power over situations they began to feel confident and assured that they have the ability to do something to those events. Hence, their feelings of self efficacy increase as a result of this perception.

The influence of training on perceived self efficacy in terms of trainer's effectiveness

In Ho4, it was assumed that there is no significant relationship between trainer's effectiveness with the relevant perceptions of self efficacy. This notion was proven unfounded through the subsequent testing of the hypothesis by correlation analysis. The value $P=0.023$ which is significantly below the level of 0.05 indicates that there is a significant relationship between the two noted variables. Ibrahim Mamat (2001 . p.43) noted that 'conducting a good training program requires the services of a trainer who understands his duty as a trainer'. Research by Rust and Mitchael (2001) reinforces this notion for trainers had been found to make or break a particular training engagement. Herein, it is apparent that an effective trainer needs to be able to communicate their knowledge in various instructional techniques besides having the needed skills to encourage ferocious learning in their trainees (DeSimone *et al.*, 2002).

In this context, the last skill is especially important in instilling a high perception of self efficacy amongst trainees. This is so because a belief in ones ability to perform a task better can only come after the proper understanding of hat should he done is comprehended. Therefore, in training engagements, trainers have that crucial responsibility in ensuring that their trainees grasp the concept of what is being taught to facilitate the proper transfer of ' hat was learnt to the job (Rae, 2001). This is in line with what was noted by Gist (2001) which stated that trainees do look upon the trainers as role models in performing what should he done in a given training session. Thus, this strengthens the finding that trainers are crucial to heightening perceptions of self efficacy in individuals.

The influence of training on perceived self efficacy in terms of training content

Ho5 introduces the notion that there is no significant relationship between training content and the relevant perception of self efficacy. According to the correlation analysis, this notion is proven true for the P value of 0. 119 are undoubtedly higher than the required 0.05. One probable explanation for this notion is that the training content needs to address the needs of the trainees for it to heighten their perception of self efficacy after a training engagement. This correlates with the research done by Rust and Mitchell (2001) whereby only when the training brings meaning to the trainees can it he applied successfully into the workplace. The trainees need to first understand the relevant concepts or principles before they can perceive that they are able to transfer what was learnt into their jobs Goldstein (1986). This is because the more the trainees understand a concept, the more they will have the belief (self efficacy) that they are able to perform a particular job or task (Seta *et al.*, 2000).

The influence of training on perceived self efficacy in terms of trainees' self regulations

For Ho6 the assumption that there is no significant relationship between trainees' self regulation and the relevant perception of self efficacy was groundless and thus firmly rejected. This is because the subsequent correlation analysis with a P value of 0.000 soundly proves that there is a strong relationship between individual self regulations with the relevant perceptions of self

efficacy in individuals. This notion is supported by the fact that self regulation is the exercise of influence over one's own motivations, thought processes, emotional states and patterns of behavior' (Yallow, 1982, p.57). Indirectly, it influences an individual's self efficacy for it regulates the extent of ones belief in ones ability to perform a task or job. As such, an individual whom is said to have a strong self regulation will also inevitably have a high perception of self efficacy because one needs to be able to control the way one thinks, feels and react to a given situation to have a strong belief in ones capability of achieving a set goal.

The influence of training on perceived self efficacy in terms of trainees' supervisors

In Ho7, it is stated that there is no significant relationship between trainees' supervisors and the relevant perception of self efficacy. From the analysis, this notion is proven to be true for the finding of the P value is 0.078 which is much higher than the needed level of 0.05. One probable explanation for the non-existence of relationship between these two variables would be the fact that the dependency on one's colleagues or peers is higher than the dependency on ones supervisors. As noted earlier, ones colleagues or peers in the workplace play a major role in establishing the level of perceived self efficacy because they provide the reinforcement for continuity in performing a certain task or job. This is in tandem with Bandura's research (1977) which stated that individuals enhance their perceived levels of self efficacy through verbal persuasions and social support from others who are closer to them. Research had also shown that positive reinforcement is thought to increase the level of individual self' efficacy in transferring what was learnt from training to the workplace while negative reinforcements will undoubtedly have the reverse effect (Pajares, 2002).

Interestingly, this finding is in direct opposition of much research on training which states the supervisor or the immediate manager as having strong influence on trainees' ability to transfer what was learnt from training to the workplace. Cromwell and Kolb (2004) for example found that trainees report a higher transfer from training if sufficient support is received from their immediate supervisors or managers. Goldstein (1986) also noted that when trainees receive encouragement from their supervisors, they are more willing and more susceptible to proving their worth in the workplace.

The influence of training on perceived self efficacy in terms of trainees' colleagues

Ho8 notes that there is no significant relationship between trainees' colleagues and the relevant perceptions of self efficacy. This notion is opposed through the Pearson analysis which showed a P value of 0.012 which as significantly lower than the 0.05 level. Thus, the null hypothesis is rejected for there is a significant relationship between the two variables. As discussed earlier, past research had showed that there is a strong relationship between colleagues and the level of perceived self efficacy because colleagues do influence how an individual performs at work. Part of this influence is that colleagues establish a social network of support in the workplace which provides a reinforcement of performing job tasks. Bandura (1977) notes that when the proper support and encouragement is gained from colleagues at work, individuals would find it easier to believe in their ability to perform a novel or more challenging task. This is further reinforced by

Pajares's (2002) research which states that the amount of verbal persuasions does determine the amount of effort that an individual exerts when performing a task.

The dominant factor in influencing perceived self efficacy in trainees'

Ho9 assumes that there is no significant dominant factor influencing the relevant perception of self efficacy in this study. This hypothesis however is rejected for the subsequent analysis proves the opposite. Thus, this shows that there is one dominant factor that has an impact on the perceived levels of self efficacy which was found to be self regulation. This finding can be supported by the fact that self efficacy is an individual's belief about his or her abilities to mobilize cognitive resources and courses of action needed to successfully execute a specific task within a given context (Stalkovic and Luthans, 1998). It is an internalized condition or state of mind that an individual has (Bandura, 1986). So forth, it depends heavily on one's perception of individual capability, beliefs, attitudes and aptitude. Keeping that in mind, self efficacy is then said to have a strong relationship with self regulation. One of the reasons is that self regulation is a concept that plays a main role in monitoring the internal processes of thoughts and feelings to enable the expression of these thoughts and feelings into observable behavior (Yallow, 1982). Therefore, for an individual to have a high perception of self believe (self efficacy) in performing a task, he or she must first have a strong control (self regulation) over his emotions, thoughts and behaviors.

Following the findings outlined in the previous discussion, it was found that training does really play a part in influencing the perceived levels of self efficacy in individuals. This is concurrent with the belief that self efficacy does function as a mediator to factors such as training and job performance (Cassidy and Eachus, 1998; Geer *et al.*, 1998; Gist and Mitchell, 1992; Nahl, 1996; Ren, 1999; Watson, 1997).

However, it is also important to note that self efficacy in individuals can be heightened by other sources external to the individual. For example, past researchers like Bandura (1977) notes that it is mastery experiences while Pajares (2002) is of the opinion that positive persuasion by others is the key. Research by Gist (2001) notes that the level of self efficacy in an individual is heightened by the emergence of a model to imitate in doing a task. As such, from the hypotheses testing of independent variables, it was found that trainer's effectiveness (modeling), trainees' colleagues (persuasion by others) as well as self regulation had a significant relationship in affecting the perceived levels of self efficacy in individuals.

Of all the independent variables considered in this study, self regulation is noted to be the most dominant factor which affects the perceived levels of self efficacy in the respondents. This is mainly due to the fact that self efficacy is an internalized as opposed to an externalized condition in individuals (Bandura, 1977). As such, it is predominantly more affected by other such 'internal' processes of an individual such as self regulation and other related self concepts. This is concurrent with the research finding noted by Yallow (1982) which states that self regulation is among the variables having a strong relationship to the concept of self efficacy.

The findings for the study also revealed that the demographic characteristics of the respondents surprisingly do not, play a part in affecting the perceived levels of self efficacy. The self efficacy

of the respondents in this study can then be inferred to not being influenced by age, academic background and their length of service. This can be explained by the fact that in this study the respondents depend more on the positive persuasions of their peers (Pajares, 2002) and emulating their trainers (Gist, 2001) to perform better in their work as a result of self efficacy.

Recommendations

The results of the study suggest that it is important to address the issues of work colleagues, individual self regulation and the role of trainers in the firm because of its important relationship to self efficacy. Thus, the organization can improve the levels of its employees self efficacy if they understand how to capitalize on these factors for the benefit of all. The firm should pay more attention to the informal structure in the organization in relation to boosting employee self efficacy through work colleagues. Activities that help increase employee cohesion and solidarity in organization should be the focus of their efforts in this particular factor. Here, the firm can mandate unity and built upon employee social support at work by arranging activities such as team lunches, survival camps at the end of the work year, as well as having an annual sports day.

In addition to this, the firm should also place a special focus on improving and maintaining the self regulation of their employees. This can be done through various ways such as imposing activities like motivational talks to gain insights on ones personal comprehension of self, personality training and encouraging positive self-talk amongst employees. Positive self-talk is gaining reputation as one of the easiest and most economical way to gain a constructive and upbeat work environment in firms. The researcher notes that even big international companies like Shell are jumping on the bandwagon by introducing self-talk training sessions for its employees to improve work productivity. The firm should also consider capitalizing on its trainers to improve the levels of self efficacy among its employees. As such, proper attention should be given to important elements such as ensuring that the trainers are properly equipped with the necessary knowledge and ability to deliver appropriate training engagements besides being able to induce the proper guidance when needed to enhance perceptions of self efficacy among its employees in the firm.

Conclusion

The findings of this research warrant for subsequent future research on the relationship between self efficacy and self regulation. It is believed that further research should be done on these two factors to further understand their implications on job performance hence the productivity of the organization in the long run. It is also helpful to incorporate a different set of independent variables not considered in this study. For instance, factors such as the training environment, self esteem and self regard. It is suggested that researchers who are interested in studying the relationship between self efficacy and training need to consider incorporating a larger sample size. This is to ensure generalizability alongside ensuring the homogeneity of the sample identified. In addition, the authors also recommend the use of a comparative study to further analyze the relationship between training and self efficacy. A good example might be to investigate the differences among firms in the government and the private sectors in terms of the noted relationship.

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