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Antecedents of Employees' E-training Participation in a Malaysian Private Company

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ABSTRACT

Previous literature indicated that people tend to have lower motivation and level of participation in e-training. This case study aims to shed light on the factors that contribute to employees' e-training participation. It examines the influence of personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment on employees' e-training participation. Results of the study indicate that all of the selected predictors were correlated positively with employees' participation in e-training. The three most dominant factors that influenced employees' participation in e-training were computer self-efficacy, technology acceptance and organisational commitment. The implications and conclusions of the study are clarified.

Keywords: Attitudes, e-training, participation, personalities

INTRODUCTION

E-training or web-based training (WBT), virtual classroom, distance education and Information and Communications Technology (ICT) have become prevalent in today's organisations (Ramayah,

Ahmad, & Hong, 2012). According to the E-Learning Market Trends and Forecast Report by Dacebo from 2014 to 2016, more organisations and individuals are turning to e-learning each year as e-learning is effective and powerful. Based on this report, which considered the situation in 26 countries worldwide, Malaysia has the third highest rate of growth in e-learning (41%), while Asia has the world's highest regional growth rate at 17.3%.

Every year, the government as well as the private sector incurs a large sum of

money on education and training. According to the Tenth Malaysia Plan prepared by the Economic Planning Unit and the Finance Ministry of Malaysia, one of the priorities of the national budget from 2011 to 2015 was to focus on improving the knowledge abilities and innovation of the people to bring progress to the country. E-learning refers to the use of technology in order to learn while e-training is defined as learning offered to employees to enhance their job performance (Nadler, 1984). Adult education or andragogy is the art and science of teaching adults. Thus, e-training is a combination of e-learning and adult education that refers to any type of training given by organisations through electronic media to improve employees' knowledge, attitudes and skills (Ramayah, Ahmad, & Hong, 2012). In e-training, the training programme is delivered through the Internet and the course interaction and delivery are technology mediated. Therefore, one can easily access the information online and be more flexible in terms of time and venue of learning as the learning is more self-directed and independent. As such, e-training is suitable for adult learners who are more independent, mature and expected to have a higher locus of control (Makoe, Richardson, & Price, 2008).

As a result, e-training, which is flexible, accessible, cost effective and time saving, has become an ideal and popular delivery method for training programmes in many organisations (Rosenberg, 2006). According to the research by Global Industry Analysts, e-learning, at the time of writing, was almost US$107 billion in 2015 and would continue to grow. This is at par with figures detailed in studies by Welsh et al. in 2003, which showed that learners tend to learn better using computer-based teaching methods rather than traditional classroom methods. Similarly, Fletcher and Tobias (2000), Bonk and Wisher (2000), Hairston (2007) and Lowry (2007) obtained comparable results in their research. Furthermore, e-learning is more effective than traditional classroom education as learners can tailor the learning to suit their learning pace and it is more engaging for learners (Means et al., 2009). Therefore, it is not surprising that e-learning plays a major role now in adult education and e-training has become a trend in private and public sectors (Egodigwe, 2005). However, most previous research has focussed on training effectiveness and talent development but seldom touched on employees' participation in e-training (Donaldson & Townsend, 2007).

Learners who are not familiar with computer and electronic gadgets may have problem handling the online learning software and in the end lose their interest in e-learning (Kruse, 2004). Thus, computer self-efficacy is crucial in motivating employees to join e-training. Previous research showed that many learners who enrolled in e-learning education did not finish their study and tended to have lower motivation (Dutton, Dutton, & Perry, 2002). This is also supported by the studies done in Kennesaw State University the United States that showed a higher dropout rate of distance learning than for traditional

education. According to the study, 15 to 20% more students dropped out of online classes. Other than that, local research study carried out by Yiong, Sam and Wah (2008) in Sarawak, Malaysia also showed that most of the learners surveyed had moderate levels of e-learning acceptance with a mean of 3.80. Sloane et al. (2004) pointed out that there is clear evidence that training has positive relationship to job satisfaction. Motivation is the thrust that determines how much effort a worker will put in his or her work and how long and which direction the effort is geared towards (Robbins & Judge, 2008). If employees are forced to take part in e-training because they have to, their job satisfaction will be lowered. Thus, it is crucial to understand the factors that will lead to employees' participation in e-training to have optimum results from the training.

Most studies on e-learning have focussed on pedagogy and have not taken into account the different challenges faced by adult learners (Gail & Donald, 2013). As such, this study aimed to narrow the gap between pedagogy and andragogy in e-learning and to provide more findings on e-training in the Malaysian context, which is lacking. Moreover, it is hoped that through this research, employers can better understand the needs and difficulties faced by employees in e-training and be able to encourage them to pick up e-learning with ease. This study provides the participating employees with a better understanding of themselves about their own personality and attitudes including self-esteem, computer self-efficacy, technology acceptance, job

satisfaction and organisational commitment so that employees can identify the potential problems they faced in e-training. The identified personality traits and attitudinal disposition also provide a helpful reference to employees as well as the organisation to make e-training a success.

The objective of this study was to determine the antecedents of e-training participation among private sector employees. The specific research objectives of this study were (i) To examine the level of employees' participation in e-training in a selected private company; (ii) To determine the level of personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment among general employees in a selected private company; (iii) To determine the relationships between personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment and general employees' participation in e-training in a selected private company, and (iv) To determine the major predictors of employee participation in e-training in a selected private company.

This study was in line with initiatives to promote e-training in the workplace. In addition, it is of the utmost importance to enhance the effectiveness of training in the workplace to produce a competent and knowledgeable workforce able to provide optimum organisational performance. The paper is structured as follows: Firstly,

we discuss the concept of employees' e-training participation and review previous literature to develop the hypotheses. Then, the methodology, results and implications of the study are discussed.

THEORISING EMPLOYEE PARTICIPATION IN E-TRAINING

In this study, employee participation in e-training was conceptualised using the ISSTAL Model by Cookson (1986). ISSTAL stands for Interdisciplinary, Sequential-Specificity, Time-Allocation and Life-Span. This classic model incorporates all relevant institutional, situational and dispositional variables to explain the factors that affect adult education participation. This is also the main reason why the ISSTAL model was picked as the foundation of this study; it is a well-rounded and complete model that explains the various factors that influence employee participation in e-training. The model was first introduced by Smith and Theberge in 1980 and later adapted by Cookson in 1986.

In this model, institutional and situational variables include external contexts such as climate, culture and environment and learners' social background and social roles such as age, education level and occupation. Four factors fall under dispositional variables, which are personality traits, intellectual capacity, retained information and attitudinal disposition. Personality is the sum of individual characteristics of a person while intellectual capacity refers to a person's cognitive ability, such as his/her intelligence test scores. Retained information includes learners' stored and retrievable information, images, knowledge and plans. Attitudinal disposition refers to learners' attitudes, beliefs, motivations and perceptions. All of these factors are intertwined and lead to situational factors, which are a result of the complex and interactive effects of the previous factors. Finally, situational variables lead to adult participation in continuing education. Figure 1, from left to right, shows the relevance of the factors contributing towards adult
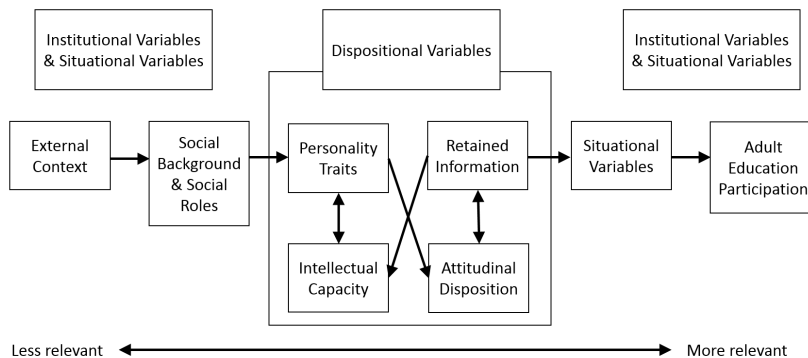

Figure 1. ISSTAL model
Source: (Cookson, 1986, p. 130–141)

education participation. The more to the right, the stronger the relation is between the factors and adult education participation.

The Theory of Reasoned Action

This study also applied the Theory of Reasoned Action (Ajzen & Fishbein, 1980) to explain the phenomenon of employee participation in e-training. According to this theory, an individual's behavioural intention is determined by two major factors, which are the person's attitudes and subjective norms. Ajzen and Fishbein refer to attitudes as the evaluation and strength of a belief whereas subjective norms are "the person's perception that most people who are important to the individual think he or she should or should not perform the behavior" (Fishbein & Ajzen, 1975, p. 302).

The equation of the theory of reasoned action

Behavioural Intention = Attitude+
                                    Subjective norms

Based on this theory, employee behaviour is determined by employees' behavioural intention, where behavioural intention is the result of attitude and subjective norms as depicted in the equation above. Behavioural intention is an indication of how hard individuals are willing to try and how much effort they are going to put in to perform the behaviour. A person's beliefs or perceptions about the consequence of a behaviour will affect the person's attitude towards that particular behaviour. Thus,

an employee who perceives e-training as beneficial will have a more positive attitude towards e-training participation.

Meanwhile, subjective norms are determined by the beliefs of the people around a person and by his motivation to comply with the norms. For example, in this study, if many of the employees had a positive experience in e-training and it was the organisational culture to actively take part in e-training, other employees who previously had not takeen part would be influenced to join e-training, too.

As such, the Theory of Reasoned Action fits in well with the ISSTAL Model. It supports the rationale behind the model, showing the impact of environment or social background and individual attitude towards adult education participation. An individual's personality and attitude can be shaped by situational factors and they intertwine to influence a person's behavioural intention, leading to the probability of action. For this study, we selected computer self-efficacy and self-esteem to represent personality traits, technology acceptance and job satisfaction, while organisational commitment characterised attitudinal disposition.

The Antecedents of Employee E-Training Participation

The research framework in Figure 2, which is an integration of the ISSTAL Model and the Theory of Reasoned Action, shows the relationships between the independent variables, which are personality traits i.e. computer self-efficacy and self-
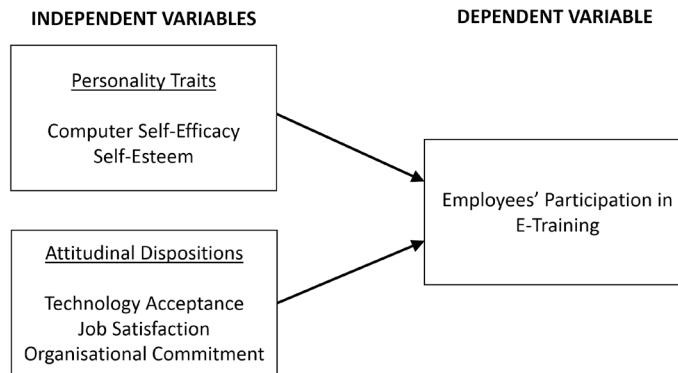
INDEPENDENT VARIABLES

DEPENDENT VARIABLE

Personality Traits

Computer Self-Efficacy
Self-Esteem

Attitudinal Dispositions

Technology Acceptance
Job Satisfaction
Organisational Commitment

Employees' Participation in
E-Training

Figure 2. The research framework

esteem, and attitudinal dispositions i.e. technology acceptance, job satisfaction and organisational commitment with the dependent variable i.e. employee participation in e-training. The position of these variables was consistent with the research objectives. Moreover, the research framework was based on the ISSTAL Model by Cookson (1986) and the selection of variables was supported by Maslow's Hierarchy of Needs (1943), the Theory of Reasoned Action (Ajzen & Fishbein, 1980) and previous research to investigate the relationships between the chosen independent variables and employee participation in e-training.

Personality Traits and Employee E-Training Participation

Computer self-efficacy. According to Karsten and Roth (1998) and Kripanont (2007), learners with higher computer self-efficacy tend to perform better in e-learning. Furthermore, based on Bandura (1997), people with higher self-efficacy have a stronger sense of commitment to

their tasks. Therefore, these people tend to develop deeper interest in their job. Thus, when an employee has higher computer self-efficacy, he or she will be more interested in e-training. Moreover, computer self-efficacy influences employee expectation of learning outcomes and their emotional reactions to computers (Compeau & Higgins, 1995). Staples (1999) also agreed that employees with higher computer self-efficacy tend to have more satisfactory experience in e-learning. Previous research supports that computer self-efficacy has a correlation with employee e-training participation. Based on the above, this study hypothesised:

H1: Employee computer self-efficacy is positively and significantly related to employee participation in e-training.

Self-esteem. In this study, self-esteem refers to the feelings or perception an employee has towards himself. It can reflect the employees' overall emotional evaluation towards themselves. According to Maslow (1954), people with positive feelings about themselves have higher self-esteem and will

have more positive thinking that reflects greater confidence. In addition, self-esteem is closely related to one's happiness, while low self-esteem is more likely to lead to depression and low confidence (Rosenberg, 1965). For instance, employees with high self-esteem are more willing to take risk and perceive challenges more positively (Hellriegel & Slocum, 2010). Training involves changes and therefore, employees with higher self-esteem tend to be more inclined to take part in e-training. Based on Maslow's Hierarchy of Needs, self-esteem is one of the crucial factors that leads to self-actualisation. Self-actualisation is becoming what a person can be in order to actualise his or her potential (Maslow, 1954). As the main purpose of e-training is to help employees realise their full potential, it is more likely that employees with high self-esteem would be interested to join e-training (Lloyd & Sullivan, 2003). Therefore, employee self-esteem is likely to influence their participation in e-training. We therefore hypothesised that:

H2: Employees' self-esteem is positively and significantly related to employee participation in e-training.

Attitudinal Disposition and Employee E-Training Participation

Technology acceptance. In this study, technology acceptance refers to how well an employee can accept the use of technology in training. This variable is based on the Technology Acceptance Model by Davis (1989) that proposed that perceived usefulness and perceived ease of use would determine a person's behavioural intention and eventually, his technology-related behaviour. Thus, employees tend to use technology in learning when they perceive it to be useful for improving their working skills (Kripanont, 2007). However, if the system is too complex to use, employees would lose interest in using technology to assist their learning as the perceived ease of use would be too low (Sardinha & Costa, 2011). Therefore, an employee with high technology acceptance would think more positively about technology and thus, be more willing to take part in e-training (Al-Adwan & Smedley, 2013). Apart from that, employees with higher technology acceptance would be more ready to use technology in their learning to enhance job performance. Consequently, this would motivate employees to take part in e-training with an open mind and a willing heart (Masrom, 2007). As such, this study hypothesised:

H3: Employees' technology acceptance is positively and significantly related to employee participation in e-training.

Job satisfaction. Job satisfaction refers to how content an employee is with his or her job. Job satisfaction is influenced by job expectations. If the work conditions meet with the employees' expectations, they would be more satisfied with their job. If they do not, employees may suffer from stress, low quality of working life and depression and finally, resort to absenteeism and resignation (Seashore &Taber, 1975). Jones,

Latreille and Sloane's (2008) study found that employees with lower job satisfaction would tend towards lower participation in training provided by the company. Therefore, in order to encourage employees to take part in e-training, employers have to meet the needs of workers to raise their job satisfaction. This is because employees with higher job satisfaction show lower resistance to change as they feel more secure and confident in their job (Abdul Hameed, 2011; Struijs, 2012). Thus, they would also be more likely to take part in e-training. Based on the above, this study hypothesised:

H4: Employees' sense of job satisfaction would be positively and significantly related to employee participation in e-training.

Organisational commitment. Organisational commitment refers to how much effort and how dedicated employees are to their company. Research has shown that high organisational commitment has a positive influence on employees' attitudes and behaviour in an organisation (Porter et al., 1974; Koch & Steers, 1978). Studies by Mowday, Porter and Steers (1979) also revealed that employees with higher organisational commitment are less likely to be absent from work or to resign and they tend to be more productive. Apart from that, a study by Cunningham and Mahoney (2004) also pointed out that higher organisational commitment would result in higher motivation to take part in training. Moreover, employees with higher organisational commitment have a stronger bond with the company and are willing to exert more effort in their job (Miller & Lee, 2001). A high level of organisational commitment leads to high affection for the job, continuance commitment and a sense of obligation to stay. Thus, employees with a high level of commitment have low turnover intention (Meyer & Allen, 1991). All this evidence supports the finding that employees' organisational commitment correlates with e-training participation. Based on the above, this study hypothesised:

H5: Employees' organisational commitment ise positively and significantly related to employee participation in e-training.

METHODOLOGY

Participants

The target population of this study was a private company in Malaysia with 384 employees. The main service provided by the company is business security systems such as structured wiring, alarm systems and camera systems. The study samples were 100 employees comprising 67 female and 33 male respondents working in the selected private company. As only one company selected for the case study, the findings of this research are unsuitable for generalisation of trends in other companies. The average age of the respondents was 32.46 years old, with 19 years old being the youngest and 54 years old being the oldest. The majority (74%) of the respondents were married, while 26% were single. A total of 37% of the respondents were Malay, 40%

were Chinese and 23% were Indian. None of the respondents possessed a doctorate or Master's degree; the majority (64%) had a Bachelor's degree, while one respondent had received education up to secondary level only. A total of 35% of the respondents had diploma-level education.

This descriptive correlational study investigated the relationships between the five antecedents, which were personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment and the criterion variable i.e. employee participation in e-training. According to Ary, Jacobs and Sorenson (2010), correlational research is indeed suitable to determine the relationships between variables.

This study used a cross-sectional survey that helped researchers to collect one-time data from a large population in an easier and cheaper way (Hayes et al., 2002). The data were collected using a self-administered survey and analysed using univariate, bivariate and multivariate statistical analyses to describe the employees' participation in e-training. Furthermore, the study calculated the coefficient of correlation between the measures to indicate the strength and direction of the relationships between the variables to test the hypotheses.

Procedure

This study involved two steps of sampling. In the first stage, the convenient sampling technique was used to select the focus of

this study, which was a private company in Cheras, Kuala Lumpur. It was a large-scale private company with 384 employees consisting of different ethnicity and age. The main service provided by the company was business security systems such as structured wiring, alarm systems and camera systems. Apart from its convenience, the sample was typical and could be used to represent the target population. In the second stage, the simple random sampling technique was adopted to identify the respondents who were representative of the target population (Hayes et al., 2002). This study used the Table of Random Numbers to select randomly the 100 samples for the study.

Herzberg's fairly large estimation of predictive power of subjects/independent variable ratio of 15:1 (Stevens, 1986) suggests that sample size should be 75. Green's (1991) formula ($N > 50 + 8m$; m is the number of independent variables) proposes that sample size should be 90. Based on these formulae, we selected 90 as the sample size for this study. We then added an estimated 10% of the proposed size to cater for the non-response respondents. Hence, for this study, the total sample size was 100.

Data were collected from the employees through a formal survey using a standardised questionnaire. The drop-and-pick method was used to collect data in this research. Prior to data collection, the researchers approached the top management of the company by phone and later sent an application letter to the company for approval to carry out the research. Then, the

researchers met the manager of the human resource department of the company to further clarify the purpose, significance of the return rate and data collection procedure. Anonymity of the company and respondents was ensured in this study. After that, the researchers gave the questionnaires to the manager of the human resource department to be distributed to the employees.

Instruments

Employee e-training participation. Employee e-training participation was measured using a single-item scale adapted from Adult Education and Training Survey (2003) and Continuing Vocational Training Survey (2005). This item measured employee e-training participation by measuring how often employees took part in e-training. The item was, "In the past 12 months, how often did you participate in e-training?" The responses for this question ranged from 1 (Never) to 5 (Very often). As it is hard to measure an employee's level of participation, most of the previous studies used secondary data to measure this variable. To date, there is no one simple and established scale to be used to measure e-training participation.

Therefore, based on extensive literature review, this study adapted the item from the related surveys to measure this variable. The literature revealed that there were researchers who used a single-item scale to measure education participation when they did not use secondary data (Chmielewski,

1998; Klunk, Boucouvalas, Hinson, Morris, & Renard, 2013). As there was only one question in the scale, internal consistency could not be calculated. However, many studies have shown that a single-item scale is reliable and valid for use in research. For example, a single-item scale correlated highly with multiple-item scales to measure personality in studies by Woods and Hampson (2005) and Wanous, Reichers and Hudy (1997).

Personality traits. Self-efficacy was measured using a 15-item scale developed by Murphy (1992). The Likert-scale items ranged from 1 (strongly disagree) to 5 (strongly agree). A sample of the items is, "I feel confident copying a disk" and "I feel confident getting the software up and running." In this study, the reliability coefficient estimated for this scale was 0.89.

Self-esteem was measured with a 10-item scale developed by Rosenberg (1965). The scale measured both positive and negative feelings about oneself. The scale used a 4-point Likert scale ranging from strongly agree to strongly disagree. A sample of the items is, "At times I think I am no good at all" and "I am able to do things as well as most other people." The reliability coefficient estimated for this scale in this study was 0.76.

Attitudinal disposition. Technology acceptance was measured using a 10-item scale developed by Venkatesh (2003),

Compeau and Higgins (1995), Thompson, Higgins and Howell (1991) and Teo (2009) to measure employees' intention to use technology in e-training. The instrument used a 4-point Likert scale ranging from strongly disagree to strongly agree. Two samples of the items are, "Working with computers is fun" and "I find computers easy to use." The reliability coefficient reported in this study was 0.86.

Job satisfaction was measured using the Minnesota satisfaction questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967), which consists of 20 items. The instrument uses a 5-point scale ranging from 1 (not satisfied) to 5 (extremely satisfied). Two samples of the items are, "The chances for advancement on this job" and "The chance to do something that makes use of my abilities." The reliability coefficient reported was high in this study, which was 0.84.

Organisational commitment was measured using the Organisational Commitment Scale (OCS) developed by Mowday (1982), which consists of nine items. This instrument used a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Two samples of the items are, "What this organisation stands for is important to me" and "I feel a strong sense of belonging to this organisation." This scale also had a high reliability coefficient of 0.87 in this study.

RESULTS

The study aimed to determine the predictors of e-training participation among employees in the private sector. As high as 81% of the respondents had a low level of participation in e-training, while 14% of them had a medium level of e-training participation and only 5% of the respondents had a high level of e-training participation. As depicted in Table 1, the minimum overall personality traits value was 3.40 and the maximum was 8.63, with a range of 5.23. The values of the mean, median and standard deviation of the overall personality traits were 6.06, 6.20 and 1.02. These values suggested that the overall level of personality traits of the respondents was low.

On the other hand, the 25th percentile of the personality traits was 5.44 and the 75th percentile was 6.66, which suggested that 50% of the respondents had a personality-trait rating between 5.44 and 6.66. The 90th percentile of the personality trait was 7.20, which showed that 90% of the respondents had a personality-trait reading of 7.20 or less. In other words, only 10% of the respondents had a personality-trait reading of above 7.20. The personality traits categorisation revealed that only 20.5% of the respondents achieved a high level of personality traits, followed by 30% of the respondents, who had a medium level of personality traits and 49.5% of the respondents, who had a low level of personality traits.

Table 1
Levels of personality traits

Descriptive Statistics	Overall Personality Traits	Computer Self-Efficacy	Self-Esteem
Mean	6.06	3.29	2.77
Median	6.20	3.30	2.90
Standard Deviation	1.02	0.56	0.46
Minimum	3.40	1.90	1.50
Maximum	8.63	4.93	3.70
Interquartile Range (IQR)	5.23	3.03	2.20
Skewedness	0.19	0.29	-0.66
Kurtosis	0.31	0.56	0.06
Percentile			
25th	5.44	2.94	2.50
50th	6.20	3.30	2.90
75th	6.66	3.56	3.10
90th	7.20	4.00	3.20
Level of Personality Traits			
Descriptive Statistics	Overall Personality Traits	Computer Self-Efficacy	Self-Esteem
Low	(1.00-6.10)	(1.00-3.30)	(1.00-2.80)
Frequency	49.5	51	48
%	49.5	51	48
Medium	(6.11-6.70)	(3.34-3.60)	(2.81-3.10)
Frequency	30	27	33
%	30	27	33
High	(6.71-8.50)	(3.61-5.0)	(3.11-3.50)
Frequency	20.5	22	19
%	20.5	22	19
Total: Frequency	100	100	100
%	100	100	100

Table 2 shows that the minimum overall attitudinal disposition value was 5.87 and the maximum was 12.74, with a range of 6.87. The mean, median and standard deviation of the overall attitudinal disposition were 9.94, 9.94 and 1.64. The 25th percentile of the attitudinal disposition was 8.80 and the 75th percentile was 11.25, which suggested that 50% of the respondents had personality traits between 8.80 and 11.25.

The 90th percentile of the overall attitudinal disposition was 12.24, which showed that 90% of the respondents had personality traits of 12.24 or less. Thus, only 10% of the respondents achieved a rating above 12.24. The categorisation of the overall attitudinal disposition shows that only 21% of the respondents achieved a high level of attitudinal disposition, 30% had a medium level and the majority (49%) had a low

Table 2
Levels of attitudinal disposition

Descriptive Statistics	Overall Attitudinal Disposition	Technology Acceptance	Job Satisfaction	Organisational Commitment
Mean	9.94	3.45	3.21	3.28
Median	9.94	3.50	3.30	3.14
Standard Deviation	1.64	0.39	0.57	0.68
Minimum	5.87	2.00	1.89	1.98
Maximum	12.74	4.00	4.30	4.44
Interquartile Range (IQR)	6.87	2.00	2.41	2.46
Skewedness	-0.50	-1.16	-0.43	0.09
Kurtosis	0.15	2.20	-0.54	-1.20
Percentile				
25th	8.80	3.30	2.80	2.70
50th	9.94	3.50	3.30	3.14
75th	11.25	3.70	3.60	3.95
90th	12.24	3.99	3.95	4.30
Levels of Attitudinal Disposition				
Descriptive Statistics	Overall Attitudinal Disposition	Technology Acceptance	Job Satisfaction	Organisational Commitment
Low	(1.00-9.81)	(1.00-3.40)	(1.00-3.30)	(1-3.11)
Frequency	49	43	53	50
%	49	43	53	50
Medium	(9.82-11.53)	(3.41-3.60)	(3.31- 3.60)	(3.12-4.33)
Frequency	30	24	24	42
%	30	24	24	42
High	(11.54-14)	(3.61-4.00)	(3.61-5.00)	(4.34-5.00)
Frequency	21	33	23	8
%	21	33	23	8
Total: Frequency	100	100	100	100
%	100	100	100	100

level of attitudinal disposition. In short, the level of personality traits and attitudinal disposition of the respondents was low on average.

Skewedness and kurtosis were used to test for normality. As not all of the skewedness and kurtosis values fell between -2 and +2, the data were not normally distributed. Thus, Spearman's Rho was used to determine the relationships between the five variables, which were personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment. The five hypotheses (H1, H2, H3, H4, H5) based on correlations between the independent variables and the respondents' participation

in e-training were tested. The five hypotheses predicted that personality traits i.e. computer self-efficacy and self-esteem and attitudinal disposition i.e. technology acceptance, job satisfaction and organisational commitment would be positively related to employee participation in e-training. The findings of the study supported the positive relationships between all the predictor variables and employee participation in e-training.

As illustrated in Table 3, hypothesis 1 was supported by the findings (r_s=0.416, p=0.000), which showed a positive and moderate relationship between computer self-efficacy and employee participation in e-training. Thus, the results suggested that the higher the respondents' level of computer self-efficacy, the higher their level of e-training participation as employees with higher computer self-efficacy were more likely to have greater ability in using the computer during training. Furthermore, the results also supported Hypothesis 2, which showed a positive relationship between employee self-esteem and their level of participation in e-training. From the findings, employee self-esteem (r_s=0.270,

p=0.046) had a positive but low relationship with employee participation in e-training. Overall, it implied that the higher the level of employee self-esteem, the more likely they were to take part in e-training as they had higher confidence in themselves and thus, were more open to change.

Hypothesis 3 was also supported as employee technology acceptance (r_s=0.306, p=0.019) had a positive but low relationship with employee e-training participation. Therefore, the more positive the perception that employees had towards technology, the more willing they were to participate in e-training as they had a positive perception towards e-training. In addition, the findings were also congruent with Hypothesis 4, which showed that employee job satisfaction (r_s=0.244, p=0.023) had a positive and weak relationship with their e-training participation. As such, employees who were more satisfied with their job tended to be more inclined to taking part in e-training. This was because employees were more likely to put in more effort for a company with which they were satisfied. Apart from that, the results supported Hypothesis 5,

Table 3

Spearman's rho correlation coefficient of relationships between the independent variables and employee participation in e-training

	Variables	Spearman's Rho Correlation (r_s)
Y	Employee participation in e-training	
X1	Computer Self-efficacy	0.416**
X2	Self-esteem	0.270**
X3	Technology Acceptance	0.306**
X4	Job Satisfaction	0.244**
X5	Organisational Commitment	0.349**

**Correlation is significant at the 0.01 level (two-tailed)

which showed that employee organisational commitment (r_s=0.349, p=0.012) was positively and weakly correlated with their e-training participation. Employees were more supportive towards company training when they were dedicated to the company.

The findings shown in Table 3 support that the five predictor variables i.e. personality traits encompassing computer self-efficacy and self-esteem and attitudinal disposition encompassing technology acceptance, job satisfaction and organisational commitment were indeed the antecedents of employee participation in e-training. Overall, the results supported Maslow's Hierarchy of Needs (1943) and the Theory of Reasoned Action (Ajzen, 1980) that explain how human beings learn. Moreover, studies by Rubenson (2010), Meriam (1998), Holton (2003) and Costa (2011) also agreed on the influence of personality traits and attitudinal disposition in affecting an individual's intention to learn. The results indicated that computer self-efficacy (r_s=0.416, p=0.000) had the highest correlation with employee participation in e-training followed by organisational commitment (r_s=0.349, p=0.012), employees' technology acceptance (r_s=0.306, p=0.019), self-esteem (r_s=0.270, p=0.046) and finally, job satisfaction (r_s=0.244, p=0.023). This showed that among the variables, the most influential factor was employees' computer self-efficacy. The higher their confidence in using the computer, the more willing they were to take part in e-training as they were able to make good use of the computer during training.

Equation

$$Y = b_0 + b_1 (X1) + b_2 (X2) + b_3 (X3) + b_4 (X4) + b_5 (X5) + e$$

where,

Y = Employee participation in e-training

b_0 = Constant (Intercept)

b_1 = Computer self-efficacy

b_2 = Self-Esteem

b_3 = Technology acceptance

b_4 = Job satisfaction

b_5 = Organisational commitment

e = Error

The results showed that only three variables were significant in explaining the variation in employee participation in e-training (Y). The three dominant variables were computer self-efficacy (X1) (t=5.394, p=0.000), organisational commitment (X5) (t=2.551, p=0.012) and technology acceptance (X3) (t=2.379, p=0.019). The other two variables, self-esteem (X2) and job satisfaction (X4), were excluded because their contribution to the variation in employee e-training participation was not as significant as the other three variables (X1, X3, X5). In other words, they did not have a significant impact on employee e-training participation (Y). The findings suggested that the data did not fully support the proposed multiple linear regression model for employee participation in e-training. The findings are reported in Table 4.

Table 4
Estimates of coefficients for the model of employee participation in e-training

Dimension	β (Unstandardised Coefficients)	Std. Error	β (Standardised Coefficients)	t	*p*-value
Constant	1.639	0.448		-3.660	0.000
Computer Self-Efficacy	0.435	0.81	0.455	5.394	0.000
Organisational Commitment	0.164	0.64	0.212	2.551	0.012
Technology Acceptance	0.267	0.112	0.195	2.379	0.019

Notes: R=0.612; R²=0.374; Adj. R²=0.355; F=19.156; p=0.000; Durbin-Watson=1.499

The b-values showed that computer self-efficacy (X1) with (β=0.435, *t*=5.394) had the strongest contribution in explaining employee participation in e-training if the effects of other variables were held constant. The positive β shows the positive effect of employees' computer self-efficacy on their participation in e-training. Thus, for every one unit increase in computer self-efficacy, employees' e-training participation (Y) would increase at 0.435. The second highest contribution was from technology acceptance (X3) with (β=0.267, *t*=2.379) followed by organisational commitment (X5) with (β=0.164, t=2.551). From the results, it was illustrated that organisational commitment (X5) contributed the least to the variance in employee e-training participation. This suggested that a one-unit increase in organisational commitment (X5) was followed by 0.164 units of increase in employee e-training participation (Y).

To decide whether the factor made a significant contribution to the model, the *t*-tests were used. In this study, computer self-efficacy (*t*=5.394, p=0.000), organisational commitment (*t*=2.551, *p*=0.012) and technology acceptance (*t*=2.379, *p*=0.019) were all significant antecedents for employee e-training participation. The degree of freedom was calculated using the formulae: *N*-*p*-1, (100-5-1=94). The adjusted R-squared value was used to avoid a biased estimation. In this study, the adjusted R-squared value was 0.355, which showed that 35.5% of the variance in employee e-training participation was accounted for by computer self-efficacy (X1), organisational commitment (X5) and technology acceptance (X3).

On the other hand, the ANOVA results showed that the *F*-value was large (F=19.156) and the corresponding *p*-value was small (*p*=0.000) compared to the alpha value (α=0.05). As the slope for the estimated linear regression line was not equal to zero, it verified that there was a linear relationship between employee e-training participation and computer self-efficacy (X1), organisational commitment (X5) and technology acceptance (X3). The Durbin-Watson value was 1.499, which

fell between the values 1 and 3 and thus, supported the assumption that independent residuals has been met.

DISCUSSION

In this study, all of the five independent variables were positively correlated with employee participation in e-training. This showed that an increase in the five antecedents would also increase employee participation in e-training. Thus, most of the respondents in this study had a low level of e-training participation as they also had a low level of personality traits and attitudinal disposition. In other words, an employee with a high level of computer self-efficacy, organisational commitment and technology acceptance is more likely to take part in e-training.

Furthermore, the significance of computer self-efficacy and technology acceptance in affecting employee participation in e-training was highly supported by Ajzen (1980), Kripanont (2007), Richardson and Price (2008) and Sardinha and Costa (2011). Apart from that, the findings also supported the Theory of Reasoned Action (Ajzen, 1980) and Maslow's Hierarchy of Needs (1943). Based on Maslow's view, self-actualisation can only be achieved when an individual's physiological, safety, love or belonging and self-esteem needs are met. Thus, in order to encourage employees to continue learning to realise their full potential, self-esteem and organisational commitment are the important factors that are needed to motivate them to join e-training. According to Ajzen

(1980), an individual's behavioural intention depends on his attitudes about behaviour and subjective norms. Thus, an employee's intention to join e-training is influenced by his/her own attitude towards e-training and also the people around him/her. In other words, if employees have a positive attitude towards e-training and their work, they will be more likely to join e-training, which is in line with the findings of this study.

The findings of the study also suggested that employees with low confidence in using the computer had a higher tendency of showing low participation in e-training too because they did not think using the computer in training could help them to learn better. As a result, they were not interested in joining e-training, which uses the computer and the Internet as the teaching medium. Moreover, low self-esteem leads to low e-training participation as employees have a negative attitude towards themselves. Pessimistic thinking causes higher resistance to change. As such, employees with low self-esteem do not like to take part in e-training. Moreover, employees who are dissatisfied and not committed to their job have lower e-training participation as they do not want to spend more time and effort on a company to which they do not have a sense of belonging.

In addition, employees with low technology acceptance have low e-training participation as they have a negative perception about the use of the computer in e-training. Furthermore, the findings are in line with Maslow's Hierarchy of Needs. An employee can only achieve self-

actualisation, which is the highest level of need, when his or her lower levels of need such as commitment, care, love and self-esteem are fulfilled. As such, to motivate an employee to fulfil his or her potential, the company should first take into consideration the employees' personality traits and attitudinal disposition. The company should strive to increase employees' computer self-efficacy (X1), organisational commitment (X5) and technology acceptance (X3) in order to motivate them to join e-training.

Moreover, as the company provides business security systems that are strongly technology-based, workers face high demand to keep their skills and knowledge updated according to current developments in science and technology. This industry is a rapidly growing one that requires employees to be continuously learning. Therefore, increasing employee e-training participation is crucial for the company to stay current.

CONCLUSION

In conclusion, employee participation in e-training is a function of personality traits and attitudinal disposition. Employees' computer self-efficacy plays a major role in their e-training participation. Besides enriching the understanding of e-training, the study also promoted and improved e-training in the company by helping the human resource department to pinpoint the factors that contribute to e-training participation. All in all, the organisation should take into account the employees' affective domain when trying to encourage them to join e-training. E-training can only be successful when both the organisation and the employees are willing to cooperate and pitch in effort.

Implications for Theory and Practice

This study shed light on how organisations can avoid the flaws of e-training and bring the best out of employees through e-training. The study helped the organisation to identify the possible reasons behind employees' low motivation to participate in e-training. The factors that contributed greatly to e-training participation were computer self-efficacy, technology acceptance and organisational commitment. Besides enriching the understanding of e-training, the study also promoted and improved e-training in the company.

Only when employees are motivated to join e-training, can organisations enhance employees' job performance through e-training. The main purpose of training is to improve employees' knowledge, skills and attitude but the findings have shown that job satisfaction and motivation have a positive effect on training effectiveness. Thus, organisations need to encourage and motivate employees to take part in e-training and not force them to do so. The findings shown in Table 1 and Table 2 indicate that the majority of the respondents had a low level of personality traits (49.5%) and attitudinal disposition (49%). Thus, it was not surprising that the respondents (81%) had a low level of participation in e-training. The results of the study should now be able

to help the organisation determine the areas they need to focus on to increase employee e-training participation.

Top management need to pay closer attention to the psychological needs and attachment of employees. Thus, the human resource department, apart from only providing training, can also organise activities such as gathering, mentoring and sharing sessions to help inculcate a positive and supportive working environment within the organisation. Other than that, employees need to be given a chance to voice their opinion through a feedback form or suggestion box. A different idea must not be taken negatively but be considered as a way of improvement for the company. Increasing employee loyalty and commitment towards the company can raise employee participation in e-training.

Thus, the company ought to increase employees' level of attitude and personality variables. For example, the responses from the questionnaires showed that most of the respondents were not satisfied with their salary. Thus, to increase employee job satisfaction, the company could review their salary scheme. Furthermore, as it was identified in the study that computer self-efficacy had the strongest influence on e-training participation, the trainers of the organisation need to give closer guidance to employees in helping them pick up computer skills with ease. In addition, the ISSTAL model, the Theory of Reasoned Action (Ajzen, 1980) and the Theory of Planned Behaviour (Ajzen, 1996) explain the phenomenon of employee e-training participation. Based on these theories, employees' intention to join e-training is affected by their own personality, attitude, the people around them and their social background as depicted in the Equation of the Theory of Reasoned Action:

Behavioural Intention = Attitude + Subjective norms

However, the primary factors that influence an employee's e-training participation are intrinsic and not external because according to these theories, external factors can only indirectly affect one's behaviour by influencing an individual's attitude. In brief, the findings of the study provided empirical data for the ISSTAL Model (Cookson, 1986), Theory of Reasoned Action (Ajzen, 1980) and Maslow's Hierarchy of Needs (1943). The results were in line with the theories and thus, supported the importance of personality and attitude in influencing employee e-training participation. Through this research, it is hoped that human resource practitioners can pay attention to employees' affective domain to increase e-training participation. Moreover, the study has also provided updated findings from Malaysia, which is an Eastern country with a different culture from that of the West. The results showed that the ISSTAL Model is applicable to Eastern countries in explaining employee e-training participation.

Limitations and future research

As the samples of the study were drawn from a private company only, it is not suitable to generalise the findings to the public sector or other private companies as it is a case study based on one selected private company only. Thus, it is recommended that future studies should employ public sector samples and do a comparative study to examine differences in terms of antecedents of e-training participation. In addition, the scope of the study is limited to the selected independent variables only. Thus, it is highly recommended that future studies should include more relevant variables to yield a clearer picture of the phenomenon. Moreover, as this study is quantitative research work, the findings are only surface-level. To have a more thorough understanding of the predictors of employee e-training participation, it is recommended that future research on this area be qualitative.

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