University of Southampton

Faculty of Social Sciences

Southampton Business School

Psychological Conditions as an Antecedent of Training Effectiveness

by

Edora Ismail

Thesis for the degree of Doctor of Philosophy

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Abstract

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The burgeoning level on interest in employee engagement has increased in the late 1990s and continued to grow rapidly. It has become the main attraction among practitioners as well as academics from different fields of studies, such as human resource management, human resource development, and psychology. Competiveness in the business environment gives an impetus for companies to find the best method to retain and develop their employees. The companies, whether they are in private or public sectors, have to discover what it takes to improve and sustain the performance of their workforce. This study aimed to investigate the psychological conditions of engagement as an antecedent of training effectiveness. This study adopted Kahn's psychological conditions of engagement, which encompasses psychological meaningfulness, psychological safety, and psychological availability. It also sought to examine the mediating role of motivation to learn, motivation to transfer, self-efficacy, and learning, on the relationship with training effectiveness. A total of 94 middle managers in the public sector in Malaysia, who attended the leadership assessment programme, participated in this study. A time-lagged design was used to investigate the relationships in this study. For Time 1, data were collected prior to the training programme commencing, Time 2 involved data collection that was performed immediately after the participants finished the training programme, and the final stage of data collection, that is Time 3, was done four (4) months after the managers participated in the programme. The Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to analyse the data. Based on the study findings, psychological conditions of engagement directly predict motivation to transfer, motivation to learn, and self-efficacy. The results showed that psychological conditions of engagement act as an antecedent of the proposed model. This study underpinned the importance of psychological conditions of engagement as a pre-training condition for transfer of training. Finally, theoretical, practical, and methodological contributions as well as directions for future research were discussed.

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Research Thesis: Declaration of Authorship

Print name: Edora Ismail

Title of thesis: Psychological conditions of engagement as an antecedents of training effectiveness

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. Parts of this work have been published as:

   Conference Papers:

   i. Ismail, E., Clarke, N. and Wang, J.K. (2017). Linking employee engagement construct and HRD practice: an overview of the literature. *Proceedings of the 18th International Conference on Human Resource Development Research and Practice across Europe,* Lisbon, 6-9 June 2017, 497-498

   ii. Ismail, E., Baruch, Y., and Wang, J.K. (2019). Linking psychological conditions of engagement and affective learning in organisation: the mediating role of motivation to transfer. *Proceedings of International Conference on Business Economic and Management,* Johor Bahru Malaysia, 26-27 November 2019, 100-100

Signature: Date:

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Dedicated in loving memory of my late father, Ismail Mamat, my inspiration and my idol.

Before we can learn, we need to learn how to learn,
And before we can learn how to learn, we need to learn how to unlearn
-Sufi Proverb

Definitions and Abbreviations

M-LEAP: Middle Management Leadership Assessment Programme

E-LEAP: Executive Leadership Assessment Programme

INTAN: National Institute of Public Administration

PLS-SEM: Partial Least Squares Structural Equation Modelling

PSD: Public Service Department

Chapter 1 Introduction

1.1 Background of the research

It has become a universal phenomenon that public service with its bureaucratic image, is often perceived to be more underperformed than the market-driven private sector (Abd Manaf 2011, p.227). The public sector also has long suffered criticisms, such as inefficiency, red tape, lack of flexibility, ineffective accountability, and poor performance (Siddiquee, 2006). In the Malaysian context, the public service has also been plagued with the perception of failure to give a high quality of service (Johari and Yahya, 2018). The issue has grown in importance in light of a recent report (January 1 – September 30, 2019) published by the Malaysian Public Complaint Bureau, which revealed that public complaints on dissatisfaction against the quality of service of government agencies had increased to from 20.0% in 2018 to 21.3% in 2019. This evidence showed that a more meaningful approach should be taken to improve the service quality of the public sector in Malaysia.

In order to address this problem, that is, to enhance the efficiency and productivity of the public service, the Malaysian government through the Public Service Department (PSD) has launched numerous approaches to maximise the efficiency in public service. The PSD leads the central agency in managing employees in public service. The main role of PSD is formulating all policy and procedure matters pertaining to human resource of the Malaysian civil service. In order to deliver good quality service to the public, PSD heavily relies on efficient, dedicated, and well-trained administrator officers. One of the steps taken by the PSD is to offer several training and development programmes for public service managers. Two mandatory training programmes are Middle Management Leadership Assessment Programme (M-LEAP) and Executive Leadership Development and Assessment Programme (E-LEAP). The National Institute of Public Administration (INTAN) administers all formal training programmes for government officers. In the Malaysian context, public managers comprises Administrative and Diplomatic Service Officers ("*Perkhidmatan Tadbir dan Diplomatik*" – PTD). This group of personnel holds managerial positions, and they are regarded as the *corps d'elite* of generals (Kumar and Rose, 2010). Public sector managers are responsible to either directly or indirectly influence their subordinates in delivering information and resources regarding changes in work procedures to improve public service (Cregard and Corin, 2019). To do so, it requires these managers to possess high knowledge, skills, and abilities.

Chapter 1

Training and development as one of the practices in the Human Resource Development (HRD) field has been acknowledge as one of the surviving tools for workforce development strategy. Noe (2020) defined training as a planned effort by company to facilitate employees with current job-related competencies, knowledge, skills and behaviours, while development on the other hand focuses on preparing employees for future jobs. The aims of the training is to leverage employees' knowledge, skills, and abilities (KSA) that could potentially result in increasing productivity and performance of the organisation and as well as employees (Sung and Choi, 2014). Due to changes in the nature of work that requires expansion in job requirements related to KSA, it is irrelevant to differentiate these two terms. Therefore, training and development should be viewed as a complementary set of activities, not in separate concepts (Mathieu and Tesluk, 2010). This study adapted the definition of training offered by Garavan et al. (2019) in which they defined training as comprising both training and development that focuses on the KSA needed to perform the current job as well as for future tasks. This is because respondents of the present study are the public managers enrolled in training programmes that require them to improve their current KSA in order to prepare for future roles.

The key question that still arise in training function is that, how can employees and organisation particularly benefit from the training programme that they participate in? Apart from that, with the high investment on training, the result of training should yield high profit for the organisation. For the employees, their performance are expected to be enhanced after attending training programmes. One may ask, did they actually learned something? Can they apply what they have learned during the training programme? Can the new KSA gained from the training programme be maintained throughout their job tenure? This leads to another question which is, how to make sure that the employees can apply what they have learned during the training programme back to workplace? These long-standing questions still puzzle both academicians and practitioners in the human resource development field.

One of the solution for these questions rely on the ability of the employees to apply what they have learned during training. Botke et al. (2018) stated that training practices could be impactful to the organisation when employees are able and voluntarily use their new KSA to the job. Baldwin and Ford (1988) posited one of the most influential frameworks to assess the effectiveness of training programmes. The premise of this framework is that the training could only be acknowledge as successful when the participants apply learned knowledge back to the workplace. In this framework, they identified three important inputs of training transfer, that is trainee characteristics, training design, and work environment. Of the three training inputs investigated in training transfer studies, trainee characteristics, was found to be the strongest and most examined predictor of transfer of training (Kahn and Girvan, 2017).

Previous studies suggested various dimensions for trainee characteristics, for example motivation to transfer and volition to transfer (Richter and Kauffeld, 2020); pre-training motivation (Kim, Park and Kang, 2019); learner readiness, personal transfer efficacy, motivation to transfer, personal capacity, and perceived content validity (Celestine and Yunfei, 2018); motivation to participate in training (Nafukho et al., 2017); and learner readiness (Bhatti et al., 2013). This study incorporated trainee characteristics variable depicted from the seminal work of training transfer by Baldwin and Ford (1988). A review conducted by Burke and Hutchins (2007) identified motivation to transfer, motivation to learn, and self-efficacy as the primary characteristics of trainees that influence transfer of training. Therefore, this study used these dimensions to describe trainee characteristics. Apart from that, researchers also argued that, one of the crucial part to ensure the training to be a success is that learning should occur (Huang and Jao, 2016; Culpin et al., 2014; Velada and Caetano, 2007). The Kirkpatrick Four Evaluation Model included learning as one of the criteria to be evaluated for training effectiveness. Gagne (1984) pointed out five learning outcomes, i.e., intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes. Attitudes has been regarded as inferred state and it has impact on behaviour. In addition, Holton, Bates and Ruona (2000) stated learning as an outcome of HRD practices and therefore, to measure the profit of investment in training, it is important to understand what factors facilitate the learning process. This study acknowledge learning as a mediator on the relationship between motivation to transfer, motivation to learn, self-efficacy, and transfer of training.

Despite being acknowledged as a crucial factor to determine the success of transferring the training back to the workplace, the findings of the dimensions in trainee characteristics are still varied. The meta-analysis work by Huang et al. (2015) found that motivational variables are the most contributing factors on the willingness of trainees to transfer. However, a study by Chiaburu and Tekleab (2005) for instance found no direct impact of motivation to transfer on training transfer. In another study, Van de Locht, Van Dam and Chiaburu (2013) reported the role of motivation to learn as the strongest predictor for transfer of training. Influential work by Blume et al. (2010) also stated that pre-training self-efficacy and motivation to learn have moderate relationships to transfer of training. The inconsistent outcomes of these trainee characteristic dimensions demand for conclusive causes that contribute to the success of investment in training programmes.

The growing importance of employee engagement has become well-known to both academia and practitioners. This construct is also vital in everyday part of the vocabulary of HRM and used to execute core goals and activities in organisations (Christian, Garza and Slaughter, 2011; Arrowsmith and Parker, 2013). The employee engagement term is acknowledged to be linked

with the positive effects on both organisation and employees. It was noted that employee engagement construct has been interchangeably used with other terms such work engagement, job engagement, organisational engagement, and personal engagement. Crawford, LePine and Rich (2010) in their meta-analyses have argued on the issues of redundancy and overlapping construct of employee engagement. To avoid confusion, this study followed the recommendation by Shuck, Adelson and Reio (2017) on the usage of employee engagement construct. Based on their review, it was suggested that research on engagement field, instead of using the work engagement construct to discuss about engagement, it is advisable for researchers to use the employee engagement term. This is because it connotes the definition, theoretical, and measurement of engagement. Besides, this helps researchers to differentiate the terms to other similar frameworks, such as job engagement or work engagement. As for this study, it focused on the personal engagement proposed by seminal work of Kahn (1990). The employee engagement construct was grounded from Kahn's seminal work and therefore it is parallel with personal engagement construct and it is connected with high quality of job performance (Shuck and Wollard, 2010; Fletcher, 2016).

Recent evidence suggested that when employees are able to experience personal engagement that involves positive work attitude when performing a task, it could result in higher performance rates at work. A previous study on 20 financial firms found that highly engaged employees correlates with high performance (Carter et al., 2016). It is also related to the expression of extra-role behaviour of employees. Dedicated employees for example, are more enthusiastic, inspired, and employ strong identification in their work (De Braine and Roodt, 2011). Apart from that, engaged employees tend to remain longer in their organisation (Alfes et al., 2013). Furthermore, an engaged employee is usually portrayed as having a high levels of energy, more enthusiastic about their work, and much often immersed in his or her job so that time flies (Xanthopoulou et al., 2008). According to Attridge (2009), when employees are involved, committed, enthusiastic, and passionate with their work, it fosters high levels of engagement.

The backbone of employee engagement studies was derived from the seminal work by Kahn (1990). His work proposed that employee engagement refers to personal role of engagement and is regarded as an important motivational concept (Fletcher, 2017; Rich, LePine and Crawford, 2010). According to Kahn, engaged employees are explained as being psychologically present and they become cognitively, emotionally, and physically involved when performing the job (Kahn, 1990). Additionally, he further suggested three direct psychological conditions that could facilitate engagement. These psychological conditions refer to psychological meaningfulness, psychological availability, and psychological safety.

To further our understanding about the role of psychological conditions of personal engagement as antecedent to transfer of training, this study used Kahn's (1990) personal engagement model. This study posited that personal conditions of engagement predict motivation to transfer, motivation to learn, and self-efficacy. In return, it increases the learning process that could result in post-training behaviour that represents transfer of training.

1.2 Focus of the research

The focus of this research was to examine the role of psychological conditions of engagement as an antecedent of training effectiveness. Training effectiveness was measured based on post-training behaviour of trainees. Specifically, this study sought to investigate the direct effect of three roles of psychological conditions of personal engagement, that is psychological meaningfulness, psychological availability, and psychological safety on motivation to transfer, motivation to learn, and self-efficacy.

The role of psychological conditions of personal engagement is still at the nascent stage in training transfer studies. Few researchers suggested the important role of psychological element in training domain. Bhatti and Kaur (2010) for instance, stated that when employees engage with training activities, it could motivate them to comprehend the importance of improving the knowledge, skills, and abilities. Crawford (2018) emphasised the role of personal engagement is an individual characteristic that could become the key mechanism to explain the role of individual performance in an organisation. Sitzmann and Weinhardt (2015) for example, proposed the training engagement theory comprising multiple levels of analyses. This theory proposed a sequence model of independent and joint effects of establishing training goals, prioritising those goals, and persisting during goal surviving on training effectiveness (p.733). The multiple levels of analyses consist of macro, between-person, and within-person levels. In line with this, Johns (2018) highlighted the importance of identifying the context particularly when investigating the relationship of a new construct. In this present study, the novelty role of psychological conditions of personal engagement as predictor of training transfer required the researcher to understand the impact at within-person level that may vary in amount of application of the KSA. Transfer of training related to individual matter can reflect personal choice. That means, they make the decision on what to apply, how, and when to use the KSA learned during training (Yelon, 2018). In addition, by examining the within-person level, it enhanced our viewpoint about changes of the same person on how, when, and what circumstances they apply their KSA (Huang, Gardner and Moayer, 2016).

Wealth of research had been conducted to understand how motivation to transfer, motivation to learn, and self-efficacy could influence learning and as a result, it enhances the transfer of training (Yaghi and Bates, 2020; Sahoo and Mishra, 2019; Iqbal and Dasteeger, 2017). In terms of learning, Ford et al. (1998) mentioned that learning is an important outcome of the training programme. Kraiger, Ford and Salas (1993) distinguished three learning outcomes, namely cognitive outcomes, skill-based outcomes, and affective outcomes. Of these three outcomes, this study focused on affective outcomes because it parallels the motivational component (Huang et al., 2015). This study posited that affective learning mediates the relationship between motivation to transfer, motivation to learn, self-efficacy, and training transfer.

1.3 Significance of the study

This study makes a number of contributions to training transfer and engagement research. Firstly, this study contributed to the new dimensions of trainee's characteristics that could ensure the effectiveness of transfer of training. This study expanded our understanding on the role of psychological element as one of the facets of trainee's characteristics that can impact positive transfer. Thus, the findings of this study offered a new paradigm on the psychological state of engagement of trainees as one of the contributing factor on transfer of training.

Secondly, there is an increasing concern on the study of psychological conditions proposed by Kahn (1990) that had been diverted into different conceptualisations (Bailey et al., 2015). Therefore, the findings of this study could add new contributions to the psychological conditions of personal engagement theory proposed by Kahn, particularly in public sectors.

This study is a longitudinal study, therefore, the findings of this study contributed to the methodological elements in both areas, that is, transfer of training and employee engagement. In the recent review by Garavan et al. (2019), one of the problems in training transfer study is the lack of longitudinal design in investigating the transfer effect. Furthermore, Bailey et al. (2015) pointed out on the increasing need to investigate evidence that could provide causal direction in engagement studies. Therefore, the findings of this study attempted to address these calls.

The findings of this study also had implications on psychological conditions of engagement in the public sector Malaysia context. To note, there is very limited study to address the role of psychological conditions of engagement in the public sector (e.g., Soieb, Othman and Dsilva, 2015; Ibnu, Islam and Noor, 2014; Othman and Nasurdin, 2013). All of these previous studies incorporated the Job Demand Resource model to measure engagement. The rest of studies of engagement focused on the private sector context (Haruna and Marthandan, 2017; Mun, et al., 2013). Most importantly, previous research on personal conditions of engagement were

developed in Western countries and obviously they have a different culture. This is because workforces in Asian region may experience different personal conditions of engagement compared to their counterparts in Western societies (Abu Bakar, Cooke and Muenjohn, 2018). Therefore, this study makes significant contribution towards testing the Kahn's personal conditions of engagement in Asian context. In relation to transfer of training study, numerous studies were found to investigate various factors that influence transfer of training in Malaysian context such as perceived organization support (Zumrah and Boyle, 2015); personality traits and social support (Ng and Ahmad, 2018) and individual and work environment (Bhatti, et al., 2014). However, most of the studies were conducted in one point of time data collection, that is applying cross-sectional design. The present study contribute to the limited literature on transfer of training study by applying a longitudinal design particularly in public sector in Malaysia.

According to Hofstede (1984), culture is a result on how an individual places the meaning to a variety of aspects in life and this is the challenge that managers face when dealing with people from diverse backgrounds. He posited four dimensions of culture, namely individual versus collectivism, large or small power distance, strong or weak uncertainty avoidance, and masculinity versus femininity. Hofstede (1991), as cited in Selvarajah and Meyer (2008), revealed that of these dimensions, Malaysians experiences high power distance and weak uncertainty. One of the uniqueness of this study is that the survey was conducted in the Malaysian context. As a multi-cultural, multi-racial, and Muslim country, cultural differences exist. Malaysian public servants are mostly dominated by the Malays. A study by Lim (2001) among 120 private companies for example, reported that Malays were found to have higher power distance compared to Chinese and Indians. Selvarajah and Meyer (2008) in their study found that Malay managers perceived the Managerial Behaviour as one of the important factors to become excellent leader. These findings provide initial call for the present study to further investigate the cultural issues in training transfer and engagement study.

1.4 Research objective

The main objective of the present research was to examine the psychological conditions of engagement as an antecedent of training effectiveness. This research sought:

1. To identify the role of psychological conditions of engagement as an antecedent of training effectiveness,

2. To investigate the significance of motivation to learn, motivation to transfer, self-efficacy, and affective learning as a plausible mediating variable between psychological conditions of engagement and training effectiveness, and

3. To examine affective learning as a mediating variable between motivation to learn, motivation to transfer, self-efficacy, and training effectiveness.

1.5 Summary and research outline

This study intended to investigate and understand the role of psychological conditions of personal engagement as an antecedent of training effectiveness. The mediating role of motivation to learn, motivation to transfer, self-efficacy, and affective learning were also investigated in this study.

This dissertation is organised in the following way. Firstly, chapter 1 focuses on the background of the thesis, focus of the study, research objectives, and the structure of chapters.

Next, chapter 2 provides the review of literature, highlighting the variables studied in this thesis. The chapter gives a brief overview of Kahn's personal engagement model as the main theoretical model of the study. It also addresses supporting theories of the study. It continues with the critiques and comments on this model. Next, the chapter also addresses the critical review of literature, the gaps of the research, research framework, and hypotheses of the study, as well as the overview about leadership assessment programme in the public sector in Malaysia.

Chapter 3 discusses about the methodology adopted in this study. The chapter starts with the research paradigm and research design. It continues with the discussion on the variables involved in the study, as well as the research context. The sample of the study, data collection procedure, measurement of the instruments, and data analysis are also explained in this chapter.

Chapter 4 reports the findings of the study. This section presents the findings of the analysis of the study, including the EFA and structural model results.

Chapter 5 offers discussion of the findings from the study.

Finally, chapter 6 provides the conclusion, theoretical, methodological, and practical contributions, and limitations of the study, as well as the recommendations for future research.

Chapter 2 Literature review

2.1 Introduction

This chapter reviews the literature concerning the underlying theories and conceptual definition of the variables used in the study. This chapter begins by introducing the conceptual discussion of employee engagement, the underlying theories and how employee engagement is related to improving workforce performance through training effectiveness. The research hypotheses and research framework were also discussed.

2.2 Perspectives on employee engagement

2.2.1 Psychological conditions of personal engagement Kahn (1990)

The work by Kahn (1990) has been considered the first academic approach to engagement (Guest, 2014). This ethnographic study provided empirical evidence on the psychological conditions of personal engagement and disengagement at work. In his study, Kahn argued that people can experience different levels of engagement throughout their vocation. According to Soane et al. (2012), the framework offered by Kahn was inspired by three main theories of organisational research. These theories referred to needs and motives (Alderfer, 1972; Maslow, 1954), interactions with the working environment (Hackman and Oldham, 1980) and the social organisational context (Aldefer, 1985). Kahn defined personal engagement as the harnessing of the self to the work role among employees. Personal disengagement, on the other hand, is a condition where people detach themselves from their work roles. The personal engagement or disengagement process defines how they express and conduct themselves physically, cognitively and emotionally. This premise draws attention to how employees bring different aspects of themselves to performing their tasks. The importance of bringing oneself into one's work has been considered one of the critical contributing factors to influencing individual performance excellence.

Kahn included the idea of self-expression based on Goffman's (1959) work on the expressiveness of the individual. According to Goffman (1959), the expressiveness of the individual is characterized by two activities: the expression that the individual gives and the expression that he gives off. Therefore, in relation to this notion, Kahn's premise on personal engagement is concerned with the degree to which employees give of and express themselves while performing any task. Self-expressiveness enables employees to bring all of the 'self' to their work role.

Sambrook, Jones and Doloriert (2014) suggested that understanding the role of the self is crucial in engagement research. Kahn suggested that personal engagement and disengagement are influenced by three psychological conditions, namely psychological meaningfulness, psychological safety and psychological availability; in other words, the psychological experiences people will encounter when performing their tasks.

Psychological meaningfulness reflects the question on how meaningful they found it when bringing all of their 'self' to performing a task. Psychological meaningfulness refers to the feeling that one is receiving a return on the investment of one's self in terms of physical, cognitive and emotional energy (Kahn, 1990, p.703). The feeling of meaningfulness results in the individual experience of feeling worthwhile, useful and valuable. This psychological meaningfulness is characterized by three domains: task characteristics, role characteristics and work interaction. Kahn theorized that the more meaningful the feeling, the more engaged employees become. Furthermore, the degree of meaningful situation experienced tends to be accompanied by greater psychological presence at work (Kahn, 1992).

Kahn and Heaphy (2014) explained that the notion of psychological meaningfulness could also be viewed through the relational context that employees interact in the organisational setting. These relational contexts include co-workers and partnerships, groups and teams, departments, hierarchical and peer relations. They further noted that the relational context can shape the feeling of meaningfulness grounded in the increased depth of purpose that people experience and the heightened sense of belongingness at work. In other words, the relational context in which employees interact at work can increase the experience of psychological meaningfulness that is characterized by depth of purpose and heightened belongingness. Following Kahn's work on psychological meaningfulness, Wrzesniewski, Dutton and Debebe (2003) added that meaningfulness can interpret how employees understand their experience in organisations.

Psychological meaningfulness can be linked with the identity perspective of individuals, based on role fulfilment. This perspective has been discussed in detail by Pratt and Ashforth (2003). The term 'meaningfulness' was used by Pratt and Ashforth (2003) to refer to the subjective sense that people make of their work. The focus of their interpretation of meaningfulness is a subset of sense-making. Interestingly, Pratt and Ashforth clarified the term by categorizing it in two different perspectives: meaningfulness in work and meaningfulness at work. Meaningfulness in work involves conducting the work and one's tasks intrinsically. Meaningfulness at work refers to the inclusion of oneself within the organisation and assimilating onself with the goals, values and beliefs that the organisation espouses. Creating meaningfulness in work involves tapping into desired identities by making the tasks one performs at work intrinsically motivating and

purposeful. Experiencing meaningfulness at work on the other hand, requires changing the nature of one's organisational membership (Pratt and Ashforth, 2003, p.314). According to Saks and Gruman (2014), the term meaningfulness in work is similar to task and work engagement. Meanwhile, meaningfulness at work is related to organisational engagement.

The second psychological condition, that is psychological safety, seeks to understand how to perform an action without receiving any negative impact from the result of that action. Kahn (1990) defined psychological safety as feeling able to show and employ oneself without fear of negative consequences to self-image, status or career (p.708). Psychological safety is essential in order to promote positive work behaviour in an organisation. Based on the definition given by Kahn, this construct could ensure that employees feel safe when taking interpersonal risks, for example voicing conflicting views without worrying about the negative consequences they may attract. According to Kahn, psychological safety is influenced by four factors: interpersonal relationships, group and intergroup dynamics, management style and process and organisational norms.

Edmondson (1999) stated in her study on psychological safety in work teams that psychological safety affects learning behaviour, which in turn affects team performance. One interesting connotation of her findings is that an individual's beliefs regarding other people's feedback about behaviour where the outcome is uncertain affects their willingness to take interpersonal risks. In other words, the response from the relational context could influence the willingness of an individual to take interpersonal risks. Liang, Farh and Farh (2012) found in their study that psychological safety is strongly associated with the prohibitive voice. In addition, research by Carmeli, Brueller and Dutton (2009) stated that positive work relationships were found to contribute to the perceptions of psychological safety and learning behaviour in organisations.

Psychological availability refers to the sense of having the physical, emotional or psychological resources to personally engage at any particular moment (Kahn, 1990, p.714). The condition of psychological availability explains how people react, given the distractions they could be faced with in the work environment. Psychological availability may be described based on four types of distraction encountered by employees. These distractions are: depletion of physical energy, depletion of emotional energy, individual insecurity and outside life. This construct is concerned with the ability of a person to engage with their work, despite distractions or lack of resources to perform the job. A summary of these psychological conditions is shown in Figure 1.

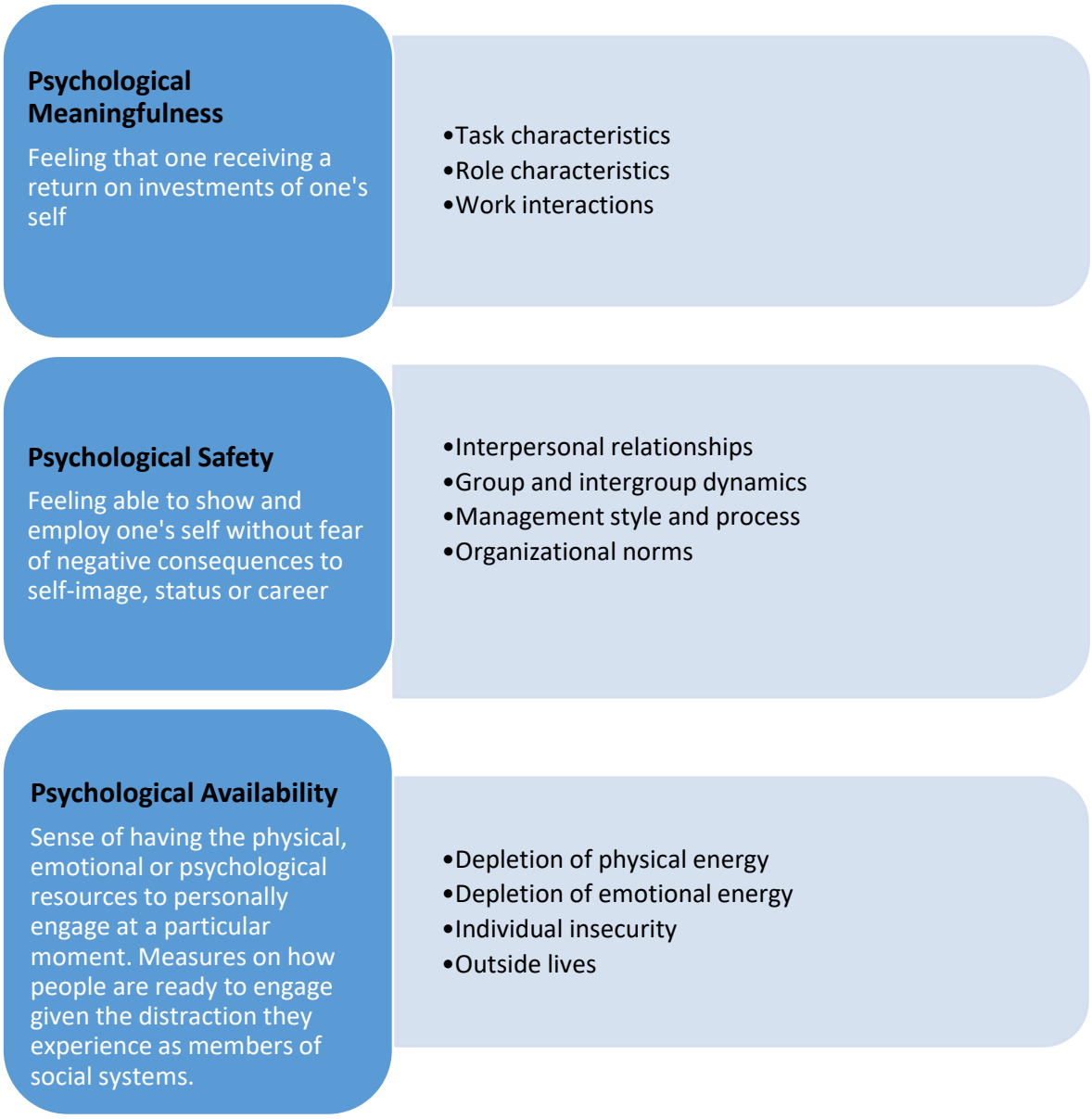


Figure 2.1 Summary of psychological conditions (Kahn, 1990)

According to this pioneering work on engagement in the setting of academia, there are two methods of extending our understanding of engagement construct: validation of theory and development of related framework. Kahn's work has led to an increasing amount of research being conducted to validate his theory. Brown and Leigh (1996) replicate Kahn's framework as a primary link to discuss the psychological climate, job involvement, effort and performance. Nearly a decade after his research, May, Gilson and Harter (2004) performed a study examining the role of psychological conditions which influence employee engagement among employees and managers of an insurance company. Their findings proved that the three psychological conditions proposed by Kahn had a significant influence on the engagement level of employees. Another early empirical study conducted by Rothmann and Welsh (2013) examined the

antecedents of employee engagement. The results showed that work-role fit and job enrichment had the strongest relationship with engagement. The findings of this study also revealed that psychological meaningfulness and psychological availability mediated the relationship between work-role fit, job enrichment, resources and co-worker relations.

The second movement resulting from Kahn's theory of personal engagement was the development of new framework that extended his theory. Shuck (2011) identified four scholarly frameworks emerging in the field of engagement since Kahn's original work. Shuck acknowledged the work by Kahn as representing a Need-Satisfying approach which explained the self-expression of the individual at work. Under this approach, Kahn considered that engagement in work was a motivational element, encouraging employees to unleash their full self when performing a task. Additionally, Kanfer (1990) agreed that the allocation of personal resources and their degree of intensity and persistence in performance indicated the motivational role of engagement.

Derived from the Burnout theory, Maslach, Schaufeli and Leiter (2001) conceptualised engagement as the positive antithesis to burnout. This was the second major approach in engagement studies. According to Shuck (2011), the Burnout-Antithesis approach views engagement as the opposite of burnout, emphasizing the role of well-being as a function of engagement, as well as a strategy to boost human strength. Furthermore, it supports the notion that if an employee is not engaged, he or she is likely to move to the other end of the continuum and experience burnout (Abu Bakar, 2013). In this school of thought, burnout consists of three dimensions: exhaustion, cynicism and ineffectiveness. Exhaustion is described as feelings of being over-extended and depleted of one's emotional and physical resources. Cynicism, on the other hand, is defined as a negative, callous or excessively detached response to various aspects of the job. Finally, ineffectiveness refers to the feeling of incompetence and a lack of achievement and productivity at work (Maslach, Schaufeli and Leiter, 2001, p.399).

The third major approach is the Satisfaction-Engagement, which views employee engagement from the practitioner's perspective. Harter, Schmidt and Hayes (2002) described engagement from a practitioners' perspective as the individual's involvement and satisfaction with, as well as enthusiasm for work (p.289). Harter, Schmidt and Hayes (2002) work yielded the Gallup Workplace Audit (GWA) 12-item Worker Engagement Index, considered one of the most influential approaches to measuring work engagement among consulting companies. Key findings showed that having a work environment promoting positive employee engagement was consistently associated with positive business outcomes (Attridge, 2009).

The final approach addressed by Shuck (2011) was Saks' multidimensional engagement scale (2006). In this approach, Saks (2006) provided an understanding of employee engagement by

looking at the antecedents and outcomes for organisations and employees. Furthermore, Saks (2006) explained employee engagement through the lens of Social Exchange theory which emphasizes the reciprocal relationship between employee and employer. Saks stated that employees self-engage in response to the resources they receive from their organisation. This framework evolved to explain why employees choose to become more or less engaged in their work and organisation. The engagement construct was categorized into two types of engagement: job engagement and organisational engagement. Both constructs signified the extent to which an individual is psychologically present in a particular organisational role (Saks, 2006, p.604).

The work by Shuck (2011) conceptualising the engagement construct into four major approaches successfully highlighted the different aspects of engagement, based on the relationship with role performance, the positive nature of employee well-being, as opposed to burnout, the relationship with well-resourced jobs, and the link with jobs and organisations (Schaufeli, 2014). A summary of these approaches is shown in Table 2.1.

Table 2.1 Summary of four major approaches of employee engagement (Shuck, 2011)

Approach	**Major contribution**	**Research type**
Need-Satisfying (Kahn, 1990)	Published early-grounded theoretical framework of personal engagement and disengagement. Provide definition of employee engagement as a separate concept and develop early theory on employee engagement.	Empirical (ethnograpic)
Burnout-Antithesis (Maslach, Schaufeli and Leiter, 2001)	First major work on employee engagement after Kahn (1990). Second major theory related to employee engagement developed from this study. Pioneered in defining employee engagement as the positive antithesis to burnout.	Conceptual
Satisfaction- Engagement (Harter, Schmidt and Hayes, 2002)	The first study to examine the profit linkage to employee engagement. Viewed the engagement construct at business level unit.	Meta-analysis

Table 2.1 (Continued)

Approach	Major contribution	Research type
Multidimensional (Saks, 2006)	First work to determine the antecedents and consequences of employee engagement in academia.	Empirical

Apart from the four approaches described by Shuck (2011), another theory evolved to understand the employee engagement construct. Based on the Conservation of Resources Theory, Demerouti et al. (2001) introduced the Job Demand-Resource (JDR) model. The basic tenet of this model was to answer the call in burnout research to investigate burnout in other working fields. The JDR model proposed the assumption that every occupation has its own specific risk factors linked to job stress, based on two general categories. These categories refer to job demands and job resources. The premise offered by this framework is that where job and personal resources are more salient, they gain motivational potential when employees are confronted with high job demands (Schaufeli, 2012). Job demands refer to those physical, psychological, social or organisational aspects of the job that require sustained physical or psychological effort or skills. Job resources, on the other hand, refer to those physical, social or organisational aspects of the job that either are, or could be functional in achieving work goals, reducing job demands, or stimulating personal growth, learning and development (Bakker and Demerouti, 2007).

Despite the lavish amount of literature, engagement faces a number of criticisms, particularly on the definition and antecedents, as well as the measurement. Saks and Gruman (2014) asserted that the engagement construct continues to be plagued by two issues concerning the first item, with varied definitions and lack of agreement on defining engagement. The second problem with engagement is that, although numerous measurement items have been developed, the questions of how to measure and how valid the measurement is needs to be explained by researchers. Keenoy (2013, cited Oswick, 2015) stated that the engagement construct is obviously a popular term, but remains an elusive, slippery and poorly defined concept.

A number of meta-analysis studies have been conducted to conceptualise and synthesize a newly emerging construct such as engagement. The work by Shuck and Wollard (2010) was among the earliest studies to examine the role of engagement in the human resource development field, and was the first review to explain the engagement construct using historical analysis methodology (Shuck and Rocco, 2014). The core argument of this analysis is that the engagement construct faces two major challenges, the first referring to the development of an agreeable definition of

the construct. The second challenge is concerned with the lack of evidence-based scholarship. Furthermore, the authors went on to draw our attention to the issue of providing evidence-based engagement research that is practical and usable by both parties (scholars and practitioners).

This integrative review by Shuck and Wollard (2010) identified 159 studies relating to employee engagement, and these studies were filtered based on selected criteria. The results revealed that 26 studies were empirically based, and only 12 studies discussed the possible origin of engagement construct. The aim of Shuck and Wollard's review was to explore the historical development of employee engagement, and to fulfil this purpose, eight seminal studies were compiled in order to develop a historical timeline of employee engagement.

Based on the work by Shuck and Wollard (2010), this integrative literature makes a number of important contributions to the engagement field. The first contribution was to clearly demonstrate how the engagement construct evolved. The historical review also provided the meaning of engagement construct according to both scholars and practitioners. However, although there are still conflicting ideas on an agreeable definition of engagement construct, this review can be used as a guideline to understand the fundamental conceptualisation of engagement. In addition, this review had a profound influence on how engagement construct has been defined from an HRD perspective. Shuck and Wollard (2010) put forward the engagement definition as an individual employee's cognitive, emotional and behavioural state, directed toward desired organisational outcomes (p.103).

The literature review by Wollard and Shuck (2011) established a proper list of the antecedents of engagement, categorized based on individual and organisational antecedents. This review, however, does not clarify the types of relationship, either direct or indirect, between antecedents and the engagement construct. Perhaps it is best to speculate that the purpose of the review was to identify the antecedents of engagement as an initial step in theory development, and therefore, determination of the types of relationship was not the main concern. The results of this review yielded 11 individual antecedents and 13 organisational antecedents. Few of the conceptual antecedents were examined. Consiglio, Borgogni and Tecco (2016), in their study among employees in a communication service company, found that self-efficacy predicted work engagement. Barrick et al. (2015) identified the role of motivational work design as a predictor of collective organisational engagement.

Three meta-analysis studies examined in detail the issue of overlapping or redundancy of engagement construct. Crawford, LePine and Rich (2010) demonstrated a different perspective on how job demands and resources are associated with employee engagement and burnout. Drawing on the Transactional Theory of Stress, their perspective differed from the traditional

perception of job demands that bring a negative to otherwise positive consequences. The challenge stressors were perceived as stressful demands which could conceivably promote mastery and future gain from personal growth. Hindering stressors, on the other hand, if appraised as stressful demands, could become an obstacle to learning and goal attainment, and impede personal growth. The findings from 55 studies reported that when demands were perceived as a challenge, this resulted in a positive relationship with engagement. Job demands perceived as hindrances, however, had a negative link with engagement. The findings of this meta-analytic study extended the role of job demands not as negative stressors, but conceptualised as positive stressors that trigger positive outcomes in performance. The demands challenge raises another question on the link between burnout and engagement, that is, if demands are perceived as positive stressors, burnout can be regarded as having a similar conceptualisation to engagement, which contradicts the previous understanding of burnout as the opposite of engagement. Thus, a detailed and thorough examination on this construct (demand as challenge) should be conducted.

Two other reviews, by MacKay, Allen and Landis (2016) and Cole et al. (2012) raised the issue of validation on the overlapping construct of engagement, burnout and other job attitudes (job satisfaction, job involvement and organisational commitment). The findings from a meta-analytic study by Cole et al. (2012) were explained based on discriminant and incremental validity that showed high correlation with both constructs, suggesting that both constructs were redundant. The empirical redundancies in both constructs could be related to misconception or having an unclear definition of engagement and burnout. In their meta-analytic study, MacKay, Allen and Landis (2016) concluded that employee engagement construct predicts job performance above and beyond other work attitudes (job satisfaction, job involvement and organisational commitment).

The findings from these meta-analysis studies provided a comprehensive discussion to understand the nature of employee engagement construct. Although some authors offered other reviews of employee engagement construct, these meta-analysis studies can be recognised as the earliest scholarly reviews since the engagement construct emerged in the academic setting.

One of the critical issues on employee engagement construct is that it offers an agreeable definition for both academia and practitioners. Scholars have offered various definitions on engagement construct, based on their own interpretations and fields of study. Kahn (1990) was apparently the first to use the term ‘engagement’. Kahn defined engagement through personal engagement theory, describing personal engagement as the harnessing of the self to one’s work role, and how when engaged, people employ and express themselves physically, cognitively and

emotionally (p.104). Derived from burnout theory, Maslach, Schaufeli and Leiter (2001) conceptualised engagement as the positive antithesis to burnout. Rooted in the burnout-antithesis approach, Schaufeli et al. (2002) popularized the term 'work engagement' as referring to a positive, fulfilling, work-related state of mind characterized by vigour, dedication and absorption.

From the practitioner's perspective, Harter, Schmidt and Hayes (2002) described engagement as the individual's involvement and satisfaction with, as well as enthusiasm for work (p.289). According to Farndale et al. (2014), construct clarity is crucial to avoid hampering the accumulation of knowledge in the field. Macey and Schneider (2008) argued that one of the problems existing in academic research on engagement was lack of rigorous testing of the theory on the underlying construct. For practitioners, the priority was not on definition of the construct, but was more focused on the positive outcomes, particularly on the actionable implications.

It is impossible to understand the engagement construct without having a precise, clear definition of engagement. Purcell (2014) explained that the problem in the engagement 'industry' is not only to define engagement construct, but also the way it is used - the implication, as well as the practice of that construct. Albrecht (2010) emphasized two essential qualities that reflect the definition of engagement. These two qualities referred to a positive and energized work-related motivational state, and a genuine willingness to contribute to the work role and organisational success. This connotation reflects the findings of Shuck and Wollard (2010) and Shuck (2011). The reviews discussed in the present paper contributed to the fundamental knowledge that became a pillar to establish a generally accepted definition of engagement. What is certain is that having a usable and practical definition of engagement construct can help to clarify other related issues, such as that of overlapping.

Another key issue which emerged in understanding the engagement construct is the issue of overlapping. The overlapping issue is best explained using two perspectives. The main perspective is the overlapping construct between engagement and burnout. The second perspective refers to the overlapping construct with other job attitude constructs, such as job satisfaction, job involvement and job commitment. One of the controversial issues is whether burnout and engagement are related, or totally different constructs. One of the best approaches to distinguish between these two constructs is through the lens of positive organisational scholarship (POS). Before continuing to elaborate on the topic of overlapping, it is best to look into the nature of engagement and burnout constructs.

Personal engagement was defined by Kahn as the simultaneous employment and expression of a person's 'preferred self' in task behaviour, which promotes connection to work and to others,

personal presence and active, full performance in one's role (p.700). The focus of Kahn's perspective on personal engagement is that of bringing all of one's self to one's '*work role'*.

Additionally, the influence of psychological conditions on personal engagement could bring positive outcomes to work performance. In other words, experiencing feelings of meaningfulness, safety and availability when performing a task could foster feelings of attachment between an individual and their work. Burnout theory is rooted in the experience of people working in service professions, which are characterized by emotional and interpersonal stressors (Maslach, Schaufeli, and Leiter, 2001). This perspective focused on the 'work conditions' that create stressful events or phenomena when performing a task. The JDR model posits that every type of work is prone to the burnout syndrome, but this negative condition can be reduced by a balance between job demands and job resources (Demerouti et al., 2001). Positive organisational scholarship offers a perspective on identifying individual and collective strengths (attributes and processes) and discovering how such strengths enable human flourishing (goodness, generativity, growth and resilience) (Roberts, 2006, p.292). Based on this argument, it could be suggested that engagement is the positive side of the organisational phenomenon, while burnout, on the other hand, is a negative dimension of the organisational context. Burnout may also be regarded as the downside to engagement.

A review by Crawford et al. (2012), however, expressed a different angle on how to view the link between job demands and resources in relation to engagement and burnout. The interpretation of job demands as a challenge significantly changed the negative influence of job demands in engagement study. This perspective indicates that job demands can actually have a positive effect on engagement. The traditional perspective on job demands has been viewed as having a negative influence on engagement. According to Crawford, when perceived by the individual as a hindrance, demands can impede or harm their efforts to achieve personal growth and result in negative emotions. In their meta-analysis study, Cole et al. (2012) argued that these two constructs do not represent any differences. The basis of their argument is that the overlapping issues reflect on how both constructs are measured.

The second perspective that lingers in engagement research is the overlapping construct with other job attitudes, specifically job satisfaction and job involvement. MacKay, Allen and Landis (2016) review concedes that the engagement construct is regarded as a higher-order construct compared with job satisfaction, job involvement and organisational commitment.

Broadly speaking, the most important issue in engagement is the need to clearly define what it really means. If the construct is poorly defined, it cannot represent the actual engagement process. This could lead to other consequences, such as the validity of measurement, which was

discussed in detail by MacKay, Allen and Landis (2016) and Cole et al. (2012). Apart from that, the possibility of creating more redundancy issues, either in measurement items or antecedents is higher if this construct is vague in definition.

2.2.2 Kahn's personal engagement

Increasing demand to understand the connections between work, individual experience at work and performance lead to burgeoning number of engagement research in HRD field (Shuck and Rose, 2013). In relation to HRD field, most of the scholars agreed that Kahn's framework is the best suited theory to fit with notion on developing employees personal growth. Anthony-McMann et al. (2016) for instance agreed that the psychological conditions offered by Kahn reflects what HRD need for employee development.

As discussed in previous section, personal role engagement theory were influence by three domain that is meaningfulness, safety and availability (Kahn, 1990). According to Shuck, Nimon and Zigarmi (2016) as a psychological state, the primary concern of personal engagement offered by Kahn is on the investment of personal energies and aspect of roles to performed their work. In comparison with other engagement theories, i.e; Job-Demand Resource and Burnout theory, these theories focused on the work activity. Fletcher (2015) for instance, reported that personal role engagement demonstrated higher incremental validity above than work engagement in predicting role behaviour. Human Resource Development field emphasize on developing individuals' capabilities through training, development and learning. In addition, HRD research trend has move towards humanisation i.e; understanding the connection between work, individual experiences of work and distinctive association between performance and engagement level (Sambrook, 2012). Therefore, it is significant to align the personal investment of self-role with the HRD practices.

The relevant of Kahn's framework with training transfer could be explained based on the Theory of Planned Behaviour (Ajzen, 1991). From the Theory of Planned Behaviour lens, Ajzen (1991) posits that individuals' intention to performed planned behaviour were determined by three facets. These factors refer to attitude toward behaviour, subjective norms and perceived behaviour control. Attitude toward behaviour explained about the extent of person have favourable and unfavourable to a specific behaviour. This facet resembles the psychological meaningfulness of personal engagement. Psychological meaningfulness exist when individuals experience that their work role is worthwhile and valuable, they are more likely to invest their self-role performance (Rich, LePine, and Crawford, 2010; Fletcher and Schofield, 2019). In relation to training transfer, employee who perceived that being able to increased their KSA through

training and give value added to their work role, it is likely to influence their attitude and motivation to learn and transfer the training.

Subjective norms denotes the social factor that is, perception towards social pressure either to perform or not to perform the intended behaviour. This notion describe the psychological safety that reflect the ability to employ one's self without fear or negative consequences to self-image, status or career (Kahn, 1990). This reflect the work environment domain in Baldwin and Ford (1988) transfer of training framework. Work environment dimensions such as organisation, supervisor and peer support play important role to facilitate the transfer process. Meanwhile, from personal engagement perspective, individuals are more likely to feel psychologically safe if the work environment were perceived as supportive and trusted. Connecting subjective norms and psychological safety, we could argue that when individual participate in training and development programme, they should be aware about the risk in applying the KSA learned during training back to workplace. As such, their perceptions towards acceptance or rejection from work environment will influence the intention to transfer the training.

The final construct of Theory of Planned Behaviour is perceived behaviour control. Perceived behaviour control refer to the perceived ease or difficulty to performed the behaviour (Ajzen, 1991). This construct could be linked to psychological availability, which denotes on having physical, emotional and psychological resources to personally engage with the task (Kahn, 1990). In relation to training transfer, it reflect that when employees face difficulties to transfer such as given lack of opportunity to apply the newly KSA, the availability of resource to apply the knowledge will affect the intended transfer behaviour.

Based on the above argument, the present study contend that engagement perspective offered by Kahn could optimised the transfer of training by including the experience of personal role engagement as part of the transfer process.

2.3 Training, development and learning

The starting point to discuss the role of training, development and learning is by defining Human Resource Development (HRD) function. The primary interest of HRD field is to improve performance of individual employees, team and organisation (Jain and Gulati, 2016). According to Swanson (2001), HRD is a process of developing and unleashing human expertise through organisation development and personal training and development to improve performance. A further definition of training and development is given by Kraiger and Culbertson (2012) who describe training as activities leading to the acquisition of knowledge, skills and attitudes relevant to an immediate or upcoming job or role, and development commonly referred to activities

leading to the acquisition of attributes or competencies for which there may be no immediate use (p.244). Goldstein and Ford (2002) define training as a systematic acquisition of skills, rules, concepts or attitudes resulted in performance improvement. Training is one of the tool to remain competitive and innovative in a knowledge-driven company (Seiberling and Kauffeld, 2017).

Employee development involved learning and experience and it is an ongoing progress to improve an individual's capacity to function effectively (Dachner et al., 2019; Maurer, 2002).

Learning has been regarded as one of the crucial outcome of HRD programme. Maurer (2002) defined learning as an increase or change in knowledge or skills that occurs as a result of some experience. Noe (2020) posits that learning is a permanent change in knowledge, skills, attitudes, behaviours and competencies. In addition, Salas et al. (2012) stated that as one of the training outcome, learning is a process where a person acquired new knowledge and behaviours. Training and development does not meet the purpose of performance improvement if learning is not being transferred to workplace (Bates et al., 2000).

Based on the above argument, it has been accepted that training, development and learning were interrelated and these are the core activities in HRD. The end result of these activities is performance improvement, which is crucial for training investment. The primary goal of training investment is to ensure the successfulness of the application of the learning from training to the job and yield changes in employees' performance (Tews and Burke-Smalley, 2017). In other words, training effectiveness should benefit the trainees and organization (Glerum et al., 2021). Alvarez, Salas and Garofano (2004) contend that training effectiveness is a theoretical approach to understand the training outcomes through various factors that contribute to the positive outcome of training. According to Baldwin and Ford (1988), the effectiveness of the training system was influenced by three major factors namely instructional design, trainee characteristics and work environment. Transfer of training is critical because failure to do so will hinder training effectiveness (Salas et al., 2012; Saks and Burke-Smalley, 2014). The present study posits that effectiveness of the training was due to the changes in employees behaviour that is, transfer of training. The transfer of training were predicted to be influence by psychological conditions of engagement, motivational constructs and learning.

2.4 Perspective on training effectiveness

Employee performance has become the central point of focus in the field of HRD (Lewis, 2005). HRD scholars have placed their primary concern on how to increase, develop and sustain employee performance through training practice. Aguinis and Kraiger (2009) drew on an extensive range of sources to assess approaches on how to maximise the benefits of training, one of these

being through transfer of training. One of the critical aspects of training effectiveness is the utilisation of skills and knowledge acquired during training back in the workplace (Beier and Kanfer, 2009). The success of trainees in applying and transferring what they have learned back in the workplace could result in meaningful individual and organisational improvement (Saks and Burke-Smalley, 2014; Bates, Cannonier and Hatala, 2014). Training programmes are considered effective when the skills and behaviour learned and practised during instruction are transferred to the workplace (Chiaburu and Tekleab, 2005). Considerable research has been conducted in order to determine the effectiveness of training programmes (e.g. Saks and Belcourt, 2006; Saks and Burke, 2012; Latif, 2012).

The framework offered by Baldwin and Ford (1988) was considered the first to discuss the transfer of training in organisations. In this framework, the transfer condition only occurred; learned behaviour must be generalised to the job context and maintained over a period of time (p.63). Within the framework, three major factors can influence the transfer of training, and are known as training inputs. These three factors refer to trainee characteristics comprising of ability, personality and motivation. The second component refers to training design, and consists of identical elements, general principles, stimulus variability and conditions of practice. The final factor that can influence training transfer is the work environment. This factor is determined by supervisory and peer support, and the opportunity to perform.

2.4.1 Previous studies on training transfer

A compilation of the literature is shown in Table 2.1. A more plausible explanation for each work would be easier if it was categorized based on themes. In their integrative review, Burke and Hutchins (2007) classified three major taxonomies affecting transfer, namely, learner characteristics, intervention design and work environment. Building on their work, the discussion of this review was based on these themes. Learner characteristics consist of cognitive ability, self-efficacy, motivation, personality, perceived utility/value, job variables and locus of control. Meanwhile, for intervention design, the dimension includes needs analysis, learning goals, content relevance, instructional strategies and methods, self-management strategies and technological support. The final construct is the influence of work environment. This construct involves strategic links, transfer climate, supervisor/peer support, opportunity to perform and accountability. The reason of choosing these themes is that, it reflects the seminal work Baldwin and Ford (1988)

2.4.1.1 Learner characteristics

The role of motivation in training transfer has long been considered one of the most important factors in transfer studies. Since the review on the role of motivation in transfer by Noe (1986), the wealth of literature on motivation shows that it is one of the most important precursors to training outcomes. An abundance of studies continue to examine motivation to transfer as an outcome variable, influenced by factors such as motivation to learn, self-efficacy, utility reactions and transfer climate (Burke and Hutchins, 2007). A considerable amount of research has been conducted on this factor, and the findings have verified that motivation is critical in influencing the training transfer process (Stiehl et al., 2015; Franke and Felfe, 2012; Weissbein et al., 2011). The term, 'motivation to learn' was used by Colquitt, LePine and Noe (2000) to refer to the desire on the part of trainees to learn the training material. Motivation to transfer can be defined as the deliberate effort to utilise the skills and knowledge learned in a training atmosphere in the real work setting (Seyler et al., 1998).

This section specifically identified the antecedents, outcomes and the interaction of motivational construct with the antecedents and its outcomes. Wealthy literatures were found to discussed the antecedents of motivation to transfer. Recent empirical work by Sahoo and Mishra (2019) reported positive link between trainees characteristics with motivation to transfer. The dimensions of trainees characteristics were measured based on self-efficacy, desire to learn and internal work motivation. Furthermore, this study also incorporated the training attitudes and training need analysis as predictors for motivation to transfer. Massenberg, Schulte and Kauffeld (2017) offered an interesting discussion regarding the antecedents of motivation to transfer. Using the Learning Transfer System Inventory (LTSI) developed by Holton, Bates and Ruona (2000), their study focused on how this model effect the motivation to transfer before and after training. The findings suggested that three specific factors and three general factors of LTSI positively affect motivation to transfer before training. In addition, only two specific factors and one general factor of LTSI significantly influence motivation to transfer after training. The new construct that is related to motivational construct was examined by the work of Ng and Ahmad (2018). Their study proved that motivation to improve work through learning (MTIWL) plays an important role that influences transfer of training. This study explored three components of the Big Five Model that could have a direct link to transfer of training. Other variables that were investigated included perceived organisational, supervisor, and peer support variables.

Additional antecedents of motivational construct were found in study done by Ng (2015). In his study, supervisor communication and assignment decisions that can motivate trainees to learn and transfer their knowledge, skills and abilities. The results confirmed that when employees

received full support from supervisors, it enhanced their motivation to transfer. Moreover, the supervisor's feedback and assignment decisions increased the learning performance of trainees. In addition to peer and supervisor support, Bhatti et al. (2013) also included learner readiness and training retention as additional components in motivation to transfer learning. Their evidence showed that all of the factors were statistically significant. Furthermore, Wen and Lin (2014) continued to investigate the relationship between transfer climate, motivation to learn and motivation to transfer. Based on the findings, they claimed that transfer climate positively related to both motivation to learn and to transfer. In addition, the most striking result emerging from the study was that although motivation to learn and transfer were confirmed as predictors on transfer of training, the mediating role of these two variables yielded non-significant results on the relationship between transfer climate and transfer of training.

Keith, Ritcher and Naumann (2010) examined the effects of motivation and cognitive ability interactions on transfer of training. In their study, they focused on the types of training method affecting the motivation to transfer. The training methods chosen for this study were active/exploratory and guided training. The results confirmed that training method can have a significant impact on transfer of training. Another variable being investigated in relation to motivation to transfer is the choice of job. Patrick et al. (2012) examined the difference in training motivation between trainees who were in the job of their choice and trainees who had simply been given a job. The authors also highlighted the effect of pre-training self-efficacy within these two groups. The findings showed that being in a self-selected job had a positive relationship with training motivation, which further had a positive effect on motivation to transfer. The results, however, revealed that training motivation did not predict post-training self-efficacy.

Few studies were found to discussed the pre-training conditions that influence motivational construct. In recent study, Kodwani and Prashar (2019) emphasized on the importance of pre-training motivation variables that facilitate training effectiveness. The pre-training factors consist of pre-training information, training need analysis and type of training. Pre-training information comprised of information about the training received by trainees, training schedule, content and expectation from training). In addition, other variables investigated in this study consist of trainees' reaction and motivation to learn. With the exception of training information, all variables predict the effectiveness of the training. Training need analysis and type of training were found indirectly influence training effectiveness through motivation to learn. The finding also suggest that when trainees' perceived that the training is beneficial, the urged to learn the training content become stronger and resulted to effectiveness of the training. Kim, Park and Kang (2019) for instance highlighted the pre-training motivation and situational characteristics directly affect training reactions and indirectly influence learning outcomes. Their self-reported

survey among Occupational Safety and Health officers and their supervisors. The findings from three- time data collection supported the premise that when employees were willing to learn and apply the knowledge, they became satisfied with the training. As a result, it helps to create positive learning outcomes to foster transferability. As for the situational characteristics, instructor behaviour and administrator behaviour were not associate with training reactions and learning.

Walsh and Magley (2018) discussed the role of psychological and work group climate civility as well as personal and ambient mistreatment as predictors of pre-training attitudes toward motivation to learn. In this study, the categorized the training scepticism and training discrepancy as a pre-training attitudes that influence the motivation to learn in training programme. The survey conducted among employees in healthcare provider proved that when employees perceived that they have been treated in respectful manner, they feel less sceptical about training effectiveness. The findings proved that training discrepancy was found to be significantly influence their motivation to learn about civility training programme. Training scepticism on the other hand, does not related to motivation to learn. Celestine and Yunfei (2018) provided evidence on the direct linkage between pre-training self-efficacy and perceived content validity with transfer effort performance. As part of learner characteristics, the findings indicated that when individual believed they were able to learn in training programme, it highly likely increase their effort to transfer the newly learned knowledge and skills. In addition, the judgement that the training content is valuable and related to their work or task, also influence their transfer effort. This study also found that employees preparedness to participate in training programme indirectly associated with transfer effort through pre-training self-efficacy. The result suggested that when employees were well prepared for instance, having sufficient information on training before participation, it increase the belief that they were capable to learn and therefore apply the content of training back to workplace. This study also reported that transfer effort was not influenced by motivation to transfer and personal capacity to transfer.

Weissbein et al. (2011) discussed two important precursors to transfer of training. The first premise was the role of pre-training intervention in increasing motivation to learn, and the second was the relationship between motivation to learn and transfer of training. The construct of pre-training intervention developed for this study was based on the attribution state, which is the trainee's effort and strategy. The findings showed that pre-training intervention had a positive affect on motivation to learn, and was linked to positive impact on transfer of training. The interesting findings from this study could be considered as basis for conducting a field study to test the impact of pre-training intervention on motivation to transfer.

The interaction of motivational construct between antecedents and outcomes have received greater attentions from scholars in transfer of training studies. Recent study by Vignoli and Depolo (2019) found that motivation to transfer mediates the relationship between proactive personality and training transfer. Empirical work by Suleiman, Dassanayake and Othman (2018) focused in the post-training context with the aims to investigate the mediating role of motivation to transfer on the relationship between trainee characteristics and transfer of training. In a survey among employees in education sector in Nigerian, the study conceptualised trainee characteristics based on two constructs that is organisational commitment and job involvement. The result showed that transfer motivation partially mediates the relationship between organisational commitment and transfer of training. The findings disclosed transfer motivation do not mediates the relationship between job involvement and transfer of training. The findings demonstrated that combining the commitment received from organisation and little job involvement helps to increase employees motivation to apply the learned KSA to the job. Given different setting of the study, Muduli and Raval (2018) study discussed the role of organisational dimension as predictors of transfer of training among employees in insurance company in India. This study refers the organisational variable as work context and consist of supervisor support, peer support, opportunity to use and performance coaching. In addition, training design was included as other factor that influence training transfer. Of all the work context, supervisor and peer support, and opportunity to use were positively related to transfer of training. That means, when employees participated in training programme, and they are fully supported by supervisor and peers, it highly likely they transfer the KSA to the job. In addition, given the opportunity to use what they have learned during training also increase the process of transferring the KSA to the job. The study also found that the content of the training, that is the training design also predict transfer of training. However, the study reported that transfer motivation does not mediates the relationship between work context and transfer of training. On contrary, training design indirectly related to transfer of training through transfer motivation.

The mediating role of motivation to transfer were also supported by the work of Iqbal and Dastgeer (2017). The findings of their study in banking sector proved that motivation to transfer mediates the relationship between self-efficacy, training retention and transfer of training. In other words, when employees believed they are capable to learn and retain the KSA when participating in training programme, they will be more likely to transfer that KSA to workplace. Seiberling and Kauffeld (2017) reported that manager's perceptions towards trainer's performance and supervisor support indirectly related to training transfer through motivation to transfer and volition to transfer. Van de Locht, Van Dam and Chiaburu (2013) included the identical elements of expected utility and motivation to learn as predictors to transfer of training,

motivation to transfer again having been labelled as mediator. The results support their premise which indicates a positive relationship between identical elements, expected utility and motivation to learn with transfer of training. Motivation to transfer on the other hand, mediates this relationship.

The importance of job satisfaction in transfer of training has been given little attention by researchers. This topic is not new in organisational study, but nevertheless has failed to draw much attention from transfer of training researchers. It is commonly known that job dissatisfaction produces negative consequences for an organisation. However, job dissatisfaction can either impact positively or negatively on transfer of training, particularly where the motivation to transfer is unclear. Current research on this topic has been limited to the moderating role of motivation to transfer with job (dis) satisfaction and transfer of training. Recent empirical survey conducted by Islam and Ahmed (2018) for employees in banking sector have discussed the mediating role of job satisfaction between perceived organisational support and transfer of training. The result found that perceived organisational support positively associate with job satisfaction which in turn influence the transfer of training.

Jodlbauer et al. (2011) pointed out in their study how dissatisfied employees were negatively related with transfer of training. In summary, the unsatisfied employee transfers fewer new skills, knowledge or attitudes learned during training programmes back to the real job compared with satisfied employees. The results, however, revealed that by having high motivation to transfer, dissatisfied employees can successfully transfer what they have learned, compared with those having low motivation. The researchers also concluded that there was no difference between satisfied and dissatisfied workers in transferring their new knowledge, if they had high motivation to transfer and expectations of the positive transfer consequences that might be enjoyed.

Based on the findings, a couple of points are worth mentioning here. Firstly, this survey used various types of training courses, for instance languages, economics and human resource management courses. It is difficult to determine the extent to which the respondents truly understood the aims of the survey, even though they had been given an explanation. Another issue that should be considered is that there was no specification on the type of focus group in this survey. To be precise, the researchers mentioned that 16% of the sample came from the human resources sector. Without specifically focusing on participants' actual task or position, it is hard to get a clear picture on the effect of job dissatisfaction on transfer of training.

Zumrah (2013), on the other hand, continued to study how job satisfaction moderates the relationship between learning and transfer of training. The results showed that when employees successfully gained new knowledge, skills and attitudes during training programmes, they were

easily able to transfer. However, results regarding the influence of job satisfaction on transfer of training confirmed that there was no significant relationship between job satisfaction and transfer of training. Similar findings were reported by Peters et al. (2014). They focused their study on the relationship between transfer climate and job attitudes towards the transfer of training. This study also investigated the mediating role of transfer between transfer climate, job attitudes and work performance. They classified job satisfaction as one of the dimensions in job attitudes. The results are in line with previous studies, showing no significant impact of job satisfaction on transfer of training.

Based on the findings from the above three studies, there is an obvious resemblance between satisfied and unsatisfied employees in transferring new knowledge, skills and attitudes to the real work environment. The findings illustrate that it does not matter how satisfied or dissatisfied employees may be with their job - they will not be keen to transfer what they have learned during a training programme unless they are motivated to do so.

Gegenfurtner (2013) prompted a detailed method of looking at motivation to transfer through the application of motivation theories, such as Self-Determination theory, Expectancy Theory and the Theory of Planned Behaviour. The author proposed the dimensions involved in motivation as three constructs, of which intention to transfer was grounded on the theory of planned behaviour, and autonomous and controlled motivation to transfer was based on expectancy theory and self-determination theory. The author further explained how dimensions in motivation impacted the transfer through the study of health and safety training programmes which involved 496 safety inspectors. The author included attitudes towards training content and knowledge testing performance as predictors. Three time frames were used to evaluate the transfer of training: before training (T1), immediately after training (T2) and three months after training (T3). The results showed that intention to transfer mediated the influence of autonomous motivation and attitudes toward training content, and thus increased performance effectiveness and retention of knowledge. Autonomous motivation was found to be more influential towards the intention to transfer than controlled motivation to transfer.

Following Gegenfurtner's (2013) work on autonomous and controlled motivation to transfer, Curado, Henriques and Ribeiro (2015) conducted a study comparing voluntary and mandatory participation in training. Their study suggested that employees who were willing to enrol in training programmes showed higher internal need to transfer (autonomous motivation to transfer) compared with those being forced to join the training programmes. However, in terms of controlled motivation to transfer, the results revealed no difference between voluntary and mandatory participation in training. In other words, whether being obliged, or volunteering to

participate in training programmes, the external driving force to transfer did not have any impact on trainees.

Motivation to transfer was examined not only at individual level, but also was analyse at group level. Team diversity training was investigated in study done by Creon and Schermuly (2019). The findings of their study suggested that group diversity training were not related to psychological safety. The findings also revealed that when the number of members in group become smaller, it also decreased the level of transfer among individuals.

A growing number of researchers shared the view on how motivation to transfer affects training transfer at the managerial level. Franke and Felfe (2012), for example, carried out a study on the influence of motivation to transfer and organisational support on transfer behaviour with regard to managerial training. In their study they further indicated that the motivation to transfer and organisational support was linked to transfer behaviour. The researchers also found that the managers who portrayed the desired leadership behaviour after training significantly increased their job performance, which was related to personal and team performance and personal growth.

Another in-depth investigation on the effectiveness of leadership training carried out by Stiehl et al. (2015) observed the Motivation to Lead (MtL) variable. Replicating the framework by Franke and Felfe (2012), they added the role of leadership competencies to determine the effectiveness of leadership behaviour. The findings indicated that Motivation to Lead influenced leadership training effectiveness. However, this study found that organisational support did not directly influence leadership competencies and behaviour, but could improve the relationship between Motivation to Lead and the attainment of competencies. A study by Towler, Watson and Surface (2014) proved that the leader's behaviour has a great impact on employees' or subordinates' motivation to transfer. According to this study, when leaders showed support for learning activities, trainees were likely to perceive them as placing a high priority on training. Nevertheless, trainees' motivation mediated the relationship between leader behaviour and trainee priority to train.

Tabassi, Ramli and Bakar (2012) conducted a study on the effects of training and motivation practices on team work performance and task efficiency. The motivation parameters used for this study consisted of training assignment, perceived importance of training, hygiene factors and motivating environment. The results of the study showed that when managers perceived the importance of training practices in their company, there was an improvement in teamwork performance and task efficiency. According to the researchers, employees were inspired by motivational factors to participate in training programmes. Although the study did not mention

the direct effect of motivation on transfer of training, it provided evidence of the importance of managers' support for training activities. These findings provide an important contribution to the debate on the role of managerial support in employees' motivation to transfer.

In two different studies, Grohman, Beller and Kauffeld (2014) went on to identify how motivation to transfer gave impact and mediated the relationship between training characteristics and different measurements of training transfer. By different measurements, the researchers were referring to different self-rated measures of transfer. Grohman classified training design and perceived content validity as constructs for the training characteristics. The results from both studies supported their hypothesis to prove that motivation to transfer mediates the relationship between training characteristics and different measurements of transfer.

Based on the review, the motivation to transfer factor can be considered an important precursor to facilitate transfer of training. In line with Cheng and Hampson's (2008) review, motivation to transfer is one of the major transfer variables in transfer of training studies. The findings from the present review point out that most of the variables used by researchers showed a link between motivation and transfer outcomes. At this stage, an important point to bear in mind is that different researchers have distinguished different factors that directly or indirectly influence the motivation to transfer. As a result, it is difficult to examine the real impact of motivation to transfer. The implication is that it provides inconsistent findings. From the author's point of view, crucial action needs to be taken to establish a set or group of variables that strongly predict the effect of motivation to transfer on the transfer process.

Self-efficacy is one of the characteristics among individual factors in transfer of training that have been extensively studied. Self-efficacy refers to trainees' belief in their competency to achieve the task (Gist, Schwoerer and Rosen, 1989). Sookhai and Budworth (2010) reported that transfer climate acts as mediator in the relationship between self-efficacy and training transfer. In another study, Esfandagheh, Harris and Oreyzi (2012) discussed the relationship between extraversion and pre-training self-efficacy, which in turn affects trainees' reactions and training outcomes. The findings suggested that extraversion and pre-training self-efficacy are related to trainees' reactions. Contrasting findings, however, revealed that pre and post-training self-efficacy is not positively related to declarative knowledge. Simosi (2012) conducted a study on 252 newly hired employees to investigate the relationship between self-efficacy and organisational culture (humanistic and achievement orientation) on transfer of training. The findings claimed that self-efficacy and organisational culture are linked to transfer of training, given that achievement orientation is the strongest predictor. Further analysis showed that self-efficacy moderates the relationship between organisational culture and transfer of training.

Machin and Fogarty (2003) stated that implementation intention was regarded as instrumental in making salient to the individual aspects of the environment that were relevant to the achievement of their goals. They further explained that for transfer to occur, trainees should have the intention to transfer. In the current review, only five studies were found to discuss implementation intention.

Yamkovenko and Holton (2010) highlighted the Five Factor personality and learning goal orientation that influences the intention to transfer. They found that learning goal orientation was not related to intention to transfer. In their survey, Hutchins et al. (2013) used the Learning Transfer System Inventory (LTSI) to investigate intention to transfer. Their research expanded the application of LTSI by examining the relationship and role of LTSI as predictive factors on intention to transfer. The findings concluded that motivation to transfer, transfer design and performance expectations were resilient factors in determining trainees' intention to transfer.

Motivational factors are also predictors of intention to transfer. Some researchers developed a conceptual model to explain intention to transfer and transfer behaviour. Turab and Casimir (2015) and Cheng, Sanders and Hampson (2015) continued to propose how the intention to transfer can facilitate the transfer process. Based on the Theory of Reasoned Action, Turab and Casimir (2015) proposed that expectation of contributions and association were linked to attitude to transfer and had an impact on intention to transfer. However, their results showed that expected reward was not significant in the attitude of trainees towards transfer. Similarly, using the Theory of Planned Behaviour, Cheng, Sanders and Hampson (2015) continued to examine how the dimension of this theory can predict intention to transfer and transfer behaviour. The findings confirmed that all the dimensions of this theory predicted transfer intention. Moreover, the intention to transfer was related to transfer behaviour.

Rangel et al. (2015) presented a different perspective to examine the intention to transfer, including the role of trainer delivery style, trainee engagement and learning approach to forecast transfer intention. The degree of trainer expressiveness was confirmed as influencing trainee intention to transfer. The trainer's style could also increase the trainees' engagement and learning style, resulting in intention to transfer. Research on how intention to transfer can foster the transfer process is inclined to rely on theories such as the Theory of Planned Behaviour. Theoretically speaking, this offers an enormous contribution to the transfer of training. Nevertheless, further exploration on how other psychological variables can influence the intention to transfer is very much needed.

2.4.1.2 Intervention design

The role of goal orientation in transfer studies has been widely discussed by previous researchers. Goal orientation can be defined as the mental framework that determines behaviour in different goal-oriented environments (Coultas, Grossman and Salas, 2012).

Dierdoff, Surface and Brown (2010) discussed the role of goal orientation and learning self-efficacy to forecast learning outcomes and training transfer through the Frame-of-Reference. Three types of goal orientation were integrated in this study, i.e. learning goal orientation, performance goal orientation and avoidance of performance goal orientation. The results suggest that performance goal orientation and learning goal orientation were related to learning and transfer. Johnson et al. (2012) used 360 degree evaluation to examine the relationship between goal settings and transfer of training. They found that leaders with one or multiple goals were related to behaviour change. This study however did not specifically indicate the relationship between goal setting and transfer of training. Strickland, Santiago, Fuller and Duenas (2013) integrated strategic business goals to identify training transfer behaviour. Four variables were categorized under strategic business goals, namely transfer climate, job satisfaction, trainee confidence and trainee knowledge. Trainee confidence, job satisfaction and trainee knowledge proved to be linked to transfer of training. By contrast, transfer climate was found to be non-significant to transfer of training. This study begs the question on the reason for having four variables, as the strategic goals were not clearly explained by the authors.

In their first review, Baldwin and Ford (1988) identified training design as one of the training-input factors. Russ-Eft (2002), in her typology study, suggested 11 elements of training design strategy, for example advance organisers and guided discovery. Empirical research found that training design was positively related to training efficiency and training relevance (Renta-Davids et al., 2014), performance self-efficacy and affective responses (Bhatti et al., 2014). Ritzman, Hageman and Kluge (2014) used five dimensions of training design, namely problem-based learning, activation, demonstration, application and integration, which served as antecedents for training outcomes. Statistical testing revealed a significant relationship between training design and training outcomes. Recent study by Nafukho et al. (2017) have replicated the work by Renta-Davids et al. (2014) by investigating the role of trainee characteristics (job and non-job related motivation), training design (training relevance and efficiency) and work characteristic (work complexity, variability and empowerment) that influence transfer of learning among adult workers in continuing professional education training programme. The findings from this cross-sectional study revealed that except for work autonomy, all of the predictors being investigate, have significant influence on transfer of learning. These findings supported the result of the study

conducted by Renta-Davids et al. (2014). Training design was found to have direct positive link to transfer of training among employees in manufacturing company in India (Chauhan et al., 2017). This study also posited that when employees satisfied with the trainer and the training content, with the support received from their supervisors, eventually enhanced the application of learned skills.

Saks and Burke-Smalley (2014) expanded the discussion on training transfer through the different perspectives of micro-training and macro-training. The authors defined micro-training research as research concentrated at the individual level of analysis, while macro-training research focused on the organisational level. Evaluation of the relationship between training transfer and firm performance was measured through training methods. The results proved that training transfer is very much related to higher organisational performance.

2.4.1.3 Transfer climate/work environment

Transfer climate can best be defined as perceptions which express the characteristics of the work environment, and can either facilitate or hinder the use of trained skills (Burke and Baldwin, 1999). Recent study by Vignoli and Depolo (2019) have describe work environment as work facilitation that could influence the transfer of training. The findings of their study showed that favourable conditions (work environment) facilitate the higher level of application of learned KSA among evaluators of school principal. A study by Kodwani (2017) for example, examined the organisational factors that are characterised by transfer climate, training awareness, training participation and involvement, and training assessment. This study found that all these factors significantly influence transfer of training with the training transfer climate being the strongest predictor.

2.4.1.4 Social support

Social support includes peer and supervisory support. Various studies have been conducted to determine the impact of social support on transfer of training. Kim, Park and Kang (2019) investigated the role of organisational and supervisor support as work environment factor that could influence training transfer. The transfer of training was measured based on the learner characteristics which refers to motivation to learn, training readiness and intention to transfer. It was found that when employees received support from supervisors, it increased their readiness to participate in training as well as the motivation to learn. As a result, it is indirectly influence their intention to transfer. Organisational support on the other hand, is an important variable to promote the transfer of training through supervisory support for training. Govaerts, Kyndt and Dochy (2018) reported similar findings on supervisor's role towards transfer of training. Their

study on work- related training programme among employees in Belgium found that when employees perceived that their supervisors concerned about the content of the training and encouraged them to use that training to their job, it helps them to retained what they have learned during training. As a result, employees are more likely to apply the knowledge learned during training. Park, Kang, and Kim (2018) discussed supervisor support as a predictor for employee developmental need awareness that influences job performance. In addition, their study also investigated the link between supervisor support with motivation to learn, training readiness and motivation to transfer. Their study explained that supervisor support directly influences employee's motivation to learn. The result also revealed that supervisor support is indirectly related to motivation to transfer, training readiness, and job performance through motivation to learn. However, even when the employees receive full support from their supervisors, there is no guarantee it will increase their developmental need awareness. Developmental need awareness was found to have a direct association with motivation to learn, training readiness, motivation to transfer, and job performance. The positive link was reported between motivation to learn, training readiness, motivation to transfer, and job performance. Motivation to transfer was found to have no significant impact on job performance. Massenberg, Spurk and Kauffeld (2015) also pointed out that supervisor and peer support influenced the motivation to transfer among individuals and teams.

Martin (2010) suggested that peer support and workplace climate have a positively direct effect on transfer of training. The study also proposed that peer support could facilitate employees to withdraw the negative effects of an unfavourable workplace environment. In another study, Den Bossche, Segers and Jansen (2010) examined the role of feedback in social support networks to determine the influence on transfer of training among academicians. Feedback in social support networks consisted of peer feedback, the source of feedback, perceived helpfulness and the frequency of feedback. The study also identified the role of motivation in mediating the relationship between social support networks and transfer. The findings indicated that peers or supervisors as the source of feedback, and frequency of feedback did not relate to transfer of training among 35 academicians in Problem Based Learning (PBL) training programmes. This negative result is not surprising, due to the nature of the setting where the task was being performed. It became clear that the most reliable feedback source came from the students involved in learning and teaching activities between tutors. Interaction when performing the task only involved tutors and students. By contrast, if the context of training related to performance in the organisational setting, including the involvement of peers and supervisors, the result might be different. However, the findings from the study suggested that post-training motivation partially

mediates the relationship between feedback from the work-related social network and transfer of training.

In their study, Pham, Segers and Gijselaers (2012) claimed that transfer strategies mediated the relationship between work environment and transfer of training. In addition, the findings from their study also proved that both general and specific work environment influenced the transfer of training. Dermol and Cater (2013) examined in more detail the role of peer and supervisory support to enhance company performance through transfer of training. Their results suggested that supervisory support and organisational rewards for training and training transfer can foster cognitive and behavioural changes, and as a result, improve company performance. Surprisingly, the results showed that peer support is not linked to training and training transfer. Despite this negative relationship, however, we cannot jump to the conclusion that predicting this factor is not crucial to facilitate the transfer. It is more likely that the sample for this study was selected from different industries.

Homklin, Takahashi and Techakanont (2014) studied the role of co-worker support in transfer of training. The results revealed that co-workers had a significant effect on transfer of training, and also moderated the relationship between knowledge retained and transfer of training. However, the supervisor role and organisational support had a negative relationship with transfer of training. Moreover, the findings from Peters et al. (2014) also support the premise that peer support positively impacts the transfer process. Dysvik, Kuvaas and Buch (2014) on the other hand, mentioned that perceived intensity of training did not reflect the work effort of employees. They further explained that when employees received less support from their supervisor, this created a negative relationship between perceived training intensity and work effort.

Trainer characteristics can be defined as a trainer's knowledge of the subject matter, professional experience, and knowledge and use of teaching principles (Hutchins, 2009). Trainer competence and behaviour proved to be positively related in predicting training satisfaction and transfer of training. In addition, the interaction between trainer's behaviour and trainee's goal orientation was strengthened when the trainees had higher learning goals (Harris et al., 2014a; Harris, Hutchins and Chiaburu, 2014b).

2.4.1.5 Training evaluation

One of the most common methods of training evaluation used by researchers is the Kirkpatrick Model. Even though this framework has received substantial criticism, its simplicity and easily understandable structure make it feasible for researchers to use for training evaluation (Ritzman, Hageman and Kluge, 2014). Chiaburu, Sawyer and Thoroughgood (2010) found that when

performing evaluation, both trainees and supervisors tended to overgeneralise the skills transfer. Saks and Burke (2012) demonstrated that frequency of training evaluation, and the period of evaluation immediately after training had a positive impact on transfer of training. Besides, the behaviour and result criteria also had a positive relationship with transfer of training. Diamantidis and Chatzoglou (2014) included training design, trainees' self-efficacy, work environment, post-training behaviour and training content to evaluate training.

Table 2.2 Empirical studies on transfer of training for the period from 2010 to 2019

Year	**Researcher (s)**	**Variables**	**Context**
2019	Vignoli, M. and Depolo, M.	Proactive personality, motivation to learn, motivation to transfer, work environment.	This study focused on the role of proactive personality to enhance transfer of training through motivation to transfer. The empirical result also showed that work environment moderate the relationship between motivation to learn and transfer of training.
2019	Sahoo, M. and Mishra, S.	Trainee characteristics, training attitudes, training need analysis and motivation to transfer.	The dimensions of trainee characteristics comprise of self-efficacy, desire to learn and internal work motivation were examined as predictors of motivation to transfer. Two other variables, training attitudes and training need analysis were assessed as significant influence of motivation to transfer.
2019	Kim, S., Park, S., Lavelle, J., Kim, M. and Chaudhuri, S.	Trainee reactions, pre-training motivation, situational characteristics, learning.	Three- times data collection was conducted to understand the linkage between pre-training motivation, situational characteristics, trainee reactions and learning.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2019	Kim, E-U., Park, S. and Kang, H-S.	Training readiness, motivation to learn, supervisor support, organisational support and intention to transfer.	The study discussed the role of organisational as distant and supervisor as proximal support to transfer of training. Besides, this study also present the training readiness, motivation to learn and intention to transfer as the outcomes of transfer of training.
2019	Martins, L.B., Zerbini, T. and Medina, F.J.	Reactions to training, reactions to transfer, support for training, barriers, learning strategies, behavioural transfer.	The study focused on online training where the employees in banking institution enrolled in two hours self-instructional online course. The multi-source of feedback was used to evaluate the effectiveness of the training programme (trainees and supervisors).
2019	Kodwani, A.D. and Prashar, S.	Pre-training information, motivation to learn, type of training, training need analysis and trainees' reaction.	The study employed three times data collection and discussed the role of pre-training motivation factors that influence training effectiveness. Of these factors, training information does not positively link with motivation to learn and training effectiveness.
2019	Creon, L.E. and Schermuly, C.C.	Team learning behaviour, psychological safety.	This study address group training diversity Two-wave data collection was applied which involve trainees and trainers. The findings of the study suggested that perceived subgroups negatively related to team learning, psychological safety and transfer of training.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2018	Celestine, B.N. and Yunfei, S.	Pre-training learning readiness, personal self-efficacy, motivation to transfer, perceived content validity, personal capacity to transfer, transfer effort.	This self-reported survey explained learner characteristics i.e; pre-training self-efficacy, perceived content validity positively influenced transfer effort among teachers. Other learner characteristics (motivation to transfer and personal capacity to transfer) were not related to transfer effort.
2018	Govaerts, N., Kyndt, E. and Dochy, F.	Supervisor support, motivation to learn, motivation to transfer, self-efficacy, training retention.	This longitudinal study explained the role of supervisory support indirectly influence transfer of training through training retention.
2018	Walsh, B.M. and Magley, V.J.	Civility training, pre-training attitudes, motivation to learn.	Study was conducted to identify the predictors of pre-training attitudes that influence motivation to learn in civility training programme.
2018	Muduli, A. and Raval, D.	Work context, supervisor support, peer support, opportunity to use, transfer motivation, transfer design.	Empirical work in insurance company proved that work context directly predict training transfer without transfer motivation. The study also explain well design training content motivates the participants to transfer the content, as a result it increase the positive transfer of training.
2018	Suleiman, W., Dassanayake, M.S. and Othman, A.E.A.	Transfer motivation, organisational commitment, job involvement.	This study aims to investigate the role of motivation to transfer as a mediator in relationship between organisational commitment, job involvement and training transfer.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2018	Park, S., Kang, H-S. and Kim, E-J.	Supervisor support, developmental needs awareness, motivation to learn, motivation to transfer, training readiness, job performance.	This study explained that when employees received support from their supervisor, it directly affect their motivation to learn and thus it increased their readiness to attend the training, motivates them to transfer and as a result increased their job performance. This study however found no direct effect of supervisor support on the developmental awareness among employees. This study found no support on the link between motivation to transfer and job performance.
2018	Ng, K.H. and Ahmad, R.	Personality traits, social support, motivation to improve work through learning.	This study reported new motivational construct i.e motivation to improve work through learning (MTIWL) as a mediator that link the personality traits, social support with training transfer.
2018	Islam, T. and Ahmed, I.	Perceived organisational support, self-efficacy, job satisfaction.	Empirical study elaborate the indirect relationship between perceived organisational support on transfer of training through self-efficacy and job satisfaction among employees in banking sector in Pakistan.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2017	Kodwani, A.D.	Transfer climate, training awareness, training participation and involvement and training evaluation.	Two-phase data collection of the study was conducted to determine the organisational factors as pre-training conditions to influence transfer of training. The organisational factors consist of transfer climate, training awareness, training participation and involvement and training evaluation.
2017	Seiberling, C. and Kauffeld, S.	Volition to transfer, supervisor support, trainer performance, motivation to transfer.	Study was conducted to identify the role of volition to transfer and motivation to transfer as mediators in relationship between supervisory support, trainer performance and transfer of training.
2017	Chauhan, R., Ghosh, P., Rai, A. and Kapoor, S.	Supervisor support, transfer design.	A self-report survey was conducted to determine the role of supervisor support as a moderator between training design and training transfer. Training design was found to directly impact the transfer of training. In addition, with the support from supervisor, it strengthen the process to transfer the training.
2017	Massenberg, A-C., Schulte, E-M. and Kauffeld, S.	Learning transfer system (LTSI), motivation to transfer.	This study discussed the variables in LTSI at two point of time that is before and after training and the relationship with motivation to transfer.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2017	Iqbal, K. and Dastgeer, G.	Self-efficacy, training retention, motivation to transfer.	The self-administered survey was conducted among banking employees found that employees with high self-efficacy and training retention were more motivated to transfer thus, it leads to fully used of knowledge, skills and abilities to workplace.
2017	Nafukho, F., Alfred, M., Chakraborty, M., Johnson, M. and Cherrstrom, C.A.	Trainee characteristics, training design, work environment, transfer of learning.	The cross-sectional survey was conducted among adult learners in continuing education programme found that trainees' learning-oriented motivation is the strongest predictor of transfer of learning. The result revealed that except for work autonomy, all other factors (work complexity and variability) were related to transfer of learning.
2015	Cheng, E.W.L., Sanders, K. and Hampson, I.	Intention-based model, Intention to transfer, transfer behaviour.	By using the self-report questionnaire, the researchers have proposed the Intention-based model through the application of The Theory of Planned Behavior.
2015	Ng, K.H.	Supervisory practices and motivation to learn.	Investigation on the influence of supervisory practices and motivation to learn on transfer of training.
2015	Rangel, B., Chung, W., Harris, B.T., Carpenter, N.C., Chiaburu, D.S. and Moore, J.L.	Trainer expressiveness, trainee experiential learning style, Trainee engagement, transfer intentions.	The main intention of this study is to investigate the role of trainer expressiveness that can influence the transfer intention. Besides, this study also examined the trainees' engagement as mediator that facilitate the transfer process.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2015	Massenberg, A.C., Spurk, D. and Kauffeld, S.	Social support and motivation.	This study involved the investigation on the role of social support and motivation on training transfer within the individual and team level.
2015	Stiehl, S.K., Felfa, J., Elprana, G. and Gatzka, M.B.	Motivational to Lead, organisational support, leader behaviour.	The study examined the construct of Motivation to Lead to ensure the effectiveness of leadership training programme.
2015	Curado, C., Henriques, P.L. and Ribeiro, S.	Autonomous and controlled motivation, voluntary and mandatory enrolment in training.	The study assessed the motivational factors i.e; job satisfaction, job involvement and organisational commitment towards motivation to transfer based on two dimension which is autonomous and controlled motivation.
2015	Turab, G.M. and Casimir, G.	Attitudes towards training, intention to transfer, Theory of Reasoned Action.	The aim of this paper is to test the conceptual model based on the Theory of Reasoned Action and this study only focused on the attitude-intention-behaviour linkages to see the effects on transfer of training.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2014	Towler, A., Watson, A. and Surface, E.A.	Perceived leader behaviour, trainee perceptions, trainee motivation.	The study introduce the conceptual model of trainee perceptions towards the leader behaviour. The leader's behaviour can give signals to the leader's priority for training thus, it will impact the trainee priority to train as well as motivation to transfer. This study use The Signal Theory to explain the relationship. The training programme is foreign language.
2014	Yu Wen, M.L. and Chuan Lin, D.Y.	Transfer climate, Motivation to transfer.	The purpose of this paper is to examine the individual cognition motivation and perceived organisational transfer climate that affect motivation to learn and the motivation to transfer.
2014	Brown, T.C. and Warren, A.M.	Goals, Unions, Behavioural Observation Scale.	The objectives of this study are twofold which is to evaluate the transfer of training based on training intervention and to measure the effectiveness of self-management on transfer in managerial training.
2014	Diamantidis, A.D. and Chatzoglou, P.D.	Training design, trainees self-efficacy, work environment.	The aim of this study is to investigate the role of transfer design, trainee self-efficacy and job environment feedback towards training transfer behaviour.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2014	Grohman, A., Beller, J. and Kauffeld, S.	Motivation to transfer, training characteristics (training design and perceived content validity) Self-rated measures of training transfer (perceived application to practice, transfer quantity and transfer quality).	The research have conducted two studies to determine the motivation to transfer as mediating role between training characteristics and transfer of training.
2014	Renta-Davids, A.I., Jimenez-Gonzalez, J.M., Fanodos-Garrido, M. and Gonzalez-Soto, A.P.	Motivation, training design and learning- conducive work effects.	Investigation on the role of trainee's motivation, training design and work environment characteristics to predict the transfer of learning in work related training course.
2014	Peters, S., Cossette, M., Bates, R., Holton, E., Hansez, I. and Faulx, D. (Journal of Personnel Psychology, 13:4)	Job satisfaction, job involvement, organisational commitment and transfer climate.	The current study was conducted to investigate the relationship between transfer climate, job attitudes and the transfer of training.
2014	Homklin, T., Takahashi, Y. and Techakanont, K. (International Journal of Training and Development, 18:2)	Work environment (social-supervisor support, co-worker) and organisational support), Kirkpatrick evaluation.	The study aim to investigate the relationship between knowledge retention and transfer which also focused on the moderating role of social and organisational support. The training focus on skill acquisition.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2014	Bhatti M.A., Ali, S., Isa, M.F.M. and Battour, M. (Performance Improvement Quarterly, 27:1)	Individual, environmental, training design and affective reaction.	The present study aim to identify the role of individual, environmental and training design factor to determine the transfer process. This study also included the training evaluation which is affective reaction to see its effect on transfer of training.
2014	Ritzman, S., Hageman, V. and Kluge, A. (Vocational and Learning, 7:41)	Training design, training evaluation and training outcomes.	The purpose of this study is to test the validity and reliability of Training Evaluation Inventory. This model was developed based on Kirkpatrick's Evaluation.
2014	Harris, T.B., Hutchins, H.M. and Chiaburu, D.S. (Journal of Workplace Learning, 26:5)	Trainer style and learner orientation.	The aim of present study is to examine the relationship between trainer directiveness and training learning goal orientation.
2014	Harris, T.B., Chung, W., Frye, C.L. and Chiaburu, D.S. (Industrial and Commercial Training, 46:5)	Trainer competence and trainees' motivation (autonomy orientation).	The goal of this paper is to identify the interplay between perceptions of instructor competence and trainees' motivational orientation.
2014	Dysvik, A., Kuvaas, B. and Buch, R. (European Journal of Work and Organisational Psychology, 23:5)	Training intensity, supervisory support and work effort.	Examination the relationship of perceived training intensity and work effort moderated by the perceived supervisory support.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2014	Saks, A.M. and Burke-Smalley, L.A. (International Journal of Training and Development, 18:2)	Micro-training and macro-training, horizontal and vertical transfer.	This study provide the findings of transfer of training based on two perspectives which are micro training-focused on the transfer of training among trainees themselves and also macro training which concerned on the result of training which affect the performance of the firms.
2013	Gegenfurtner, A. (Vocational and Learning, 6)	Dimensions of Motivation, Motivation theories, training content, knowledge test performance, self and supervisory support.	This paper provide details examination on the relationship between dimensions in motivation with the transfer of training.
2013	Van de Locht, M., Van Dam, K. and Chiaburu, D.S. (Personnel Review, 42:4)	Identical elements, motivation to transfer.	Examination on the effect of identical elements on transfer of training is the main purpose of the present study. Another variable involved in this study is motivation to transfer which acts as a mediator.
2013	Zumrah, A.R. (Journal of Workplace Learning, 25:8)	Job satisfaction, learning.	The study focused on the job satisfaction as moderator between learning and transfer of training.
2013	Hutchins, H.M., Nimon, K., Bates, R. and Holton, E. (International Journal of Selection and Assessment)	LTSI, Intention to transfer.	The focus of this research is to identify the relationship between LTSI factors and intention to transfer, and how LTSI can predict the intention to transfer.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2013	Strickland, O.J., Santiago, J., Fuller, S. and Duenas, P. (Journal of Organisational Psychology, 13:1/2)	Transfer climate, job satisfaction, trainee confidence, organisational goal.	The purpose of this research is to explore the relationship between the training and strategic business goals. Moreover, the specific goal of this research is to identify the specific training behaviour presented by trainees after they completed the training programme.
2013	Bhatti, M.A., Battour, M.M., Sundram, V.P.K. and Othman, A.A. (European Journal of Training and Development, 37:3)	Supervisor and peer support, instrumentality, learner readiness, transfer motivation.	The effect of supervisor and peer roles, instrumentality and learner readiness on transfer of training were examined in this study. Thus, this study also investigate the role of training motivation and training retention can facilitate the transfer process.
2013	Dermol, V. and Cater, T. (Personnel Review, 42:3)	Volume and quality of training, supervisory support, peer support, organisational incentives, acquisition and interpretation of information, cognitive and behavioural changes.	The main objective of this study is to identify the selected training transfer factors and impact on company performance.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2012	Patrick, J., Smy, V., Tombs, M. and Shelton, K. (Journal of Occupational and Organisational Psychology, 85)	One's chosen job, training motivation, self-efficacy.	The study investigate the role of one's chosen job in relation with transfer of training. One's chosen job referred to being in individuals chosen job. Thus, the authors have conducted this study to compare the effects of trainees who were in the job of their choice with the trainees who were assigned to their job.
2012	Johnson, S.K., Garrison, L.L., Broome, G.H., Fleenor, J.W. and Steed, J.L. (Academy of Management Learning & Education, 11)	Goal setting 360 degree.	This study revealed the role of goal setting and transfer of training by using 360-degree survey in leadership development programme.
2012	Tabassi A.A., Ramli, M. and Bakar, A.H.A. (International Journal of Project Management, 30)	Training motivation, task efficiency.	The study focused on the role of training practices and motivation in construction industries. The training practices were evaluated from the manager's perceptions.
2012	Saks, A.M. and Burke, L.A. (International Journal of Training and Development)	Training evaluation using the Kirkpatrick's four level of evaluation.	The purpose of the study is to examine the relationship between training evaluation and transfer of training in organisations.
2012	Simosi, M. (International Journal of Training and Development, 16:2)	Self-efficacy, organisational culture.	Based on the Social Cognitive theory and Social Exchange theory, the author examined the effect of self-efficacy and organisational culture on transfer of training.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2012	Esfandagheh F.B., Harris, R. and Oreyzi, H.R. (Human Resource Development International, 15:2)	Extraversion and pre-training self-efficacy.	Two stages of study was conducted (pre and post-training) to identify the impact of extraversion and pre training self-efficacy on transfer outcomes.
2012	Franke, F. and Felfe, J. (Journal of Personnel Psychology, 11:3)	Leadership behaviour, motivation to transfer organisational support.	Based on the leadership skills training programme, the research was carried out to investigate the effects of motivation to transfer and organisational support towards transfer behavioural.
2012	Pham, N.T.P., Segers, M.S.R. and Gijselaers, W.H. (International Journal of Training and Development, 17:1)	Work environment (supervisory support, job autonomy, preferred support), Transfer strategies.	The role of work environment factor being studied in this research, in order to determine its relationship between participants' transfer strategies and transfer process. The data collected from two time frames (at the end of the MBA programme, and three months after the programme).
2011	Weissbein, D.A., Huang, J.L., Ford, J.K. and Schmidt, A.M. (Journal of Business Psychology, 26)	Motivation to transfer.	The role of pre-training intervention to foster the transfer of training is the main objective for the study.
2011	Jodlbauer, S., Selenko, E., Batinic, B. and Stiglbauer, B. (International Journal of Training and Development, 16:1)	Job dissatisfaction, training motivation.	The aim of this study is to determine the effect of job dissatisfaction on transfer of training. The relationship was identified through the motivation factor which act as moderator.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2010	Dierdoff, E.C., Surface, E.A. and Brown, K.G. (Journal of Applied Psychology, 95:6)	Frame-of-reference (FOR) training, goal orientation, self-efficacy, motivation, learning outcomes (affective, skill-based and cognitive).	Research conducted to determine the calibration of evaluator/assessor when providing evaluation on language proficiency training programme.
2010	Sookhai, F. and Budworth M.H. (Human Resource Development Quarterly, 21:3)	Self-efficacy and transfer climate.	The objective of this study is to investigate the intervention of transfer climate which is supervisor support and self-efficacy that facilitate the transfer of training.
2010	Yamkovenko, B. and Holton. E. (Human Resource Development Quarterly, 21:4)	Five Factor model, goal orientation, self-efficacy and intention to transfer.	This study aims to empirically test a model of relationship between personality traits and characteristics and intention to transfer.
2010	Den Bossche, P.V., Segers, M. and Jansen, N. (International Journal of Training and Development, 14:2)	Social network support, motivation.	The authors have identified the role of social supports network as one of the factor that can create the motivation to transfer.
2010	Martin, H.J. (Human Resource Development Quarterly, 21:1)	Workplace Climate and Peer Support.	This study aim to examined the impact of workplace climate and peer support on transfer of training.

Table 2.2 (Continued)

Year	Researcher (s)	Variables	Context
2010	Chiaburu, D.S., Sawyer, B.K. and Throughgood, C.N. (International Journal of Selection and Assessment, 18:4)	Personality traits, skill overgeneralisation.	Two studies involved in this research, Study 1 (field study) and Study 2 (laboratory study) in order to determine the personality traits effects and skill overgeneralisation towards transfer.
2010	Keith, N., Ritcher, T. and Naumann, J. (Applied Psychology: An International Review, 59:1)	Active/ exploratory training, motivation and cognitive ability.	The purpose of this research is to identify the role of cognitive ability and perceived performance utility that can impact on transfer of training. It involved two studies in computer tasks.

2.5 Critical argument on previous studies

Based on this review, the trend of research on training transfer seems to have changed. Motivational variable, a well-establish variable, is proven to be one of the most studied in transfer research. The role of motivational factor, either as mediator or moderator, in relation to transfer suggests that it can be a major influence in transfer studies. According to previous studies, motivational factor was the main variable discussed or examined by researchers pertaining to transfer of training research.

Despite being the most favourable factor examined, however, the results remain inconsistent. There can be little doubt of the need to fully maximise the transfer of training via motivational factors. In Blume et al.'s (2010) meta-analysis result, motivation factor was found to have a small to moderate relationship with transfer of training. Huang et al. (2015) in their meta-analysis studies found that motivation to transfer was the strongest predictor for typical transfer. By typical transfer, the authors were referring to how far trainees transferred the skills learned back in the workplace. An in-depth investigation is still needed to determine how motivational factors can encourage maximum transfer to the workplace.

Interesting findings from the present review also highlighted the importance of pre-training and post-training intervention. It seems that many scholars have answered the clarion call by previous meta-analysis and review on training transfer (Bell et al., 2017; Ford, Baldwin and Prasad, 2018; Blume et al., 2010). This could be a good indicator in investigating the variables to evaluate the transfer of training.

Another issue that should be given attention is the problem of common variance method. Blume et al. (2010) raised the issue of common variance method. According to the current review, only ten studies used multiple raters. Podsakoff, Mackenzie and Podsakoff (2012) offered suggestions to overcome the common variance method by obtaining measurements of the predictor and criterion variables from different sources. Gegenfurtner (2013) suggested two methods to improve the measurement of transfer. Multiple assessment sourcing is one of the techniques that can be used to improve transfer measurement. Instead of using self-reporting by trainees, the supervisor role should be included in transfer evaluation. A second method of assessment is to use multiple assessment criteria. Multiple assessment criteria include performance improvement after training, the distribution of training material in the organisation (peers and supervisors), change in attitudes and performance retention testing.

The previous studies also provided additional input pertaining to the theories used to discuss the transfer of training. There has been a significant increase in the use of theories. To the author's knowledge, only one paper, however, has been published to discuss the theories used in transfer studies, which is a compilation by Yamnill and McLean (2001). Based on this review, they provided a list of theories on transfer of training. Specifically they categorized the use of theories into three groups: motivation theories, theories for training transfer design and theories supporting transfer climate. Goal setting theory was included in motivation to transfer theory. The findings from the present review have succeeded in identifying new theories being applied by researchers. These new theories refer to Theory of Planned Behaviour, Theory of Reasoned Action, Self-Determination Theory, Integrated Control Theory, Signalling Theory and Perceived Organisation Support Theory. This new development suggests that the discussion on transfer of training has expanded into more detailed explanation on how to understand human behaviour or traits in organisations.

2.6 Relationship between employee engagement and training effectiveness

HRD scholars and practitioners have acknowledged employee engagement as an important psychological state that leads to positive outcomes for HRD practices (Fletcher, 2017). As a result,

scholarly activity on engagement in the HRD field is on the rise (Alagaraja and Shuck, 2015). Reio and Batista (2014) noted that the emergence of positive psychology in the HRD field has triggered HRD scholars to find ways of drawing attention to the positive aspects of work, which could thus enhance workers' engagement.

Despite the increasing amount of research on engagement in the field of HRD, there is still a shortage in the literature on the linkage between engagement construct and training practice. As stated by Wollard and Shuck (2011), employee engagement has implications for all areas of HRD practice, including training and organisational learning. Most of the previous studies on the linkage between these two constructs examined the training construct as a predictor of employee engagement. Only five studies were found to investigate the training construct from a different perspective. Rangel et al. (2015) identified the role of trainee engagement as mediator in the relationship between trainer expressiveness and intention to transfer. Two studies have been carried out to identify the role of training as an intervention tool. Gillet, Vallerand and Paty (2013) examined the impact of perceived organisational and supervisor support towards engagement, based on contextual and situational motivation. Contextual motivation comprised work situation and situational motivation referred to training sessions. Hadre and Reeve (2009) used a similar approach to identify the role of autonomous-supportive motivation style that influenced employee engagement among subordinates. Training intervention was found to increase the level of autonomous-supportive motivation style among managers, which had a positive impact in promoting workplace engagement among subordinates. A study by Rurkkhum and Bartlett (2012) found that the benefits of training did not moderate the relationship between employee engagement and organisational behavioural citizenship. Table 3 (Appendix C) summarizes the most influential research on the linkage between employee engagement and training and development.

2.7 Gaps of the study

The review from the literature suggested that employee engagement is one of the critical construct that predict important organisational outcomes such as in-role and extra-role behaviour and organisational performance (Laschinger, 2010). Moreover, the result from meta-analyses studies showed that employee engagement linked with individual employee task and extra-role performance (Albrecht et al., 2015). Training and development on the other hand, focus on the improvement of performance for employees. The effectiveness of training programme could only mirror when employees can apply what they have learned during training, generalised and maintained the newly learned knowledge, skills and abilities throughout their vocation.

The first gap of this study is to extend the transfer of training theory proposed by Baldwin and Ford (1988). As previously mentioned, based on the review, it has been acknowledge that motivation variable is one of the most dominant construct has been studied in transfer of training research. Motivational construct was regarded as one of the trainees' characteristics (Burke and Hutchins, 2007). Due to the inconsistent findings on the role of motivational construct to influence training transfer, there are still few question that need to be address in this variable. One of the critical issue that still linger in the findings of motivational variable is that, how to maximise the motivational effect on the successfulness on transfer of training. To do so, this study included the psychological dimensions of trainees' characteristics (psychological conditions of engagement) as the antecedents to influence positive transfer. This study fill the gaps by looking an in-depth investigation on the role of personal engagement domain namely psychological meaningfulness, psychological safety and psychological availability of the participants of that influence the training transfer.

The second gap identified for the study is to fill the theoretical gap by focusing on Kahn's (1990) personal engagement theory. On the recent review conducted by Bailey et al. (2015), the authors have pointed out that the conceptualisation of engagement in the literatures have diverged from Kahn's definition. The findings of their narrative review revealed that most of the studies have been dominated by Utrecht Group's perspective. This is not surprising given the fact that the JDR model has been acknowledge as one of the influential model being used in engagement research. Shuck (2011) in his review, has proposed that the research on engagement in HRD field should focus on three important domains. One of the domain is to develop the usability of the engagement concept. To do so, it requires researcher to respond on the call of differentiating the engagement construct from other job attitude and organisational construct such as job satisfaction, job involvement. The differentiation of the construct is the second domain that beg attention from HRD researchers. The next domain is to validate the measurement tools for engagement in order to avoid the confusion in defining the engagement construct.

The third gap of this study is to test Kahn's psychological conditions in East Asian context. This study attempts to address the role of psychological conditions of personal engagement among leaders in Malaysian public sectors. To the authors knowledge, the number of study that initiate the Kahn's proposition on personal engagement in Malaysia context are still limited. Recent work on engagement was conducted by Nazli and Khairudin (2018) suggested that work engagement indirectly influence organisational citizenship behaviour through transfer of training. The UWES was used to measure the work engagement. Another empirical work by Abu Bakar, Cooke and Muenjohn (2018) discussed the role of religiosity as a source of engagement. This study used the JDR theory as basic framework. In addition, the same framework was used in 2013 study to

examined the factors influencing employee engagement in financial sector in Malaysia (Abu Bakar, 2013). Apart from that, Hamid and Yahaya (2011) conduct a study to determine the relation between the role of person-job fit and person-organisation fit on employee engagement among employees in semiconductor companies in Malaysia. This study use the UWES to measure the employee engagement construct. On a recent study conducted by Juhdi, Pa'wan and Hansaram (2013), the organisational engagement construct developed by Saks (2006) was used to examine the mediating effect of organisational engagement on the relationship between HR practices and turnover intention. These studies give a significant view that there is existing gaps in the study that incorporated Kahn's personal engagement framework particularly in developing country like Malaysia.

2.8 Hypotheses of the study

The psychological conditions of engagement proposed by Kahn (1990), which comprise of meaningfulness, safety and availability will become the focus of this thesis. As previously mentioned, the main objective of this thesis is to examine the role of employee engagement as an antecedent of training transfer. The discussion on employee engagement construct will be elaborate based on these three psychological conditions. The starting point of the discussion will look into the relationship between psychological conditions of personal engagement and motivation to transfer

2.8.1 Psychological conditions of personal engagement (meaningfulness)

Psychological meaningfulness can influence the effectiveness of training transfer in several ways. Experiencing feelings of value, meaningful work could enhance instrumentality among trainees. In other words, psychological meaningfulness should provide a higher perception among trainees that participating in a training programme could improve their performance, and as a result ease the process of applying the newly learned knowledge and skill. Apart from that, psychological meaningfulness can foster the perception of usefulness of the new knowledge, skill and abilities acquired from training, and also lead to the desired outcome, that is performance improvement. Bhatti et al. (2013) for instance, proved that trainees who perceive that acquisition of skills or knowledge during training programmes give intrinsic or extrinsic rewards are motivated to transfer what they have learned back to the organisation. Chiaburu and Lindsay (2008) described how training instrumentality is the primary predictor for motivation to transfer. Their study on large service organisations in the United States confirmed that employees with high instrumentality were found to be more motivated compared to those with low instrumentality. This is on the premise that trainees who believe that equipping themselves with new knowledge,

skills and abilities will provide a sense of value and worth, and can thus ease the process of applying what they have learned during training.

Psychological meaningfulness could also correlate with trainees' intention to apply new skills and knowledge. A plausible explanation is that when trainees believe that it will become purposeful and significant for them to use the new knowledge, skills and abilities, it leads to higher individual and organisational performance. Such employees may perceive that developing and increasing their knowledge of the current task that they are performing will contribute to their growth and enhance their performance; it could also increase their willingness to apply the knowledge. In other words, psychological meaningfulness can be said to trigger the willingness of trainees to apply their newly acquired knowledge, skills and abilities back in the work setting. In their study involving law enforcement workers participating in leadership training, Hutchins et al. (2013) stated that motivation to transfer and intention to transfer have a strong relationship with training transfer. By adopting the view that individuals can show varied favourable or unfavourable behaviour, we can deduce that psychological meaningfulness could enhance favourable behaviour in a way that individuals perceive their tasks as significant, which could therefore foster the motivation to transfer.

Drawing on the theory of planned behaviour, Cheng, Sanders and Hampson (2015) examined the role of behavioural intention in influencing the intention to transfer. One of the dimensions explained in this study is the attitude towards transfer behaviour, which refers to the disposition to respond favourably or unfavourably to specific behaviour. This dimension was found to have a significant relationship with the intention to transfer.

2.8.2 Psychological conditions of personal engagement (safety)

The term psychological safety is used by Kahn (1990, p.708) to refer to being able to portray and employ oneself without fear of negative consequences to self-image, status or career. This construct is influenced by interpersonal relationships, group and intergroup dynamics, management style and process, and organisational norms. To experience the feeling of safety is particularly important for employees in order to ensure that they have the freedom to exhibit their competency to accomplish their tasks, without feeling threatened by negative consequences. In other words, for employees to become more psychologically attached to their task, they should work in a non-threatening environment. This notion describes the work environment support that trainees receive to transfer the training. According to Baldwin and Ford (1988), work environment characteristics comprise supervisory support, peer support, opportunities, and obstacles to apply the knowledge on the job. In addition in their review, Burke

and Hutchins (2007) added three more dimensions, namely strategic link, transfer climate, and accountability. Numerous studies were found to investigate the role of work environment in transfer studies. Vignoli and Depolo (2019) reported a positive link between favourable work conditions with the application of KSA. A positive link was also found between organisational and supervisor support (Kim et al., 2019; Govaerts, Kyndt and Dochy, 2018), and peer support (Pham, Segers and Gijselaers, 2012). Martin (2010), for example, investigated the role of work environment and peer support that influences training transfer behaviour. This study explained that the role of peer support and work environment have a positive direct effect on transfer of training.

Kahn emphasized the importance of psychological safety to instil a psychological presence for employees becoming more attentive, focused, connected and recognising of the task on which they are engaged. Psychological presence refers to the experiential state that accompanies personally engaging behaviours (Kahn, 1992, p.2).

The notion of psychological safety has continued to receive attention from scholars on organisational behaviour. Following Kahn's perspective on psychological safety, several studies have been conducted to identify the role of psychological safety and positive organisational outcomes. Edmondson (1999), for example, investigated the role of team psychological safety and team efficacy that affects the learning and performance of the work team. Team psychological safety has been defined as a shared belief that the team is safe for interpersonal risk-taking (Edmondson, 1999, p. 354). The finding of the study revealed that team psychological safety affects learning behaviour, which also influences team performance. The study proposed that team psychological safety could foster learning behaviour in a way that an organisation's members are not threatened with negative reactions when taking interpersonal risks. There are four risks that people commonly encounter in the workplace: being seen as ignorant, incompetent, negative, or disruptive (Edmondson, 2002). On the other hand, May, Gilson and Harter (2004) examined the role of psychological conditions that can trigger self-expression at work, which refers to the human spirit. The findings of their study showed that psychological safety is positively related to employee engagement.

In the same vein, Nembhard and Edmondson (2006) confirmed that psychological safety is positively related to team engagement in quality improvement. This relationship is moderated by leader inclusiveness. Additionally, psychological safety was found to mediate between leader inclusiveness and team engagement. In a recent study by Carmeli and Gittell (2009), another interesting finding revealed that psychological safety is significantly related to learning from failure. Learning from failure has been viewed as a rich source of learning, as well as provoking

fear. This study provides the view that psychological safety can be regarded as an enabler to the learning behaviour of individuals. In addition, when individuals were given the opportunity to speak about their mistakes, asking questions or seeking feedback, the role of psychological safety was very important. In addition, this study also suggested that shared goals, shared knowledge and mutual respect are associated with psychological safety.

In relation to training transfer, psychological safety can motivate employees so that they do not feel threatened in applying what they have learned during training programmes. One of the explicit factors that can be examined is that this psychological construct can provide greater opportunity for employees to transfer the skill and knowledge back to the workplace. Opportunity to perform has been discussed widely among scholars in transfer of training studies. Ford et al. (1992, p.512) defined the opportunity to perform as the extent to which a trainee is provided with or actively obtains work experiences relevant to the tasks for which he or she was trained. The opportunity to perform is characterized by three dimensions:

i. Breadth - which refers to the extent of the variety of tasks that are actually being performed by trainees after completing the training programme;

ii. Activity level – the frequency of performing the trained tasks by trainees;

iii. Type of tasks – which refers to the complexity or difficulty of the trained tasks.

Grossman and Salas (2011) suggested that for training to be successful, it is vital to provide the trainees with sufficient resources and opportunities to apply what they have learned during training programmes. Furthermore, Clarke (2002), in a qualitative study examining the job/work environment factors in service agencies in the United Kingdom, found that heavy workload and time pressures were significant obstacles to the opportunity to use the trained skills.

Psychological safety also enables trainees to experience feelings of safety to prepare themselves for participation in training programmes and learn the contents of the training. In other words, psychological safety can assist trainees' readiness to learn and develop their skills during training programmes, and will result in positive transfer. This situation refers to learner readiness. The psychological safety construct could also provide a sense of higher self-efficacy for trainees to perform what they have learned during training programmes. In line with this, few studies were found to investigate learner readiness having positive impact on training transfer (Kim et al., 2019; Celestine and Yun Fei, 2018; Park, Kang and Kim, 2018; Bhatti et al., 2013).

Apart from that, psychological safety is also associated with learning behaviour (Edmondson, 1999). Therefore, we propose that psychological safety is positively related to motivation to learn.

It is also likely that psychological safety has a stronger influence on the motivation to learn than on motivation to transfer and self-efficacy. It also hypothesized that psychological safety is positively related to the employee's motivation to transfer, motivation to learn and self-efficacy.

2.8.3 Psychological conditions of personal engagement (availability)

Psychological availability refers to the sense of having the physical, emotional, or psychological resources to engage at a particular moment (Kahn, 1990, p.714). This psychological condition is concerned with the distraction that one might experience which can affect one's availability to engage with the task. Distractions occur in terms of insufficient physical energy, depletion of emotional energy, individual insecurity and outside lives. Based on this premise, Kahn and Heaphy (2014) delicately stressed that psychological availability can be considered as a sign of readiness to mirror how available people are during distractions. Following Kahn's work, Rich, LePine and Crawford (2010) continued to investigate the relationship between psychological availability and performance.

The conceptualisation of psychological availability has been viewed as being influenced by the level of confidence in an individual, including the capabilities and status they enjoy. According to Rich, LePine and Crawford (2010), this could be represented by the core self-evaluation concept. The findings from this study revealed that this construct positively related to job engagement. In the same vein, Barrick et al. (2015) investigated Kahn's engagement construct through the lens of collective organisational engagement. Based on Barrick et al. (2015) work, collective organisational engagement has been defined as the shared perceptions of organisational members that they have physically, emotionally and cognitively invested in their work (p.113). This study however, used 'bundle' HRM practices to determine the factors that influence collective organisational engagement. The HRM practices refer to pay equity, job security, developmental feedback and pay for performance. The findings of the study suggested that HRM practices and CEO transformational leadership are related to collective organisational engagement. Rothman and Welsh (2013) identified psychological availability as consisting of the availability of resources (cognitive, emotional and physical) perceived organisational support, rewards and recognition. The result of their study found that psychological availability is strongly related to employee engagement.

From a training transfer perspective, the condition of psychological availability could mirror the importance of volition to transfer. Derived from the Theory of Action Control (Kuhl, 1984), Deiman and Keller (2006) defined volition as one's capability of maintaining attention and effort toward goals, despite distraction or setback (p.139). Using this construct, Seiberling and Kauffeld

(2017) provided empirical evidence on the positive influence of volition to transfer and transfer of training. In addition, the findings from their study revealed that motivation and volition are two independent constructs. In addition, distraction to achieve goals could be related to perceived barriers and enablers. Perceived barriers and enablers related to conditions that are being interpreted as either impeding or facilitating goal achievement (Lent, Brown and Hackett, 2000). The work by Klein, Noe and Wang (2006) exhibited this construct to have positive impact on motivation to learn. Findings from Martins, Zerbini and Medina (2019) indicated perceived barriers are not associated with transfer of training indicators.

Based on the discussion of previous research, this study propose following hypotheses:

H1: Psychological conditions (i.e. psychological meaningfulness, psychological safety and psychological availability) positively related to motivation to transfer

H2: Psychological conditions (meaningfulness, safety and availability) positively related to motivation to learn

H3: Psychological conditions (meaningfulness, safety and availability) positively related to self-efficacy

The following section will elaborate on the relationship between motivation to transfer, motivation to learn and self-efficacy with learning and training transfer.

2.8.4 Motivation to learn

Motivation to learn has been regarded as one of the critical factors for training effectiveness. It is undeniable that motivation to transfer and motivation to learn have significant interplay for training transfer. According to Kontoghiorghes (2002), a well-designed training programme cannot promise to be effective if the trainees are not motivated to learn during it. Motivation to learn refers to the specific desire of the trainee to learn the content of the training programme (Noe, 1986). A wealth of literature has described that motivation to learn is one of the critical indicators of the success of training transfer. As highlighted by Klein, Noe and Wang (2006), training motivation theory recognises that motivation to learn has direct effect on learning outcomes (p.668). This is exemplified in the work undertaken by Weissbein et al. (2011) investigating the role of motivation to learn amongst students in higher education institutions, and found that motivation to learn gave a positive link with transfer. Ng (2015) suggested that supervisor feedback and task decisions influence trainees' motivation to learn, resulting in positive transfer. On the other hand, Yu Wen and Chuan Li (2014) also proved that motivation to learn is related to transfer climate. In the same vein, Al-Eisa, Furayyan and Alhemoud (2009)

asserted that trainees with high motivation to learn and possess high confidence in their abilities to succeed in training, were prone to have high intention to transfer what they learned back to workplace. The discussion presented above leads to the following hypotheses:

H4: Motivation to learn positively related to affective learning

2.8.5 Motivation to transfer

Motivation to transfer has been widely researched in training transfer studies. This construct has been researched extensively over the past 25 years, due to its significant impact on professional development, as well as in generating the theories of training and training effectiveness (Gegenfurtner, 2011). According to Cheng and Ho (2001), trainees with lack of motivation are likely to have low understanding of the training content and succeeding in the training performance. Additional support for this explanation comes from Cheng and Hampson's (2008) review, which suggested that motivation to transfer is one of the important predictors of learning. The term, motivation to transfer was discussed earlier in the work of Noe (1986) and Noe and Schmit (1986). Noe (1986) defined motivation to transfer as the trainee's desire to use the knowledge and skills mastered in the training programme on the job (p.734). Motivation to transfer also refers to the intensity of effort directed toward utilising the skills and knowledge learned in training in the work setting (Holton, Bates and Ruona , 2000).

Despite being heavily researched in transfer studies, motivation to transfer still receives inconsistent findings. This brings us to the question on to what extent the motivation to transfer influences the transfer of training. Jacot, Raemdonck and Frenay (2015) pointed out that clarification on the motivation to transfer construct is much needed in transfer studies. Additionally, having a clear understanding of this construct could ease the process of interpretation of divergent findings, and furthermore could enhance our understanding of the actual role of motivation to transfer. During recent meta-analytic studies by Huang et al. (2015), the results revealed that motivation to transfer is considered as being a strong predictor for typical transfer.

A number of studies have been conducted to examine the role of motivation to transfer and transfer of training. Jodlbauer et al. (2011) found that experiencing higher motivation to transfer can foster the unsatisfied employees to successfully transfer the newly learned knowledge back to the workplace. This study also proved that those unsatisfied workers with low motivation to transfer were poorly equipped to transfer. Franke and Felfe (2012) examined the relationship between motivation to transfer and transfer behaviour. This study also confirmed that motivation to transfer is associated with transfer behaviour.

Gegenfurtner (2013) provided an in-depth discussion on motivation to transfer. Drawing from self-determination theory, expectancy theory and the theory of planned behaviour, the author proposed that the motivation to transfer can be best explained through three dimensions. These dimensions refer to intention to transfer, and autonomous and controlled motivation. The findings explained that autonomous motivation is regarded as influential on the successfulness of the transfer. The present study proposed that the relationship between three psychological conditions of engagement (meaningfulness, safety and availability) and affective learning will be mediated by motivation to transfer. By thus having the empirical evidence, it can be predicted that motivation to transfer does, in fact, play a critical role in training transfer. Therefore, the following hypothesis is proposed:

H5: Motivation to transfer positively related to affective learning

2.8.6 Self-efficacy

Another important variable that influences the training transfer is self-efficacy. Burke and Hutchins (2007) included self-efficacy as one of the dimensions of learner characteristics. Self-efficacy has been acknowledged as having a strong relationship with training transfer. The term, self-efficacy was first explained by Bandura (1977) in his work to identify behavioural change. Self-efficacy has been defined as judgements individuals make about their competency when performing a task (Bandura, 1982). It also refers to the beliefs that determine how people feel, think, motivate themselves and behave (Bandura, 1994). According to Bandura, there are four sources of self-efficacy, referring to enactive mastery, modelling, social persuasion and arousal. . Giving advance in the self-efficacy research, Chen, Gully and Eden (2001) have discussed the new perspective on self-efficacy. In their work, two important construct were examined that is general self-efficacy and specific self-efficacy. General self-efficacy refers to individuals' perception of their ability to perform across a variety of different situation. Specific self-efficacy on the other hand, refers to proximal state that positively relates to individuals' decisions to engage and persist in task-related behaviour (pp.67). By comparing these two constructs, their research have provided a New General Self-efficacy Scale which explain the motivational and performance aspect played role in a variety of work contexts.

Colquitt, LePine and Noe (2000) explained that as an individual characteristic, self-efficacy correlates with transfer of training. Esfandagheh, Harris and Oreyzi (2012) found a positive relationship between pre-training self-efficacy and training outcomes. Additionally, Simosi (2012) conducted a study on newly hired employees in Greece and found self-efficacy to be positively significant on training transfer. Chiaburu and Marinova (2005) asserted that trainees with high

self-efficacy tend to transfer, and have higher motivation to transfer compared to those with low levels of efficacy. Machin and Fogatry (2003) proposed that implementation intentions of trainees in computer training were associated with post-training self-efficacy. Referring to the above previous studies, the following hypothesis postulates:

H6: Self-efficacy positively related to affective learning

Prior research on engagement have come to consensus that psychological conditions of engagement is positive motivational state (Byrne et al., 2017; Delaney and Royal, 2017). The construct also being acknowledge to create positive individual and organisational outcome. Recent empirical study by Han, Sung and Suh (2020) provided evidence of significant relationship between psychological conditions of meaningfulness and performance. Other studies also indicated that positive association between engagement and organisational performance (Shantz, Alfes and Arevshatian, 2016); work role behaviour (Fletcher, 2015); proactive behaviour (Maden, 2015) and employees' job performance (Karatepe, 2013). In training transfer, the positive behaviour changes represent the effectiveness of the training. According to Ford, Baldwin and Prasad (2018) they argued that post-training intervention could give greater impact to training transfer. Based on the above argument, the following hypothesis can be proposed:

H7: Psychological conditions of personal engagement positively related to post-training behaviour

2.8.7 Affective learning

Learning has been regarded as one of the tool to influence the development of human capital resources. In employee engagement field, by providing the learning climate in the workplace, it can be considered as a resource to enhance employees' engagement (Eldor and Harpaz, 2015). Learning climate also reflect the intrinsic and extrinsic motivational components that could facilitate the willingness of employees to engage with their work (Eldor, 2016).

In training and development field, learning is one of the critical factor to determine training effectiveness. According to Sonnetag, Niessen and Ohly (2004), the role of learning in training and development can be viewed based on the definition of training and development. Swanson and Holton (2001) defined training and development as a process of systematically developing work-related knowledge and expertise in people for the purpose of improving performance (p.204). The meaning of this term has been broadened where training aims not only to equip new employees with work-related knowledge, but also for the present employees entering new job roles. Development on the other hand, is a planned growth and expansion of knowledge and expertise of people beyond the present job requirements. Brown and Sitzmann (2011) further explained

that through formal, planned effort, training help employees gained job-relevant knowledge and skills related to their current jobs, while development activities help employees prepare for their future jobs. Having defined what is meant by training and development, it is obvious that learning served as a foundation of this HRD practice. As Patten (1974) reminds us, training exists to bring about learning on the part of the trainees (p.27) and learning is a manifested in changes in behaviour. Whilst, the core challenge to training and development practice is ensuring that the trainees could apply and maintain what they have learned in training programme back to their job and it resulted in improved performance. Kraiger and Ford (2021), expressed learning as a multidimensional construct. They defined learning as mental engagement process resulted in the acquisition and maintenance of knowledge, skills and affect.

Baldwin and Ford (1988) in their most cited framework, demonstrated that two critical conditions of transfer process are, the generalisations of learned material in training and maintenance of what was learned over period of time on the job. In order to ensure the successfulness of these two conditions, the learning process must occur first. In other words, transfer of training is affected by the degree to which trainees have learned the material in the training context (Brown and Sitzmann, 2011). Bell et al. (2017) in their review on the timeline of training and development research, found that the link between learning and training could be traced back in the early years of training research (1917-1959). Historically, research investigating the association between learning and training for this period only focused on the learning different skills as well as determining the rates of learning.

Additionally, learning was strongly associated with transfer of training (Zumrah, 2013). Learning and motivation are important features in training transfer (Gegenfurtner et al., 2009). Noe, Clarke and Klein (2014) for example have mentioned that pre-learning intervention could ensure that the learning process occurred and can be transferred to the work setting. Noe, Tews and Dachner (2010) have asserted that learner engagement can be considered as one of the critical factor that can enhance the effectiveness of the training programme. Noe (1986) listed four condition that are necessary for high motivation to learn. These four factors refer to reaction to skill assessment feedback, expectancies, and career and job attitudes. The expectancies and career factors can be relate to the psychological meaningfulness when employees believe that they have the ability mastering the training content. Furthermore, employees will perceive they will get a return of their effort to join and mastering the training programme when they receive the reward of their effort like salary increases and enhancement of self-confidence. In addition, employees will feel worthwhile when they are being involve in their career planning, understand the psychology of the job and embrace the good job performance. The psychological safety related to the assessment feedback factor. For this construct, assessment on trainees' performance in training

either good or bad performance will not instil the negative feeling for trainees like fear of getting punish or being penalise because of poor performance during training. The fourth factor that is job attitudes linked with the psychological availability when trainees perceive that they have been provided with necessary resources to perform job tasks and have supportive interpersonal relationship with the work environment

Kraiger, Ford and Salas (1993) suggested that learning could result into three main outcomes; cognitive, skill based and affective outcomes. Cognitive outcomes included the verbal knowledge, knowledge organisation and cognitive strategies. The skill based learning outcomes comprise of compilation of knowledge and automaticity. Meanwhile, the affective outcomes focus on attitudinal and motivational outcomes. This study incorporated the view from Kraiger, Ford and Salas (1993) by focusing on affective outcomes that could relate to behavioural changes of the participants of the training programme. Ford, Kraiger and Merrit (2010) suggested that learning outcome is related to the actual behaviour on the job. Thus, it is important to identify the type of learning outcome to predict behavioural changes. Study by Yi and Davis (2001) for instance found that individual with positive attitude towards the use of computer skills training were associated with usefulness perceptions. Additionally, recent work by Testers, Gegenfurtner and Brand-Gruwel (2020) discussed affective learning outcomes based on the characteristics of the affective learner. The five affective characteristics refer to learner readiness, motivation to learn, positive outcomes, negative outcomes and personal capacity were found to influence intention to transfer new knowledge. The findings from Roberson, Kulik and Pepper (2009) however explained no relationship between affective learning with training transfer. Stanhope, Pond and Surface (2013) indicated affective learning as training outcome and directly related to core-self evaluation.

As for the present study, learning construct will be examined as one of the variable that directly related to post-training behaviour. The following hypothesis is formulated;

H8: Affective learning outcomes positively related to post-training behaviour

2.8.8 Post-training behaviour

Post-training behaviour is defined as behavioural changes of trainee when applying what has been trained back to workplace (Cheng, Sanders and Hampson, 2015). The behavioural changes is one the evaluation stage included in Kirkpatrick training evaluation. Previous studies on behavioural changes proved that individual factors such as motivation to transfer predict behavioural changes. Franke and Felfe (2012) for instance found that motivation to transfer positively related to managers behavioural changes. In addition, Tracey, Vonderembse and Lim (1999) asserted that transfer climate were related to post- training behaviour. Empirical work by Diamantidis and

Chatzoglou (2014) supported the positive link between post-training behaviour and employees' performance. A study by Dermol and Carter (2013) confirmed that supervisory support and organisational incentives gave positive impact on behavioural changes. This study proposed that psychological conditions of personal engagement predict changes in employees' behaviour through motivation to transfer, motivation to learn and self-efficacy. Affective learning on the other hand, is expected to mediates the relationship between motivation to transfer, motivation to learn, self–efficacy and post-training behaviour. It is posited that when employees personally engaged with their task, they will be more likely to transfer the training that lead to behavioural changes.

2.8.9 Mediating effect of motivational constructs

This study hypothesize that motivation to learn and motivation to transfer mediates the relationship between psychological conditions (meaningfulness, safety and availability) and affective learning. One of the essential element of training effectiveness is trainees' motivation (Naquin and Holton, 2003). Given the importance of motivational construct, they proposed the higher order construct refers to motivation to improve work through learning (MTIWL). This term comprised of motivation to learn and motivation to transfer. Tardif (1996) cited in Jacot, Raemdonck and Frenay (2015) posited that learning and training transfer were closely related to motivation to learn and motivation to transfer. It implies that, researchers should explained the motivation to learn construct when discussing the transfer process. Meanwhile, to explain the learning process, researchers should consider the role of motivation to transfer. Derived from Expectancy Theory, Donovan and Darcy (2011) argued that motivation to enrol and learned in training programme influenced by trainees' perception that the training programme benefit them to learn new skills, improving their performance, achieving desired outcome and avoiding negative consequences.

Motivation to learn is a direct antecedent of learning (Noe, 1986; & Noe and Wilk, 1993). Motivation to learn is one of the proximal contributing factor of learning (Colquitt and Simmering, 1998). Individuals with a desire to learn were expected to initiate their effort in learning process and thus, facilitate the transfer process (Gegenfurtner and Vauras, 2012). Previous studies supported the positive link between motivation to learn and learning (Kodhwani and Prashar, 2019; Walsh and Magley, 2018; Rowold, 2007).

Motivation to transfer is another essential component in training transfer. One of the indicator of successfulness in training is that, trainees or employees willing to apply all the KSA learned from training back to the job. Noe (1986) in his influential seminal work on training effectiveness

posited that motivation to transfer mediates the relationship between learning and behaviour changes. Bates, Cannonier and Hatala (2014) for example posited that when employees have the intensity effort to apply the knowledge learned in training, it is likely to increase the implementation to transfer and as a resulted to workplace learning transfer.

In relations to psychological conditions of engagement, there is possible linkage between psychological engagement and learning via motivation to learn and motivation to transfer. The present study proposed that employees who experience psychological meaningfulness, availability and safety will likely to be motivated to transfer and motivated to learn the training. Thus, it foster the successfulness of learning which resulted in positive transfer. In other words, employees who perceived that their work is worthwhile, valuable, they will exert their effort to increase the knowledge, skills and abilities. In addition, with the support from the work surrounding, it will make them feel psychologically secured to performed the new knowledge, and receiving feedback on their action to transfer the training. Furthermore, given the availability of resources to apply the knowledge, it increase their motivational element to learn.

The present study proposed that, when individual experience positive attitude towards training, they are motivated to apply the knowledge, skills and attitude during training. Thus, it facilitate the process of learning during training.

In general, this study proposed the following hypotheses:

H9: Motivation to learn mediates the relationship between psychological conditions (meaningfulness, safety and availability) and affective learning

H10: Motivation to transfer mediates the relationship between psychological conditions (meaningfulness, safety and availability) and affective learning

2.8.10 Mediating effect of self-efficacy

Self-efficacy is one of the trainee characteristics proposed by Baldwin and Ford (1988) that influenced transfer of training through learning. Self-efficacy is important precursor to transfer of training because it related to individual's belief on their ability to achieve desired goal. This construct has been widely research in training transfer and engagement studies. Sukserm and Takashi (2012) for instance found positive link between self-efficacy and learning. Other studies also reported there is association between self-efficacy and intention to transfer (Vignoli et al., 2018); learner readiness (Celestine and Yunfei, 2018), personal learning (Jyoti and Sharma, 2017). In employee engagement field, numerous empirical work found a link between self-efficacy and employee engagement (Chaudhary, Rangnekar and Barua 2012; Pati and Kumar, 2010). Recent

work by Albrecht and Marty (2020) also reported that self-efficacy has direct effect with employee engagement. The present study suggested that when employees experience positive psychological conditions of engagement, it will increase their confidence on the ability to learn during training.

This study propose the following:

H11: Self-efficacy mediates the relationship between psychological conditions (meaningfulness, safety and availability) and affective learning

2.8.11 Mediating effect of affective learning

Previous studies have agreed that transfer of training were influenced by motivation to learn (Kodwani and Prashar, 2019; Park, Kang and Kim, 2018; Ng, 2015; Ng and Ahmad, 2018; Kontoghiorghes, 2002), motivation to transfer (Vignoli et al., 2019; Banerjee, Gupta and Bates, 2017; Curado, Henriques and Ribeiro, 2015) and self-efficacy (Esfandagheh, Harris and Oreyzi, 2012; Simosi, 2012; Sookhai and Budworth, 2010). Scholars have agreed that learning is one of the element of training and it is associated with motivational construct. Findings from Dierdorff, Surface and Brown (2010) for example, proved that individual who keen to develop their competencies by acquiring new knowledge and skills have positive effect on affective learning outcome and improve the transfer outcomes. In different study by Bhatti et al. (2014) found direct relationship between affective reaction and transfer motivation. Based on these findings, the present study proposed that motivation to transfer, motivation to learn and self-efficacy were indirectly related to post-training behaviour through affective learning.

The study postulates the following hypotheses:

H12: Affective learning mediates relationship between motivation to learn and post-training behaviour

H13: Affective learning mediates the relationship between motivation to transfer and post-training behaviour

H14: Affective learning mediates the relationship between self-efficacy and post-training behaviour

2.9 The training programme

Middle Management Leadership Assessment Programme (M-LEAP) and Executive Leadership Development and Assessment Programme (E-LEAP)

The training programmes was developed to assess the criteria and leadership competencies of officers. This course is one of the requirement phase for promotion. This is a mandatory courses that aims to develop leadership skills and competencies among future leaders in public sector in Malaysia.

The M-LEAP programme was designed specifically for the officer (Diplomatic and Administrative Officer) of Grade M52. However, this programme is a fast track for the eligible candidates for Grade M48. The focus of this programme is to prepare the officer with specific skills and competencies particularly on the leadership skills before being promoted to the next level that is Grade M54. The objectives of this programme are:

i. Assessing leadership capabilities

ii. Identifying officers with future quality needs

iii. Identifying officers with strategic thinking skills

iv. Identifying officers with effective communication skills and the ability to take action

v. Identifying officers with high integrity

The E-LEAP programme focused on cultivating the leadership capability at the executive level. This programme was designed specifically for the Grade M48 and fast track candidates for Grade M44. Those who succeed in this programme will be promoted to the Grade M52. Among the competencies that being assessed in the programme are visionary leadership, decisiveness and problem solving, influential and tactful persuasiveness and perseverance and focus.

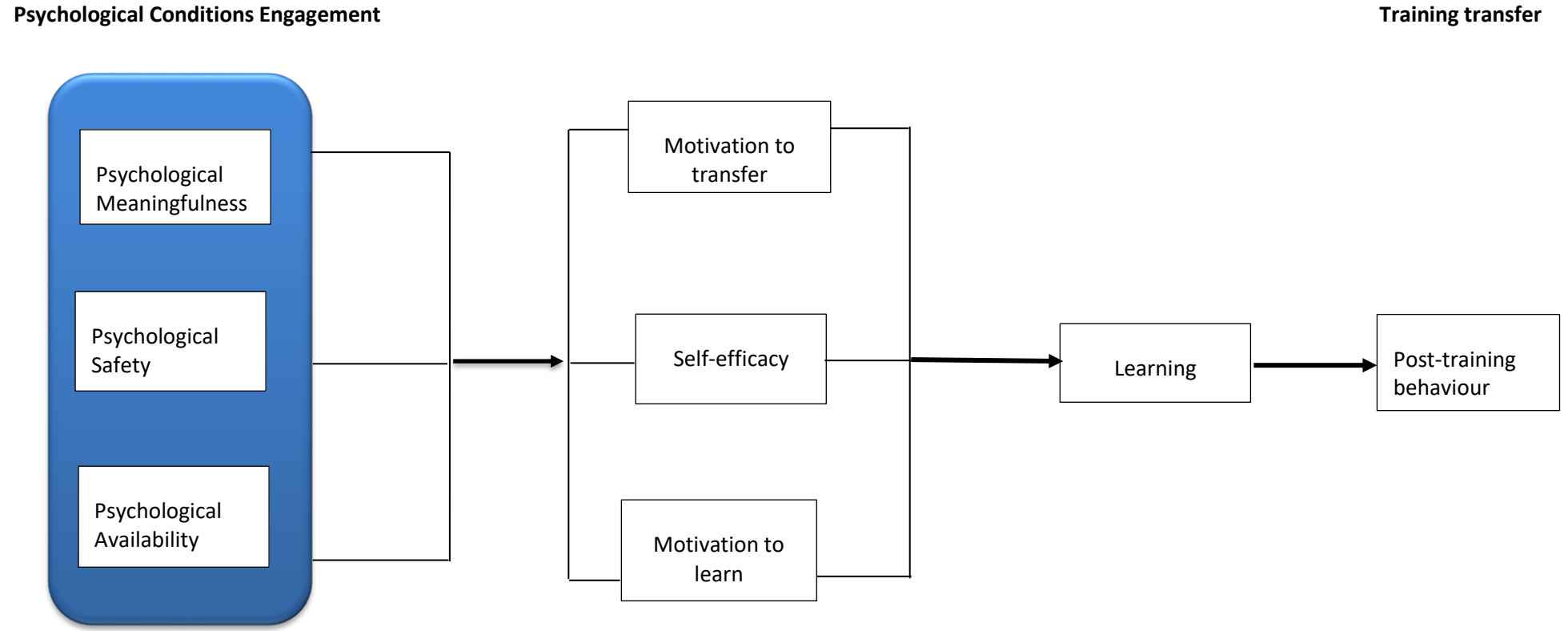


Figure 2.2 Research framework

2.10 Chapter summary

This chapter summarized the literature on psychological conditions of personal engagement, transfer of training, and variables that being studied. In addition, the details of the assessment programme that is M-LEAP and E-LEAP were explained in this chapter. Apart from that, hypotheses and research framework were discussed. The following chapter explained the methodology used in this study

Chapter 3 Methodology

3.1 Introduction

This chapter discusses the methodology applied for the present research. It presents the research design, identification of sampling size, data collection, measurement of variables and instruments, and data analysis procedures.

3.1.1 Research paradigm

Research paradigm or philosophical assumptions hold by researchers are important to explain the design of their research. Krauss (2005) asserted that, philosophical assumptions is important to understand the perspective of the study and it served as guidance for scientific investigation. According to Creswell (2014), four philosophical worldviews or paradigms are widely discussed in literature, which are post-positivism, constructivism, transformative, and pragmatism.

Post-positivism holds the view that emphasise on discovering causal laws, careful empirical observations and value-free research (Neuman, 2014). This worldview posits that only observable phenomena will lead to credible data (Saunders, Lewis and Thornhill, 2012). It also assumes that a research is influenced by well-developed and tested theories (Mackenzie and Knipe, 2006).

As mentioned in the previous chapter, this thesis addresses three important gaps in engagement literature that are related to theory testing. Therefore, this study embraces the positivism worldview where, based on theories, this study sought to understand the causal relationship between variables. Quantitative research focused on the measurement and analysis of causal relationship between variables within framework developed based on previous theories (Yilmaz, 2013). Apart from that, in order to seek rigorous, precise measures, and objectivity of the research, it is valuable for this researcher to understand the phenomena in a different geographical setting, that is, from the Asian perspective, which could contribute to logical links of the abstract ideas into precise measurement of the observed phenomenon.

3.2 Research design

This research adopted a quantitative approach and the survey strategy that is associated with deductive reasoning. Deductive reasoning is used to confirm that the theories can be tested. A questionnaire set was used to gather the data. The research questionnaire was designed based on previous studies related to employee engagement and training transfer. The self-completed

questionnaire design was applied for this present study. In addition, a pilot test was conducted in order to ensure that respondents do not have any problems to understand and thus be able to answer the questions. This study is characteristically a longitudinal research type. This type of data collection was adopted in order to reduce the common method variance (CMV) bias. According to Rindfleisch et al. (2008), three strategies could be applied to reduce the threat of CMV and these strategies refer to employing multiple respondents, obtaining multiple types of data, and gathering data over multiple periods. Apart from that, in engagement research, longitudinal studies are still limited. Bailey et al. (2015) in their review found that most studies on engagement are based on cross-sectional studies. Thus, it was revealed that some discrepancies could be observed from the findings of engagement research, including biased estimates of causal relationships. Therefore, longitudinal studies are very much needed to explore the impact of engagement on employees and organisational performance. The issue of time lag in measuring training effectiveness also received attention by HRD scholars. A review by Bell et al. (2017) summarised that it is critical to explore intensively on the pre-training and post-training intervention as these two factors can greatly influence training effectiveness. These intervention actions are related to one of the critical condition of transfer, that is, maintenance. Blume et al. (2010) confirmed that the effect of transfer would decay over time when there is a huge time lag between training and transfer measurement. Therefore, to overcome this maintenance issue, it is necessary to conduct a longitudinal data collection method.

Neuman (2014) had classified three types of longitudinal research which comprise time-series, panel, and cohort types. Time-series research collects data from a category or group of people or other units multiple times. The data gathered in this research can be different cases of people in each of several time periods. Meanwhile, panel study refers to the type of collecting data on exactly the same people, group, or organisation across time points. The final category of longitudinal study, that is the cohort study, focuses on observing or collecting data from a category of people that share important features or experience a common life event. The present study employed the panel longitudinal study, which involved three phases of data collection, that is, before participants (managers and executives) attend the training programme (Time 1), immediately after the participants finished the training programme (Time 2), and four months after completing the training programme (Time 3). Each of these evaluation phases used three different questionnaires. This is because each phase measured different variables, as shown in Figure 3.1.

3.2.1 Variables of the study

The independent variables of the study consisted of three psychological conditions of personal engagement, which are psychological meaningfulness, psychological safety, and psychological availability. This study proposed that motivation to learn, motivation to transfer, and self-efficacy would mediate the relationship between psychological conditions of personal engagement and training effectiveness. Apart from that, learning process is expected to mediate the relationship between psychological meaningfulness, psychological safety, psychological availability, and training effectiveness. Demographic background of the public managers were included as control variables.

3.3 Research context and data collection

The sampling technique that was applied for this study was purposive sampling. According to Saunders, Lewis and Thornhill (2012, p.261), this technique provides the chance or probability of each case being selected from a population that is known, and usually equal for all cases. This method also links with the survey research strategy. The most appropriate purposive sampling technique to match with this study is homogenous sampling.

3.3.1 Sample of the study

The sample of this study consisted of respondents who were the Administrative and Diplomatic ("*Pegawai Tadbir Diplomatik*" – PTD) officers in public service. The Administrative and Diplomatic officers hold the role of managers in the public sector. The selected officers to join the leadership programmes were those of Grade M48 to Grade M54.

3.4 Data collection procedure

As mentioned previously, this study involved three phases of training evaluation, that is before participants enrol in the training programme (Time 1), immediately after they finished the training programme (Time 2), and four months after they enrolled in the training programme (Time 3).

In this study, two strategies for data collection were used. The first strategy was the self-administered survey method, which was employed to collect data for the first and second phases of evaluation, that is, before the training starts and immediately after the participants finished the training programme. Before conducting the survey, this researcher contacted and met the officer-in-charge at the Service Division from the Public Service Department. This section is responsible to manage, formulate, and implement effective and strategic public service policies, as well as

employee career development. A brief explanation about the survey and how the survey will be conducted was discussed during this meeting. Following this meeting, an official letter of request was sent to the Service Section to get approval for data collection.

In the next step, the researcher met the Head of Cluster for Leadership and Executive Development at the National Institute of Public Administration (INTAN). This institute (INTAN) is accountable for carrying out the training, research, and consultancy on developing knowledge, skills, and attitude of public servants. More specifically, the Cluster for Leadership and Executive Development on the other hand, is responsible to organise and administer the leadership and development programmes for public servants. During the meeting, detailed information about the training programme, for example the schedule, the number of participants for each session, and other matters were discussed. Based on this discussion, the researcher was informed that there were five cohorts involved in this leadership programme. In addition, the researcher also obtained approval from INTAN to be present during the training session to distribute the questionnaires.

After approval was obtained from the relevant parties, namely the Service Section, and the Cluster for Leadership and Executive Development, a cover letter and two versions of questionnaires were prepared, in English and Malay versions. The reason for having both languages is that, it could help the respondents to have better understanding of the items in the questionnaire. Each of the questionnaire and envelope were coded by number (1-55). The reason of coding the envelope was to enable this researcher to match the responses from the participants to each cohort.

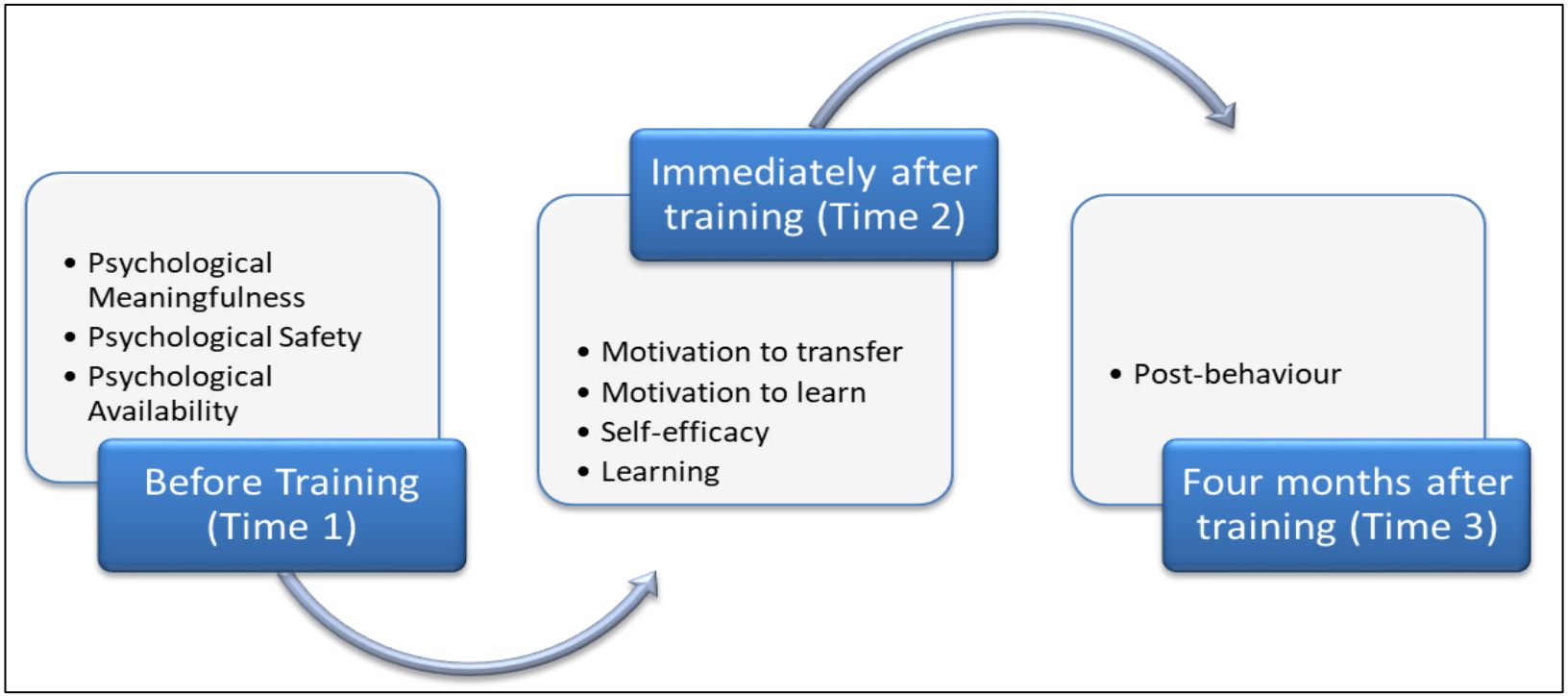
The questionnaire was distributed prior to the training, which was one day before the training started (Time 1). A brief explanation was given to the participants, particularly on the confidentiality issues of the survey. The respondents were also given a choice to answer the survey either in Malay or English languages. The allocation of fifteen minutes was given to the researcher to explain, distribute, and collect the questionnaires. For Time 2 data collection, the researcher distributed the questionnaire after the participants completed the final task of their training programme. Data collection for Time 1 and Time 2 were conducted from July 2017 to November 2017. It involved five cohorts that comprised 246 participants.

The second strategy to collect the data was through electronic mail (e-mail). This method was used to evaluate the third phase of data collection of the survey, which was four months after the participants completed their training programme (Time 3). Based on the email provided by the participants, the researcher emailed the questionnaire to the participants. Respondents were given approximately two weeks to complete the survey.

3.5 Ethical consideration

The ethical considerations in business research is vital when the research involves human participation. According to Zikmund et al. (2010), ethical issue in business research involves dilemmas and confidentiality concerns of the participants. Prior to participation, all participants were given consent form, which informed them about the voluntarily participation and confidentiality of data processing. This study does not intend to publish and share participant information with other party and their information remain anonymous in public. In addition, the participants were informed that, though they gave consents to participate in the survey, they could withdraw anytime without being penalised. In terms of data processing, the researcher assured that all data were stored with a secured password in which only researcher could access the documents.

Figure 3.1 Data collection process



3.6 Evaluation of leadership development programme

The biggest questions that arose in training and development were related to how to evaluate training activities and how to ensure it is effective. For the leadership development programme, the main concern was to know if there has been an improvement in individual or organisational performance. A well-known training evaluation framework that has been widely used is Kirkpatrick's Four-Levels of Training Evaluation Model (McMurray et al., 2012; Olsen, 1988; Scourtoudis and Dyke, 2007). Kirkpatrick (1996) defined his framework as follows:

Level 1: Reaction

This stage is concerned with how trainees react to a programme. It assesses how much trainees liked a particular programme. According to Kirkpatrick, the reaction of trainees is important to determine how people feel about a training programme. A positive reaction among participants may lead to future participation; likewise, a negative reaction will discourage participants from attending or completing the programme (Reio et al., 2017).

Level 2: Learning

This level focuses on to what extent learning has occurred during the training programme. This level measures changes in the participant's attitude, as well as the knowledge and skills learned during the training programme. An objective and quantifiable measurement is important for this stage.

Level 3: Behaviour

Behaviour level addresses the extent to which the knowledge and skills acquired from the training programme are applied on the job. Thus, the successful application of knowledge and skills at this level will result in performance improvement.

Level 4: Results

This level emphasises the results of the training programme in terms of organisational objectives. It also mirrors the positive consequences from the training programme, such as reduced staff turnover and improved efficiency. In other words, this stage will determine the return on investment to an organisation.

As previously mentioned, this framework has received overwhelming attention from researchers when evaluating training programmes. One of the factors is the simplicity and ability of the framework to provide taxonomy of evaluation criteria (Alliger and Janak, 1989). In management

development programmes, it is especially important to evaluate the outcomes. According to Collins and Holton (2004), the learning and performance outcomes of leadership development programmes can be divided into three categories, namely knowledge (subjective or objective), behaviour (subjective or objective), and performance (subjective or objective). This study evaluated Level 3 of the Kirkpatrick evaluation, which is the behaviour stage.

3.7 Variables measured

3.7.1 Independent variables

3.7.1.1 Psychological meaningfulness

The psychological meaningfulness scales was measured based on the scale developed by May et al. (2009). This variable consisted of six items, all of which were rated on five-point Likert scale, ranging from (1) Strongly Disagree to (5) Strongly Agree. A few studies had established the reliability of the construct. A recent study by Liu and Zhou (2018) confirmed a high reliability of psychological meaningfulness, with Cronbach's α value 0.89, while Ghadi, Fernando and Caputi (2013) reported high reliability coefficients of 0.90. Another study by Wildermuth, Vaughan and Christo-Baker (2013) reported an alpha coefficient of 0.92.

3.7.1.2 Psychological safety

Psychological safety was evaluated based on the work of Edmondson (1999). The original version was anchored on a seven-point Likert scale ranging from (1) Very Inaccurate to (7) Very Accurate. However, to fit with the present study, this construct was modified to use the five-point Likert scale, which was from (1) Very Inaccurate to (5) Very Accurate. This construct consisted of seven items. In order to suit with the objectives of the present study, the word "team" in the original version of the measurement was replaced with the word "organisation". Bradley et al. (2012) reported a quite high reliability coefficient of 0.83, while Carmeli, Reiter-Palmon and Ziv (2010) reported a moderate reliability coefficient of 0.74.

3.7.1.3 Psychological availability

The psychological availability measurement was adapted from May, Gilson and Harter (2004). It comprised five items with the scale ranging from (1) Strongly Disagree to (5) Strongly Agree. Rothman and Welsh (2013) reported a moderate reliability coefficient of 0.87, while Olivier and Rothman (2007) reported a reliability coefficient of 0.85.

3.7.2 Control variables

Control variables influence the relationship between independent and dependent variables and it could occur before or between variables (Neuman, 2014). Control variable as one of the confounding variable, could eliminate the predictor-criterion contamination (Berneth and Aguinis, 2016). In accordance with previous research, this study included demographic factors as control variables. These variables refer to gender, age, ethnicity, academic qualification, work- grade and job tenure.

Numerous research have been conducted to examine the demographic roles in training transfer and engagement study. Hyde (2014) for instance, suggested that a study on gender differences and similarities is imperative. One of the reason is, researchers tend to fall into the assumptions that psychological gender differences influence peoples' behaviour. Another reason is, psychological gender differences implored the issues on policies. As such, investigation that is more detailed needed to clarify the raising concerns about this variable. A study by Gegenfurtner (2020) revealed that men and women react differently in terms of motivation to transfer the training. An empirical research in engagement studies also have been conducted to examined the gender differences on their level of engagement (e.g; Badal and Harter, 2014; Dirani, 2012). In addition, Alfes et al. (2012) also documented that female employees were likely to be more engage compared to male employees. Findings from Chen, Holton and Bates (2006) found the demographic factors; age, gender, level of education, job type, year of job experience, year of job experience in current organisation were related to transfer systems.

3.7.2.1 Gender

Malaysia labour force comprised of 61.1% of male and 38.9% of female workforces (Department of Statistic, 2020). Gender was coded with (1= male and 2= female).

3.7.2.2 Age

Age of the participants were examined as control variable. Data provided by the Malaysia Departmental Statistic (DOSM) (2020) exhibited that 50% of work population were dominated by the group of people age between 22 to 55 years old. It is expected that those employees who are senior were more engaged and being able to transfer the training effectively compared to junior employees. Age was categorized into four cohorts that is (1= less than 30 years; 2= 30-39 years; 3= 40-49 years; 4= more than 50 years).

3.7.2.3 Ethnicity/ race

Due to multi-race exist in the context of the study that is Malaysia, the ethnicity was treated as control variable. There are three major races in Malaysia; Bumiputras (including Malays), Indian and Chinese. Malays are the dominant group in public sector management (Mohd Rasdi, Garavan and Ismail, 2013). Ethnicity was assigned based on four categories, (1= Malays, 2= Chinese, 3=Indians and 4= Others)

3.7.2.4 Academic qualification

Level of education of the managers and executives was examined as control variable. Three education level were labelled as (1= PhD, 2= Masters and 3= Bachelor degree.)

3.7.2.5 Work grade

In this study, there are two work level that is managers and executives. As for the managers they were categorized in Grade M52 to M54, meanwhile M48 were categorized for executives. These work grades were coded as (1= M48, 2= M52 and 3= M54)

3.7.2.6 Work tenure

Work tenure as one of the demographic factor were empirically tested in both engagement and training transfer study. Work tenure plays important role to determine the successfulness of engagement and training transfer. It was expected that the more experience employee have, they will more engaged and could easily apply what they have learn during training in contrast to the less experience employees. The work tenure was coded into five categories that is; (1= Less than 5 years, 2= 5-9 years, 3= 10-14 years, 4= 15-19 years and 5= more than 20 years).

3.7.2.7 Job title

There are two job titles investigated in this study, therefore it was coded as (1= Manager and 2= Executive).

3.7.3 Mediating variables

3.7.3.1 Motivation to transfer

The measurement of motivation to transfer was employed from the work by Gegenfurtner (2009). This variable consisted of two dimensions, namely controlled motivation to transfer and autonomous motivation to transfer. Both dimensions utilised four items. Items were measured with a 5- point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.7.3.2 Motivation to learn

The motivation to learn construct was evaluated based on the work by Noe and Schmitt (1986). The original version of this measurement consisted of 15 items. However, to match with the purpose of this present study, only 12 items were selected. This meant that there were items that were excluded, which measured the motivation to transfer and environmental favourability. The reason of this exclusion was that those two items were related to other constructs of the present study which already have their own measurement item (motivation to transfer and psychological safety). Items ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.7.3.3 Self-efficacy

The self-efficacy construct was measured based on the New General Self-efficacy Scale developed by Chen, Gully and Eden (2001). This scale comprised eight items. DeRue and Morgeson (2007) and Yeo and Neal (2006) reported high reliability coefficient of 0.92 and 0.80, respectively for the self-efficacy factor. This variable utilised a 5-point ranging scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.7.3.4 Learning

The learning construct measurement was derived from the work by Jennings (2000). A total of 12 items were utilised for the present study. Adobor and Daneshfar (2006) reported a high reliability coefficient of 0.97. The items measured based on 5-point ranging scale (1= Strongly Disagree, 5= Strongly Agree).

3.7.4 Dependant variable

3.7.4.1 Post-training behaviour

Measurement items for post-training behaviour were adapted from Diamantidis and Chatzoglou (2014). The total of measurement items for this construct was 12 items. A 5-point scale was utilise ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The summary of measurement items is displayed in Appendix B.

3.8 Pilot test

The questionnaire used two languages, that is, English and Malay languages. The Malay version used in this study was obtained through the back translation procedure. Two experts in both languages were appointed to review the measurement items. In addition, the measurement items

were sent to two practitioners, one who is a certified trainer that has been involved in various leadership programmes and the other practitioner is the Head of Cluster for Leadership and Executive Development at the National Institute of Public Administration. The reason for this procedure is to get practical feedback from the practitioners about the appropriateness of the measurement items. As a result, several improvements were made to these items. The items regarding the work experience and age were revised to match with the respondents.

3.9 Data analysis

Data analysis undertaken for this study was Partial Least Squares Structural Equation Modelling (PLS-SEM) using the SMARTPLS 3.2.8 software and Statistical Package for Social Sciences (SPSS) version 25. There are a few stages involved in the data analysis process. Firstly, the response rate checking was conducted to determine the percentage of respondents who answered the survey on each phase of data collection (Time 1, Time 2, and Time 3). Secondly, a data screening procedure was conducted. At this stage, the analysis procedure focused on checking missing data, suspicious responses, detecting outliers, and assessing normality.

Thirdly, the data were analysed to examine the profile of respondents. Descriptive statistics, such as frequency and percentage were used to explain the respondents' demographic profile. Fourthly, the Exploratory Factor Analysis (EFA) was conducted to provide a parsimonious understanding about the research. Exploratory Factor Analysis describes and summarises the data by grouping variables that are correlated (Tabachnick and Fidel, 2014). It was also used to validate a set of latent constructs of measured variables (Fabrigar et al., 1999). The EFA analysis was done following the five steps suggested by Williams, Osman and Brown(2010), which refer to; selection of observation (determining the suitability of the data), selection of extraction method, selection of factor extraction criteria, choosing the rotation method, and interpreting the result. Reio and Shuck (2015) asserted that by following the best EFA decision-making practices, it would assist HRD researchers to provide precise and accurate findings of their research to support the new theory building. One of the aims of this study was to test Kahn's theory of psychological conditions of personal engagement in the Asian context; therefore, conducting EFA is necessary.

Fifthly, PLS-SEM was used to evaluate the validity and reliability of the research instrument. PLS-SEM is a second generation Structural Equation Modelling (SEM). PLS-SEM is aimed at maximising the explained variance of the dependent latent constructs (Hair, Ringle, and Sarstedt, 2011). In addition, one of the reasons this researcher considered using PLS-SEM was that the research is concerned with testing a theoretical framework from a prediction perspective (Hair et al., 2019). One of the objectives of the current research was to examine the role of psychological conditions

of engagement as a predictor of training effectiveness. Thus, this study fulfilled this purpose by using PLS-SEM as an approach to analyse the data. There are two elements to PLS-SEM, which are the structural model and measurement model. The structural model was evaluated to assess the hypothesised relationships among constructs of the research. There are six steps involved when assessing the structural model results (Hair et al., 2017), all of which are shown in a Figure 3.2.

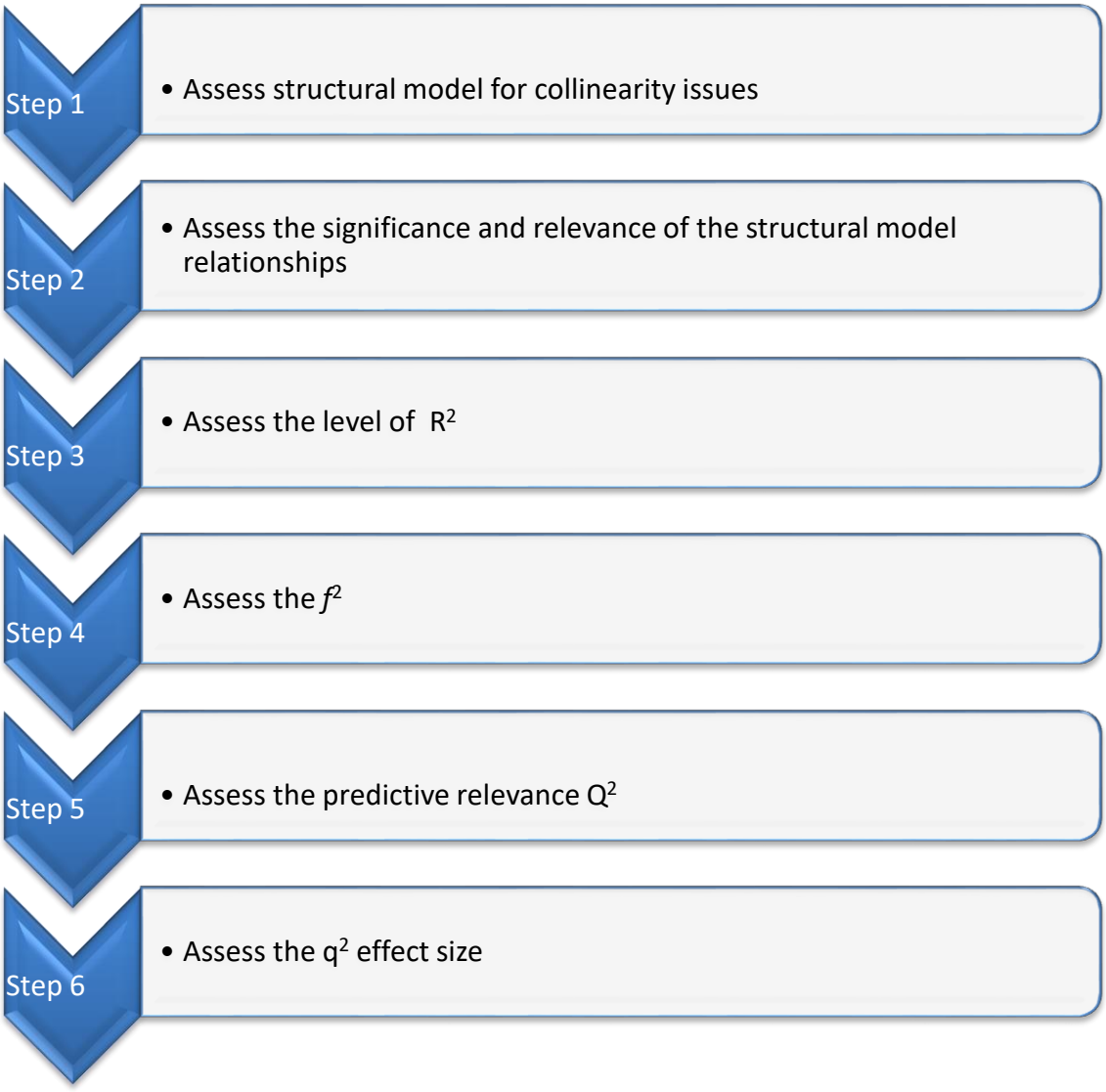


Figure 3.2 Steps to evaluate the structural model result (Hair et al., 2017, p.191)

The second element is the measurement model, which is used to evaluate reliability and validity of the instrument employed in this research. The measurement model was assessed based on:

i. internal consistency reliability,
ii. convergent validity, and
iii. discriminant validity.

3.10 Chapter summary

This study was conducted in Malaysia and the samples were the public service managers who participated in leadership assessment programmes. This was a longitudinal study where data collection was conducted at three different times of the training programme (Time 1, Time 2, and Time 3). The researcher personally distributed the questionnaire at Time 1 and Time 2. Online questionnaire was distributed to collect the data at Time 3. The variables involved in this study included the measurement items discussed in this chapter. In addition, the analytical methods to analyse the data and to test the hypotheses were explained. The following chapter discusses the findings of the current study.

Chapter 4 Data analysis and results

4.1 Introduction

This chapter presents the results of data analyses and hypothesis testing to answer the research questions and fulfil the research objectives. This chapter consists of four important parts which involve; i) data screening procedures to ensure the dataset is clean, ii) common method variance to confirm the dataset is reliable and error free, iii) measurement model assessment to test the validity and reliability of constructs under study, and iv) structural model assessment to test the hypothesised relationships between the constructs.

4.2 Response rate and non-response bias

This study managed to get the sample of respondents from five cohorts of training programmes. The number of participants for each cohort comprised 46 to 55 participants, as presented in Table 4.1. A total of 241 respondents participated in this survey. Five of the participants refused to participate because they have just completed their Master degree and have not been placed to any department yet.

Table 4.1 Number of participants for each cohort involved in this study

M-LEAP (Middle Management Leadership Assessment Programme)		
Cohort	**Date**	**Number of participant**
1	18-21 July 2017	48
3	22-25 August 2017	47
5	10-13 October 2017	46
E-LEAP (Executive Leadership Assessment Programme)		
Cohort	**Date**	**Number of participants**
2	1-3 August 2017	50
4	26- 28 September 2017	55
		Total: 246

According to Neuman (2014), total response rate is calculated by dividing the total number of responses with the total number in the sample (excluding ineligible samples). The total number of samples in this study was 241. In this study, data collection was conducted at three different phases (Time 1, Time 2, and Time 3) and each phase demonstrated different response rates. For the Time 1 (T1) and Time 2 (T2) data collection, the total number of responses was also 241, which made the response rate to be 100%.

However, there are two and 18 respondents who did not completely answer all questions during the T1 and T2 respectively. These 20 respondents were considered as ineligible samples since they had completely left items for measuring certain variables unanswered. Hence, the actual response rate for T1 was 99.2%, while for T2 it was 92.5%. Unfortunately, for T3 data collection, the total number of responses dropped even lower to 105. Hence, the response rate for T3 was only 43%. Similar to T1 and T2, there were 11 ineligible samples because the associated respondents only completely responded for only two phases (either T1 and T 2, or T1 and T3). This makes the total number of samples with complete responses from T1 to T3 of the data collection to be only 94 respondents. Hence, the final overall response rate for this study was 39%. According to Baruch and Holtom (2008), for individual unit of analysis response rate averaged around 50% is expected. Nevertheless, research methodology scholars like Sekaran and Bougie (2016) asserted that a 30% response rate is considered acceptable. Hence, the response rate of 39% acquired in this study is not an issue as long as non-response bias does note threated the generalisability of the study.

Considering that the response rates were not 100% for every phase, non-response bias or sometimes called non-response error, needed to be examined. Non-response bias is defined as bias in findings caused by respondent refusing to take part in the research or answer a question (Saunders, Lewis and Thornhill, 2016). Following the recommendation by Hulland, Baumgartner and Smith (2018), this study made comparisons between the demographics of those who responded for every phase (T1, T2, and T3) and those who just responded two out of three phases, to examine non-response bias (see Table 4.2). Chi-square test of association ($\chi 2$) in SPSS was utilised to examine the difference.

Table 4.2 Non-response bias results

Demographics	Subgroups	Responded T1, T2 & T3		χ^2
		Yes	No	
Gender	Male	53	88	.490
	Female	42	58	
Age	Less than 30	1	0	.521
	30 to 39	44	62	
	40 to 49	48	82	
	50 and above	2	2	
Race	Malay	79	123	.168
	Chinese	6	3	
	Indian	7	18	
	Others	3	2	
Education level	PhD	4	9	.380
	Master	63	84	
	Bachelor	28	53	
Position Title	Manager	49	88	.183
	Executive	46	58	
Position Grade	48	46	60	.427
	52	40	74	
	54	9	12	
Working Experience	5 to 9 years	7	9	.070
	10 to 14 years	63	78	
	15 to 19 years	22	57	
	20 years and more	3	2	

Table 4.2 revealed that there was no significant statistical difference between respondents and non-respondents across their demographics at $\chi 2 > .05$. Hence, these results suggested that the dataset is free of non-response biases.

4.3 Data screening

Data screening is the process of ensuring the dataset is clean and ready to go before further statistical analyses are conducted. Data must be screened in order to ensure the data are useable, reliable, and valid for testing causal theory (Gaskin, 2017). Hair et al. (2017) had outlined several data screening procedures that need to be conducted before proceeding with PLS-SEM analysis. These procedures include; i) missing data, ii) suspicious response patterns (e.g., straight lining answers, un-engaged responses, etc.), iii) outliers, and iv) normality of data distribution. Hence, this study conducted data screening procedures following these sequences (see Table 4.3).

Table 4.3 Data examination procedures

Dataset Issues	Procedures
Missing data	Frequency analysis and case elimination
Suspicious response patterns	Standard deviation values
Outliers	Mahalanobis distance
Normality of data distribution	Skewness and kurtosis z-scores

4.3.1 Missing data

Missing data refers to information that is missing about a participant or data record. It should be identified and rectified during data screening stage of analysis (Cooper and Schindler, 2014). As previously addressed in section 4.2, Frequency Analysis running on SPSS can reveal numerous missing responses in a systematic pattern. For instance, Sample No. 109 and No. 135 did not answer any items to measure five variables which attributed for 53.8% from the total items. A similar incident occurred to the other 145 samples with most of them contributing to around 18% of missing data (12 out of 65 items).

According to Hair et al. (2017), when missing data for an observation (sample) exceeds 15%, it should be removed from the dataset (i.e., case-wise deletion). In fact, samples with missing data for dependent variables are often deleted to avoid any artificial increase in relationships with independent variables (Hair et al., 2010). For this study, missing data contributed by these samples were observed to be more than 15% and the majority of them (136 samples) did not answer items for measuring the dependent variable. Therefore, this study decided to exclude these samples from the dataset for further analysis. Thus, the remaining usable samples were 94.

4.3.2 Suspicious response

Suspicious responses in the dataset can be traced by computing standard deviation values of each response case. Zero standard deviation interprets that there is no variation in every response (answer) given by a particular case (respondent) (Gaskin, 2016). No variation signifies that all questions are answered with the same rating score by a particular respondent (i.e., straight lining answers) (Hair et al., 2017). As the result, all cases in the dataset do not produce standard deviation values that are equal to zero. Hence, all 94 samples are retained for the next data screening stage.

4.3.3 Outliers detection and removal

Outlier refers to an extreme response to a particular or all questions in a survey questionnaire (Hair et al., 2017). Box plot diagrams are used to detect outlier cases (responses) in univariate statistics (Pallant, 2016), while Mahalanobis distances (D2) are used to detect outliers in multivariate statistics (Tabachnick and Fidell, 2014; Byrne, 2016). Since, data analyses to be conducted for answering the research questions are primarily multivariate statistics (i.e., PLS-SEM), this study calculated D2 to identify significant outliers in the dataset. SPSS software version 25 was used to calculate the D2 values.

Based on the rule of thumb, the maximum D2 should not exceed the critical chi-square ($\chi 2$) value, given the number of predictors as degree of freedom (df). Otherwise, the dataset may contain cases posing as outliers (Byrne, 2016; & Hair et al., 2010). A very conservative probability estimate for a case being an outlier is when $p \leq .001$ for the $\chi 2$ value (Tabachnick and Fidell, 2014). As shown in the result of this test for the dataset in this study, there was no sample case with $p \leq .001$ that can be classified as a significant outlier in this dataset. Therefore, all 94 samples are carried forward the next analysis stage.

4.3.4 Normality of data distribution

Normality of data distribution is the benchmark for statistical methods. Data distribution is regarded as normal when its shape for an individual metric variable is correspondent to the normal distribution (Hair et al., 2010). Following the recommendation by Hair et al. (2017), this study evaluated normality of data distribution using skewedness and kurtosis distributions. Skewedness and kurtosis distributions allow researchers to evaluate the extent of the data that may deviate from the normal distribution. In addition, SEM advocates strongly researchers to examine normality of data distribution for both univariate and multivariate statistics (Kline, 2011; Tabachnick and Fidell, 2014; & Byrne, 2016). Therefore, an online free access statistical power

analysis calculator named WebPower (Zhang and Yuan, 2018) was used to compute both univariate and Mardia's multivariate skewedness and kurtosis distributions. This online calculator can be accessed at https://webpower.psychstat.org and has been recommended and used in recent literature (Cain, Zhang and Yuan, 2017; Ramayah et al., 2017). The results of the calculations are presented in Table 4.4.

Table 4.4 Data normality results

Variables	Skewness		Kurtosis	
	Statistics	**z-score**	**Statistics**	**z-score**
Post-Training Behaviour (PTB)	-.803	-3.230	1.162	2.358
Psychological Conditions (PC)	.089	.356	-.513	-1.041
Motivation to Learn (ML)	-.194	-.781	-.658	-1.335
Motivation to Transfer (MT)	.029	.117	-.765	-1.553
Self-Efficacy (SE)	.327	1.313	-1.243	-2.524
Affective Learning Outcome (ALO)	.050	.201	-.491	-.996
Mardia's Multivariate Normality	30.542	478.485	160.765	5.092

According to Kline (2011), data distribution is within acceptable range when the z-score of univariate skewedness does not exceed ±3 and univariate kurtosis is not beyond the range of ±7. Meanwhile, Cain, Zhang and Yuan (2017), and Mardia (1970) asserted that z-score of multivariate skewedness ranging from -3 to +3 and multivariate kurtosis ranging from -20 to +20 would indicate that the data as normally distributed. Results in Table 4.4 shows that all values for univariate skewedness and kurtosis are within the acceptable range, except for Post-Training Behaviour (PTB).

Similarly, skewedness distribution for multivariate statistics is non-normal (z-score = 478.485 > 3). Both skewedness and kurtosis distributions need to be within acceptable range to declare the whole dataset as normally distributed. Hence, this data is considered as not normally distributed. Even so, PLS-SEM contains a non-parametric statistical method that does not require the data to be normally distributed (Reinartz, Haenlein and Henseler, 2009). In fact, PLS-SEM can handle extremely non-normal data (highly skewed distribution) (Hair et al., 2017). Since this study intended to use SmartPLS 3 software to test the hypothesised relationships, this researcher can still proceed to the hypotheses testing stage.

4.4 Common method variance

Survey studies are usually subjected to common method variance (Hulland, Baumgartner and Smith 2018; Podsakoff et al., 2003). Common method variance (CMV) or common method bias (CMB) is variance that is attributable to the measurement method rather than to the construct of interest (Podsakoff et al., 2003). CMV poses a problem in survey studies because it might cause measurement error that disputes the validity of the conclusions on the relationships between measures (Nunnally, 1978; Podsakoff et al., 2003; Bagozzi, Yi and Phillips, 1991).

Since this study has employed data collection at three different periods (longitudinal study), one of the procedural remedies to control CMV has been applied. Specifically, this procedural remedy is known as "temporal separation" (Podsakoff et al., 2003; Feldman and Lynch, 1988). According to Podsakoff et al. (2003), introducing temporal separation between the measures of the predictor and criterion variables enable researcher to reduce respondent's ability and/or motivation to use previous answers (short-term memory information) to answer subsequent questions.

In addition, this study performed a full collinearity test introduced by Kock and Lynn (2012) to check whether CMV is still a threat in the structural model. Full collinearity test requires observation of variance inflation factors (VIFs) that have been generated for all latent variables in the structural model (see Table 4.5). This test has also been employed in other recent studies (Krey et al., 2019; Hassan et al., 2018; Shahreki, 2019).

Table 4.5 Full collinearity test results

Latent Variables	**VIF**
Post-Training Behaviour (PTB)	1.101
Psychological Conditions (PC)	1.321
Motivation to Learn (ML)	2.367
Motivation to Transfer (MT)	2.521
Self-Efficacy (SE)	2.261
Affective Learning Outcome (ALO)	2.600

Kock (2015) claimed that CMV poses a problem when any of the latent variable possesses VIF value greater than 3.3. Table 4.5 demonstrates that the VIF value for every latent variable under study does not exceed 3.3, hence it is evident that CMV is not a threat in this study.

4.5 Demographic Information

This study utilised 94 eligible samples, representing 94 individuals who participated in the leadership assessment programme for data analysis. The demographic section in the survey form has requested the respondents to provide information on their; i) gender, ii) age, iii) race, iv) education level, v) position title, vi) position grade, and vii) years of work experience. All these data are summarised in Table 4.6.

Table 4.6 Background of the respondents

Information	**Frequency**	**Percentage**	**Cumulative Percentage**
Gender			
Male	53	56.4	56.4
Female	41	43.6	100
Total	94	100	
Age (years)			
Less than 30	1	1.1	1.1
30 to 39	43	45.7	46.8
40 to 49	48	51.1	97.9
50 and above	2	2.1	100
Total	94	100	
Race			
Malay	78	83.0	83.0
Chinese	6	6.4	89.4
Indian	7	7.4	96.8
Others	3	3.2	100
Total	94	100	
Education Level			
PhD	4	4.3	4.3
Master	62	66.0	70.2
Bachelor	28	29.8	100
Total	94	100	

Table 4.6 (Continued)

Information	Frequency	Percentage	Cumulative Percentage
Position Title			
Manager	49	52.1	52.1
Executive	45	47.9	100
Total	94	100	
Position Grade			
48	45	47.9	47.9
52	40	42.6	90.4
54	9	9.6	100
Total	94	100	
Working experience (years)			
5 to 9	7	7.4	7.4
10 to 14	62	66.0	73.4
15 to 19	22	23.4	96.8
20 and more	3	3.2	100
Total	94	100	

Table 4.6 displays that the majority of the respondents were male (53 individuals, 56.4%) compared to females (41 individuals, 43.6%). Furthermore, the majority of them were aged from 40 to 49 years old (48 individuals, 51.1%), followed by 30 to 39 years (43 individuals, 45.7%). Meanwhile, 50 years and above (2 individuals, 2.1%) as well as less than 30 years old (1 individual, 1%) are the minority in this study. Next, with respect to race, the Malays were the majority (78 individuals, 83.0%), followed by Indian (7 individuals, 7.4%), Chinese (6 individuals, 6.4%), and other races were the least number of respondents (3 individuals, 3.2%) in this study. With regard to education level, the majority of respondents were master degree holders (62 individuals, 66.0%), followed by bachelor degree graduates (28 individuals, 29.8%), and those who had been awarded a PhD (4 individuals, 4.3%). Meanwhile, there were only two categories of Position Title, namely manager and executive with the number of managers (49 individuals, 52.1%) being slightly higher than the executives (45 individuals, 47.9%). Furthermore, most of them belonged

to grade 48 (45 individuals, 47.9%), followed by grade 52 (40 individuals, 42.6%). Meanwhile, respondents with grade 54 were the least (9 individuals, 9.6%) represented in this study.

Lastly, most respondents had been in-service around 10 to 14 years (62 individuals, 66%), while respondents with 20 years and above work experience were the minority (3 individuals, 3.2%). There were also plenty of respondents who possessed 15 to 19 years of work experience (22 individuals, 23.4%), which was more than those who just worked for 5 to 9 years (7 individuals, 7.4%). Thus, this data concluded the respondents' demographic information.

4.6 Descriptive statistics

Descriptive statistics refers to statistics such as frequencies, means, and standard deviations, which provide descriptive information about a set of data (Sekaran and Bougie, 2016). It is the generic term for statistics that can be used to describe variables (Saunders , Lewis and Thornhill, 2016). This study observed mean scores and standard deviation values for every continuous variable to identify the level of respondents' perception (i.e., agreement) on each variable (see Table 4.7).

Table 4.7 Descriptive statistics of each variable

Variables	**Mean**	**Std. Dev**
Motivation to Learn (ML)	4.359	.451
Affective Learning Outcome (ALO)	4.329	.450
Self-Efficacy (SE)	4.294	.446
Motivation to Transfer (MT)	4.094	.471
Psychological Conditions (PC)	3.970	.309
Post-Training Behaviour (PTB)	3.693	.810

Note. Sort descending based on mean scores

Table 4.7 displays the mean and standard deviation for six continuous variables observed in this study. The highest mean score was depicted by Motivation to Learn (ML) (M = 4.359). In contrast, Post-Training Behaviour (PTB) portrayed the lowest mean score among other variables (M = 3.693). Although the lowest, PTB can still be considered as moderate because the mean score of 3.693 is within the neutral (mid-point range) level of agreement. Similarly, Psychological Conditions (PC) was also rated as moderate for having the mean score of 3.970. Meanwhile, the

remaining variables, which include Affective Learning Outcome (ALO), Self-Efficacy (SE), and Motivation to Transfer (MT) all demonstrated high levels of mean score. This is because, mean score of 4 and above (agree or strongly agree responses) indicates high level of agreement based on the questionnaires' rating scales.

4.7 Correlation between demographics and continuous variables

Further, this study examines the correlations between demographic of respondents and all continuous constructs under study. For demographic information with two categories (dichotomous scale) like gender and position title, point bi-serial correlation coefficients are observed. Meanwhile, for demographic information with three or more categories (i.e. age, race, education levels, position grade, and tenure), eta coefficient test is examined. The results from both correlation tests are summarised in Table 4.8.

Table 4.8 Correlation matrix between respondents' demographic and continuous variables

Constructs	**PTB**	**PCA**	**PCM**	**PCS**	**ML**	**MTA**	**MTC**	**SE**	**ALO**
Gender	.004	-.173	-.141	-.133	-.053	-.168	-.080	-.021	.029
	(.968)	(.096)	(.177)	(.968)	(.613)	(.105)	(.443)	(.837)	(.780)
Age	.112	.198	.139	.190	.216	.186	.127	.197	.188
	(.427)	(.374)	(.897)	(.353)	(.348)	(.391)	(.731)	(.748)	(.589)
Race	.261	.179	.155	.159	.186	.140	.156	.228	.219
	(.207)	(.442)	(.195)	(.411)	(.622)	(.928)	(.380)	(.469)	(.647)
Education	.126	.206	.261	.274	.103	.037	.179	.059	.109
Levels	(.615)	(.084)	(.734)	(.036)*	(.789)	(.829)	(.414)	(.597)	(.905)
Position Title	-.016	<.001	-.076	-.091	-.185	-.160	-.216	-.073	-.145
	(.882)	(.996)	(.465)	(.382)	(.075)	(.124)	(.036)*	(.487)	(.164)
Position Grade	.047	.218	.183	.177	.193	.139	.205	.177	.151
	(.701)	(.369)	(.178)	(.142)	(.079)	(.181)	(.051)	(.354)	(.169)
Tenure	.236	.193	.147	.061	.112	.139	.153	.067	.207
	(.161)	(.292)	(.560)	(.997)	(.713)	(.404)	(.303)	(.753)	(.299)

Note. Values outside brackets = correlation coefficients. Values inside brackets = *p*-values

Table 4.8 depicted that majority of correlation coefficients produced are not statistically significant, except for correlations between Education Levels and Psychological Conditions: Safety

(PCS), as well as Position Title and Motivation to Transfer: Controlled (MTC). Both correlation coefficients are significant at $p < 0.05$. These results are suggesting that there is an association between Education Levels and Psychological Conditions: Safety as well as association between Position Title and Motivation to Transfer: Controlled.

4.8 Exploratory factor analysis (EFA)

Exploratory factor analysis (EFA) is a complex multivariate statistical procedure that involves many linear and sequential steps (Thompson, 2004; Pallant, 2010). Hence, EFA should be properly designed to ensure it produces meaningful results (Hair et al., 2010). Williams, Osman and Brown (2010) outlined a Five-Step EFA Protocol to facilitate novice analysts in designing and conducting EFA as well as properly interpreting its results. The Five-Step in EFA Protocol involves ; i) determining the suitability of the data, ii) deciding the appropriate extraction method, iii) selecting practical factor extraction criteria, iv) choosing the proper rotational method, and v) results' interpretations. Thus, this study presents the EFA results following this protocol.

Prior to determining the suitability of the data through any statistical coefficient, adequate sample size must be acquired (Hair et al., 2010; Williams, Osman and Brown, 2010). According to Sapnas and Zeller (2002), EFA requires a minimum sample of 50. This study has acquired more than the minimum required samples (N = 94 > 50). Hence, the acquired sample size was deemed adequate and appropriate for conducting EFA. The suitability of the data for EFA was then confirmed by the Kaiser-Meyer-Olkin (KMO) (Kaiser, 1970) value of .722, and a highly significant result for Bartlett's Test of Sphericity (Bartlett, 1950) at $p < .001$ (see Appendix F).

The KMO value ranged from 0 to 1, with values between .70 and .80, which were suitable and considered good for factor analysis (Hutcheson and Sofroniou, 1999). Meanwhile, the Bartlett's Test of Sphericity should be significant at $p < .05$ for factor analysis to be suitable (Tabachnick and Fidell, 2014). Thus, these results indicated the respondent data (N = 94) acquired for this study is sufficient and suitable for EFA.

Next, the purpose of researcher's study for conducting EFA would determine which extraction method is appropriate. There are two types of commonly use extraction method in EFA namely; i) principal component model, and ii) common factor model (Hair et al., 2010; Habing, 2003). Principal component model is the most appropriate when data (item) reduction is the primary objective, while common factor model is best suited for identifying latent constructs and/or dimensions that reflect what the data (items) share in common (Hair et al., 2010). The purpose of conducting EFA in this study is according to the latter. Therefore, common factor model using

Principal Axis Factoring (PAF) extraction method in SPSS was applied (Habing, 2003; Kootstra, 2004).

Furthermore, for employing the third protocol, there are several options or criteria to determine how many factors should be extracted. These options include; i) Kaiser's criteria (Kaiser, 1960), ii) Scree Plots (Cattell, 1966), iii) cumulative percentage of variance extracted, and iv) parallel analysis (Horn, 1965). Given the options and complex nature of EFA, much of the literature suggested factor extraction should be determined using more than one criteria (Hair et al., 2010; Osborne, Costello and Kellow, 2008; Thompson and Daniel, 1996). Therefore, this study applied the Kaiser's criteria (eigenvalue of more than 1 rule) and the cumulative percentage of variance extracted as factor extraction criteria. These two criteria are regarded as more practical than the other two (i.e. Scree Plots and Parallel Analysis) due to the following rationale.

Interpreting Scree Plots is subjective, requiring researcher judgement. Thus, disagreement over which factors should be extracted is often open for debate (Williams, Osman and Brown, 2010). Meanwhile, Parallel Analysis is an unpopular factor extraction option (Henson and Roberts, 2006) and is rarely reported in the literature. Its limited use is possibly because it is not available in conventional statistical software such as SPSS or SAS (Williams, Osman and Brown, 2010). This study employed SPSS version 25 to perform the EFA.

As a result, the dataset has produced 14 factors based on Kaiser's criteria with eigenvalues ranging from 1.080 to 18.122 (see Appendix G). However, considering the second criteria (cumulative percentage of variance extracted), factor 10 to factor 14 were omitted from the finding. In psychology and humanity studies, factor extraction can be stopped when the variance explained has achieved 60% (Hair et al., 2010; Williams, Osman and Brown, 2010). Up until factor 9, the cumulative percentage of variance extracted was 61.628%. In fact, there were less than three items that were highly loaded (factor loadings > .40) in factor 10 to factor 14 (Appendix G).

Conventionally, at least three items must load onto a factor so that it can provide a meaningful interpretation (Henson and Roberts, 2006; Hatcher and Stepanski, 1994; Isaac and Michael, 1995; Hair et al., 2010). Thus, this study decided to disregard the remaining factors although their eigenvalues had exceeded 1. The omitted factors contain items, as in the following; Factor 10: AUTO04 and CTRL02, Factor 11: SAFE04, Factor 12: SAFE01, Factor 13: SEFF13, and Factor 14: SAFE02. Hence, omission of these factors also meant the elimination of these items. Nevertheless, most of these items were also loaded onto other factors, except, SAFE02 and SAFE04. Thus, only two items (i.e., SAFE02 and SAFE04) should be deleted at this stage.

Proceeding to the fourth protocol, appropriate rotation method was selected and employed. Proper selection of rotational method enables analysts to maximise items with high loadings and minimise items with low loadings, providing a more interpretable and simplified solution in factor extraction step (Williams, Osman and Brown, 2010). There are two general rotational methods, namely; i) orthogonal and ii) oblique. Furthermore, there are several options under orthogonal and oblique rotation methods. Two of most popular options for orthogonal rotation are varimax and quartimax, while for oblique rotation, they are direct oblimin and promax (Habing, 2003).

In practice, both orthogonal and oblique rotation often result in very similar solutions (Tabachnick and Fidell, 2014). Therefore, much of the literature recommended analysts to conduct both orthogonal and oblique rotations, and then report the result with a more practical solution that is easier to interpret (Pallant, 2010; Kootstra, 2004; & Field, 2009). Therefore, this study employed both methods (i.e., orthogonal varimax and oblique direct oblimin), but decided to report the varimax result. Varimax rotation has produced easier and clearer result to interpret, while direct oblimin demonstrated the “rotation failed to converge in 25 iterations” notification as the result.

Lastly, the fifth protocol involved the interpretation of which variables (items) are attributable to a factor and giving that factor a label (name) that reflects the theoretical and conceptual intent (Williams, Osman and Brown, 2010). In order to determine the interpretation of the factor in a significant manner, high factor loadings were identified (Kootstra, 2004). It is common to indicate which of the factors loadings are actually significant by supressing the non-significant ones (Habing, 2003). Therefore, this study supressed factor loadings that were below .40, following Stevens (2009) (see Table 4.9). Stevens (2009) noted that interpreting factor loadings with an absolute value greater than .40 means the variable (item) explains around 16% of the variance in the factor. Overall, only item SAFE05 that has factor loading below this threshold. Thus, SAFE05 was suppressed from appearing in the output and should be deleted from the dataset before proceeding further.

Table 4.9 EFA result

Latent Variables/ Items	**Factors**								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Psychological Condition: Meaningfulness (PCM)									
MEAN01			0.762						
MEAN02			0.796						
MEAN03			0.767						
MEAN04			0.787						
MEAN05			0.828						
MEAN06			0.720						
Psychological Condition: Availability (PCA)									
ABLE01						0.816			
ABLE02						0.808			

Table 4.9 (Continued)

Latent Variables/ Items	Factors								
	1	2	3	4	5	6	7	8	9
ABLE03						0.716			
ABLE04						0.561			
ABLE05						0.569			
Psychological Condition: Safety (PCS)									
SAFE01									-0.410
SAFE02									
SAFE03									-0.575
SAFE04									
SAFE05									
SAFE06									0.421
SAFE07			0.486						

Table 4.9 (Continued)

Latent Variables/ Items	Factors								
	1	2	3	4	5	6	7	8	9
Motivation to Transfer: Autonomous (MTA)									
AUTO01		0.493							
AUTO02		0.539							
AUTO03		0.444		0.411					
AUTO04		0.615							
Motivation to Transfer: Controlled (MTC)									
CTRL01								0.472	
CTRL02								0.456	
CTRL03								0.773	
CTRL04								0.657	

Table 4.9 (Continued)

Latent Variables/ Items	**Factors**								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Motivation to Learn (ML)									
MOTL01		0.670							
MOTL02		0.619							
MOTL03		0.523							
MOTL04		0.527							
MOTL05		0.643							
MOTL06		0.747							
MOTL07		0.657							

Table 4.9 (Continued)

Latent Variables/ Items	**Factors**								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Self-Efficacy (SE)									
SEFF01		0.515							
SEFF02		0.497			0.420				
SEFF03		0.556			0.429				
SEFF04					0.821				
SEFF05					0.784				
SEFF06					0.668				
SEFF07					0.535				
SEFF08					0.616				

Table 4.9 (Continued)

Latent Variables/ Items	**Factors**								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Affective Learning Outcome (ALO)									
LERN01		0.402					0.697		
LERN02							0.726		
LERN03		0.524					0.624		
LERN04				0.466			0.610		
LERN05				0.690					
LERN06				0.721					
LERN07				0.496					
LERN08				0.529			0.416		
LERN09				0.408			0.403		
LERN10				0.416			0.412		

Table 4.9 (Continued)

Latent Variables/ Items	Factors								
	1	2	3	4	5	6	7	8	9
LERN11				0.848					
LERN12				0.840					
Post-Training Behaviour (PTB)									
POST01	0.789								
POST02	0.818								
POST03	0.793								
POST04	0.846								
POST05	0.695								
POST06	0.800								
POST07	0.910								
POST08	0.873								
POST09	0.885								

Table 4.9 (Continued)

Latent Variables/ Items	**Factors**								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
POST10	0.909								
POST11	0.839								
POST12	0.842								
Eigenvalue	8.965	6.655	4.993	4.957	3.916	3.589	3.461	2.287	1.234
Percent of Variance	13.793	10.239	7.682	7.626	6.025	5.521	5.325	3.519	3.519
Cumulative Percent	13.793	24.031	31.713	39.340	46.365	50.886	56.211	59.730	61.628

Table 4.9 presents the results of EFA to assess the validity of survey instrument used in this study. Hair et al. (2010) remarked that the result of EFA might be different when there are changes in the sample, process, and/or time of data collection between different studies. Since items were adapted from related studies that were not completely similar to this study, hence the underlying factors of these variables would slightly deviate from the source studies.

Factors 1, 6, and 8 were perfectly loaded with items that are intended to measure a single latent variable. Factor 1 consisted of all items that reflect Post-Training Behaviour (PTB). Factor 6 contained all items that intended to measure Psychological Condition: Availability (PCA), while Factor 8 comprised items that reflect Motivation to Transfer: Controlled (MTC). Furthermore, Factor 5 dwelled most of Self-Efficacy (SE) items, while three items that were intended to measure Psychological Condition: Safety (PCS) were loaded under Factor 9.

On the other hand, Factors 2, 3, and 4 are loaded with items that were intended to measure several theoretically distinct constructs (more than one latent variable). Both Factors 3 and 4 comprised items that reflect two latent variables. Factor 3 consisted of all items for measuring Psychological Condition: Meaningfulness (PCM) and an item intended for Psychological Condition: Safety (PCS). Meanwhile, the majority of items that loaded under Factor 4 belonged to Affective Learning Outcome (ALO) with an item that belonged to Motivation to Transfer: Autonomous (MTA).

Meanwhile, Factor 2 contained all items of MTA and Motivation to Learn (MTL), with the addition of few items from SE and ALO. Altogether, there were four distinct concept overlap in Factor 2. Besides Factors 2 and 4, most items for ALO were also loaded under Factor 7 (crossed-loadings).

Hence, this study decided to retain ALO items under Factor 4 since the percent variance explained of Factor 4 is much higher than Factor 7. Furthermore, more items were loaded under Factor 4 (9 items) as compared to Factor 7 (7 items). This decision was made based on common practice mentioned in EFA literature (Henson and Roberts, 2006; Hatcher and Stepanski, 1994; Isaac and Michael, 1995; Hair et al., 2010) which resulted in the elimination of LERN01, LERN02, and LERN03 from the model.

Overall, most of the items can be retained, except for SAFE02, SAFE04, and SAFE05. SAFE02 and SAFE04 should be deleted because they load independently in Factor 14 and 11, respectively, and establish a single item construct. Whereas, at least three items were required to load onto a factor so it can provide a meaningful interpretation and sufficiently represent a variable. Meanwhile, SAFE05 was considered for deletion as it has factor loading lower than the determined threshold (factor loading < .40). Besides, from the seven items that were designed to

measure Psychological Condition: Safety (PCS), only three items were properly loaded together to establish a factor. This result demonstrated that measurement theory for PCS is quite problematic. Therefore, this study employed Confirmatory Factor Analysis (CFA) through PLS-SEM measurement model assessment to confirm these EFA results and further assess the validity of every construct.

4.9 Measurement model

The measurement model is an element of a path model that contains the indicators and their relationships with the constructs. It is also called the outer model in PLS-SEM (Hair et al., 2017). In this study, measurement model analysis was performed using PLS Algorithm procedure in SmartPLS 3.2.8 software (Ringle, Wende and Becker, 2015) to assess construct reliability and validity.

Since there were two multi-dimensional latent variables in the research model, this study employed the second order measurement model analysis using a two-stage approach. The two-stage approach is a technique to analyse the validity of higher order construct (HOC) in SmartPLS (Hair et al., 2017; Becker, Klein and Wetzels, 2012). Although this technique is introduced for reflective-formative or formative-formative measurement models, it is also applicable for reflective-reflective measurement model, as employed in this study (Hair et al., 2018).

The two-stage approach was applied to this measurement model to mitigate the limitation of the conventional approach of analysing HOC, which is called “repeated indicator”. Through repeated indicator approach, the correct average variance extracted (AVE) and composite reliability (ρC) will not appear in the model output, hence researchers need to do further calculation manually (Sarstedt et al., 2019) or use a self-developed MS Excel template. The two-stage approach involves:

i. Stage One: Apply repeated indicator approach (Becker, Klein and Wetzels, 2012) to obtain latent variable scores for the lower order constructs (LOC).
ii. Stage Two: Use LOC latent variable scores as the indicator to establish HOC (Ringle, Sarstedt and Straub, 2012).

Figure 4.1 illustrates the Stage One of the measurement model assessment, while Figure 4.2 illustrates the Stage Two assessment.

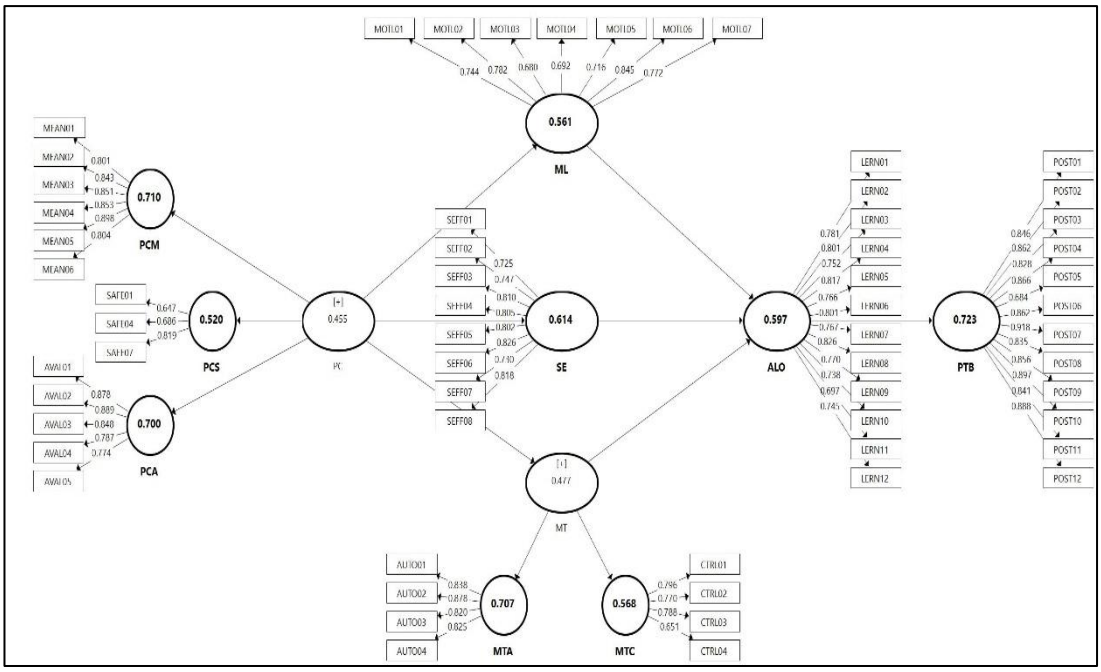


Figure 4.1 Measurement model (stage one)

Note. For better visual, see Appendix D

Figure 4.1 illustrates the first stage of measurement model assessment, whereby there were 11 latent variables (i.e., five LOCs, namely PCM, PCS, PCA, MTA, and MTC, with six HOCs, which were PC, ML, MT, SE, ALO, and PTB). LOCs represent the dimensions of HOCs.

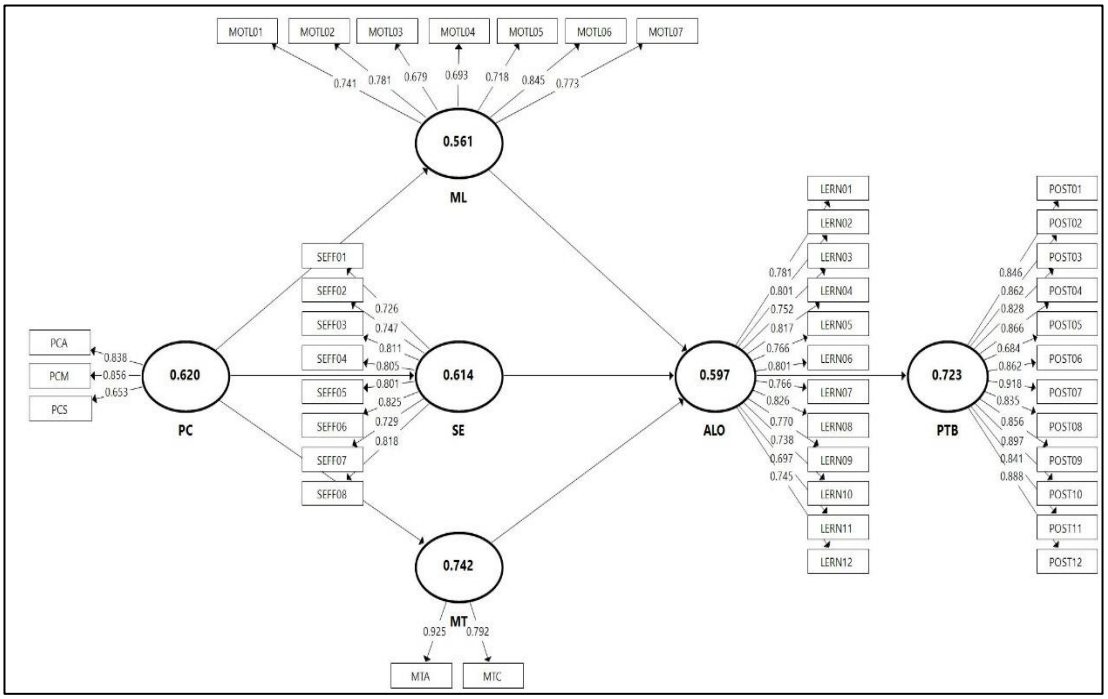


Figure 4.2 Measurement model (stage two)

Note. For better visual, see Appendix E

Meanwhile, Figure 4.2 illustrates the second stage of measurement model assessment, whereby there were only six latent variables (i.e., PC, ML, MT, SE, ALO, and PTB). In this stage, the dimensions of PC; PCM, PCS, PCA, and MT; MTA, MTC have been transformed into indicators (items) using the latent variable scores of each respective dimension.

In both figures, values noted on the arrows represent the outer loading (factor loading) while values remarked inside the constructs indicate the AVE. Construct reliability and validity assessments provided by measurement model analysis in PLS-SEM include; i) internal consistency reliability, ii) convergent validity, and iii) discriminant validity. Internal consistency reliability is represented by composite reliability (ρC) coefficients, while convergent validity is determined through AVE values (see Table 4.10 and Table 4.11).

Table 4.10 Internal consistency reliability and convergent validity results (unidimensional construct)

Constructs	**Items**	**Loadings**	**ρ_C**	**AVE**
Post-Training Behaviour (PTB)	POST01	.844	.969	.724
	POST02	.859		
	POST03	.827		
	POST04	.867		
	POST05	.691		
	POST06	.861		
	POST07	.918		
	POST08	.837		
	POST09	.858		
	POST10	.898		
	POST11	.842		
	POST12	.887		

Table 4.10 (Continued)

Constructs	Items	Loadings	ρ_C	AVE
Self-Efficacy (SE)	SEFF01	.725	.927	.614
	SEFF02	.742		
	SEFF03	.806		
	SEFF04	.807		
	SEFF05	.802		
	SEFF06	.826		
	SEFF07	.733		
	SEFF08	.821		
Motivation to Learn (ML)	MOTL01	.742	.899	.561
	MOTL02	.784		
	MOTL03	.678		
	MOTL04	.695		
	MOTL05	.713		
	MOTL06	.843		
	MOTL07	.773		
Affective Learning Outcome (ALO)	LERN04	.781	.938	.628
	LERN05	.805		
	LERN06	.848		
	LERN07	.774		
	LERN08	.840		
	LERN09	.765		
	LERN10	.736		
	LERN11	.761		
	LERN12	.814		

Table 4.10 exhibits results of internal consistency reliability and convergent validity for unidimensional constructs. This measurement model carried forward items retained from previously performed EFA. Altogether, 60 items are included in this measurement model assessment. As a result, all unidimensional constructs have fulfilled convergent validity requirement with AVE values ranging from 0.561 to 0.724. The minimum requirement of convergent validity for a construct is to have at least AVE of 0.5 (Fornell and Larcker, 1981; Gefen, Straub and Boudreau, 2000; Hair et al., 2014). Moreover, all unidimensional constructs demonstrated at least satisfactory level of ρ_C, thus indicating internal consistency reliability has also been fulfilled. The satisfactory level for ρ_C coefficient ranges from 0.7 to 0.9 (Gefen, Straub and Boudreau, 2000).

Table 4.11 Internal consistency reliability and convergent validity results (multi-dimensional constructs)

Constructs		**Items**	**Loadings**	**ρ_C**	**AVE**
LOC	**HOC**				
Psychological Condition: Meaningfulness (PCM)		MEAN01	.802	.936	.710
		MEAN02	.843		
		MEAN03	.850		
		MEAN04	.853		
		MEAN05	.898		
		MEAN06	.804		
Psychological Condition: Availability (PCA)		AVAL01	.878	.921	.700
		AVAL02	.889		
		AVAL03	.848		
		AVAL04	.786		
		AVAL05	.774		
Psychological Condition: Safety (PCS)		SAFE01	.642	.762	.519
		SAFE03	.684		
		SAFE07	.823		
	Psychological Conditions (PC)	PCM	.837	.829	.621
		PCA	.856		
		PCS	.654		

Table 4.11 (Continued)

Constructs		Items	Loadings	ρ_C	AVE
LOC	**HOC**				
Motivation to Transfer: Autonomous (MTA)		AUTO01	.838	.906	.707
		AUTO02	.878		
		AUTO03	.820		
		AUTO04	.825		
Motivation to Transfer: Controlled (MTC)		CTRL01	.795	.840	.568
		CTRL02	.769		
		CTRL03	.789		
		CTRL04	.653		
	Motivation to Transfer (MT)	MTA	.916	.853	.744
		MTC	.806		

Table 4.11 exhibits results of internal consistency reliability and convergent validity for multidimensional constructs. Two items from the construct, namely Psychological Conditions: Safety (PSC) (i.e., SAFE05 and SAFE06) needed to be deleted to achieve the convergent validity requirement. Besides, these deleted items demonstrated outer loadings of below .40 (Hulland, 1999). Moreover, Hair et al. (2017) stated that researchers are allowed to delete up to 20% of items from total items in the model in order to fulfil construct validity without compromising its content validity. Hence, it is acceptable to drop two out of 60 items (i.e. ≈ 3%) from this measurement model. After deletion, all multidimensional constructs demonstrated AVE values ranging from 0.519 to 0.744. Similarly, all multidimensional constructs exhibited at least satisfactory level of composite reliability with ρ_C ranging from 0.762 to 0.936.

Lastly, the measurement model in PLS-SEM offers three approaches to assess discriminant validity, namely cross-loadings (see Table 4.12), Fornell-Larcker criterion (see Table 4.13), and Hetereotrait-Monotrait (HTMT) ratio (see Table 4.14). According to Sarstedt et al. (2019), assessing the HOCs discriminant validity requires:

i. LOCs demonstrate discriminant validity among each other and to all other constructs in the model, except for their own HOC, and

ii. HOCs exhibit discriminant validity to all other constructs in the model. Following Sarstedt et al. (2019), this study reported discriminant validity assessment as mentioned.

Cross-loadings refer to an item's correlation with other constructs in the model. In order to establish discriminant validity, the item's outer loading on the associated construct must be greater than any of its cross-loadings on other constructs (Hair et al., 2014). As can be seen in Table 4.12, the outer loading values were always exceeding the cross-loading values, thus indicating that discriminant validity between all constructs in the measurement model had been fulfilled.

Next, the second approach in verifying discriminant validity is the Fornell-Larcker criterion (Fornell and Larcker, 1981). Fornell-Larcker criterion is a measure of discriminant validity that compares the square root of each construct's AVE with its correlation with all other constructs in the model. In particular, the square root of each construct's AVE must be greater than its highest correlation with any other construct. This means that a construct must share more variance with its associated indicator items than with any other construct (Fornell and Larcker, 1981; Hair et al., 2014).

Table 4.12 Cross-loadings result

	PTB	PC	PCM	PCA	PCS	ML	MT	MTA	MTC	SE	ALO
POST01	0.846	0.130	0.070	0.099	0.161	0.270	0.228	0.245	0.127	0.222	0.238
POST02	0.862	0.164	0.106	0.144	0.143	0.244	0.238	0.262	0.121	0.208	0.258
POST03	0.828	0.280	0.218	0.216	0.247	0.237	0.143	0.148	0.087	0.203	0.228
POST04	0.866	0.030	0.001	0.002	0.095	0.253	0.134	0.112	0.125	0.160	0.184
POST05	0.684	0.064	0.066	0.032	0.062	0.134	0.152	0.134	0.130	0.138	0.091
POST06	0.862	0.097	0.055	0.061	0.139	0.276	0.246	0.248	0.161	0.191	0.303
POST07	0.918	0.099	0.104	0.040	0.113	0.255	0.241	0.185	0.251	0.228	0.235
POST08	0.835	0.120	0.120	0.077	0.096	0.165	0.136	0.096	0.155	0.112	0.098
POST09	0.856	0.006	0.025	-0.070	0.109	0.170	0.095	0.061	0.119	0.085	0.100
POST10	0.897	0.101	0.099	0.033	0.141	0.246	0.226	0.195	0.201	0.184	0.222
POST11	0.841	0.124	0.133	0.051	0.134	0.173	0.269	0.185	0.315	0.163	0.171
POST12	0.888	0.156	0.138	0.053	0.234	0.314	0.287	0.236	0.274	0.255	0.244

Table 4.12 (Continued)

	PTB	PC	PCM	PCA	PCS	ML	MT	MTA	MTC	SE	ALO
PCM	0.115	0.856	-	0.593	0.631	0.382	0.301	0.257	0.272	0.300	0.318
PCA	0.084	0.838	0.593	-	0.387	0.331	0.340	0.340	0.231	0.518	0.410
PCS	0.174	0.653	0.631	0.387	-	0.273	0.189	0.168	0.162	0.221	0.210
MEAN01	0.107	-	0.801	0.388	0.315	0.261	0.242	0.210	0.213	0.235	0.188
MEAN02	0.057	-	0.843	0.418	0.443	0.208	0.203	0.124	0.264	0.232	0.151
MEAN03	0.095	-	0.851	0.482	0.483	0.355	0.255	0.180	0.293	0.273	0.274
MEAN04	0.110	-	0.853	0.497	0.413	0.331	0.258	0.238	0.207	0.278	0.290
MEAN05	0.190	-	0.898	0.492	0.454	0.366	0.249	0.250	0.166	0.286	0.363
MEAN06	0.009	-	0.804	0.436	0.359	0.408	0.317	0.302	0.238	0.210	0.331
AVAL01	0.062	-	0.468	0.878	0.159	0.278	0.299	0.269	0.249	0.438	0.325
AVAL02	0.087	-	0.405	0.889	0.304	0.366	0.357	0.388	0.190	0.529	0.385
AVAL03	0.101	-	0.514	0.848	0.254	0.277	0.326	0.349	0.181	0.389	0.400
AVAL04	0.049	-	0.461	0.787	0.236	0.240	0.201	0.222	0.101	0.350	0.360

Table 4.12 (Continued)

	PTB	PC	PCM	PCA	PCS	ML	MT	MTA	MTC	SE	ALO
AVAL05	0.046	-	0.398	0.774	0.201	0.217	0.230	0.177	0.241	0.465	0.233
SAFE01	0.176	-	0.213	0.172	0.647	0.116	0.043	0.052	0.014	0.067	0.095
SAFE04	0.069	-	0.264	0.196	0.686	0.199	0.129	0.155	0.044	0.196	0.205
SAFE07	0.140	-	0.511	0.227	0.819	0.248	0.201	0.142	0.232	0.194	0.154
MOTL01	0.176	0.292	0.370	0.195	0.105	0.741	0.543	0.543	0.365	0.407	0.414
MOTL02	0.237	0.372	0.350	0.304	0.210	0.781	0.561	0.580	0.346	0.503	0.549
MOTL03	0.212	0.188	0.171	0.180	0.068	0.679	0.519	0.464	0.437	0.475	0.353
MOTL04	0.150	0.444	0.382	0.321	0.377	0.693	0.389	0.426	0.203	0.515	0.371
MOTL05	0.128	0.247	0.201	0.163	0.253	0.718	0.418	0.506	0.139	0.444	0.466
MOTL06	0.242	0.282	0.260	0.201	0.218	0.845	0.583	0.657	0.274	0.605	0.586
MOTL07	0.319	0.335	0.250	0.340	0.166	0.773	0.524	0.571	0.275	0.527	0.539
MTA	0.225	0.338	0.344	0.265	0.176	0.720	0.925	-	0.576	0.591	0.762
MTC	0.204	0.285	0.233	0.271	0.167	0.380	0.792	0.576	-	0.434	0.436

Table 4.2 (Continued)

	PTB	PC	PCM	PCA	PCS	ML	MT	MTA	MTC	SE	ALO
AUTO01	0.159	0.309	0.237	0.323	0.128	0.598	-	0.838	0.493	0.526	0.576
AUTO02	0.157	0.240	0.200	0.223	0.126	0.592	-	0.878	0.375	0.457	0.658
AUTO03	0.183	0.312	0.227	0.320	0.159	0.573	-	0.820	0.381	0.487	0.695
AUTO04	0.260	0.275	0.202	0.277	0.148	0.659	-	0.825	0.434	0.516	0.635
CTRL01	0.187	0.207	0.186	0.171	0.125	0.289	-	0.471	0.796	0.405	0.420
CTRL02	0.049	0.238	0.226	0.213	0.097	0.312	-	0.473	0.770	0.394	0.373
CTRL03	0.224	0.212	0.221	0.117	0.187	0.350	-	0.351	0.788	0.281	0.297
CTRL04	0.182	0.212	0.192	0.207	0.073	0.161	-	0.112	0.651	0.168	0.160
SEFF01	0.257	0.388	0.192	0.490	0.163	0.644	0.594	0.566	0.444	0.726	0.606
SEFF02	0.142	0.286	0.197	0.285	0.176	0.571	0.420	0.448	0.237	0.747	0.516
SEFF03	0.129	0.299	0.168	0.306	0.223	0.631	0.492	0.497	0.321	0.811	0.585
SEFF04	0.179	0.252	0.114	0.315	0.128	0.452	0.415	0.440	0.238	0.805	0.445
SEFF05	0.218	0.389	0.314	0.410	0.131	0.486	0.449	0.441	0.315	0.801	0.497

Table 4.12 (Continued)

	PTB	PC	PCM	PCA	PCS	ML	MT	MTA	MTC	SE	ALO
SEFF06	0.150	0.441	0.325	0.500	0.133	0.520	0.546	0.525	0.401	0.825	0.509
SEFF07	0.119	0.378	0.278	0.420	0.129	0.376	0.401	0.311	0.413	0.729	0.432
SEFF08	0.192	0.449	0.270	0.476	0.281	0.453	0.447	0.437	0.316	0.818	0.502
LERN04	0.338	0.327	0.243	0.358	0.120	0.422	0.589	0.587	0.399	0.512	0.817
LERN05	0.230	0.161	0.132	0.182	0.030	0.471	0.621	0.638	0.390	0.436	0.766
LERN06	0.230	0.226	0.178	0.216	0.121	0.478	0.507	0.536	0.295	0.483	0.801
LERN07	0.217	0.383	0.253	0.389	0.238	0.506	0.545	0.533	0.385	0.534	0.766
LERN08	0.250	0.385	0.361	0.350	0.158	0.488	0.584	0.567	0.419	0.563	0.826
LERN09	0.149	0.323	0.281	0.289	0.173	0.495	0.583	0.607	0.352	0.518	0.770
LERN10	0.125	0.214	0.120	0.253	0.101	0.439	0.509	0.535	0.301	0.540	0.738
LERN11	0.081	0.298	0.207	0.291	0.191	0.382	0.479	0.494	0.299	0.430	0.697
LERN12	0.169	0.254	0.142	0.275	0.164	0.464	0.546	0.549	0.361	0.504	0.745

Table 4.13 Results of fornell and larcker criterion

	PTB	**PC**	**PCA**	**PCM**	**PCS**	**ML**	**MT**	**MTA**	**MTC**	**SE**	**ALO**
PTB	.851										
PC	.142	.788									
PCA	.081	-	.836								
PCM	.113	-	.538	.842							
PCS	.172	-	.276	.492	.721						
ML	.283	.420	.333	.384	.272	.749					
MT	.247	.364	.339	.303	.191	.669	.863				
MTA	.223	.339	.340	.258	.167	.721	-	.841			
MTC	.204	.291	.230	.272	.164	.382	-	.501	.754		
SE	.223	.467	.519	.301	.220	.663	.605	.590	.434	.784	
ALO	.256	.363	.367	.272	.181	.584	.695	.710	.452	.635	.792

In Table 4.13, values with the bold fonts inside the diagonal columns represent the square root of each construct's AVE. Values in the diagonal columns should be higher than all other values in the rows and columns of the table. As can be confirmed, all diagonal values were higher than other values, hence it could be concluded that this measurement model had fulfilled discriminant validity.

Emphasis on some limitations of cross-loadings and Fornell-Larcker approaches to examine discriminant validity under several circumstances have led to the application of HTMT ratio to assess discriminant validity (Henseler, Ringle and Sarstedt, 2015; Hair et al., 2017). HTMT is the ratio between mean of all items' correlations across constructs measuring different constructs and the mean of the average items' correlations measuring the same construct (Henseler, Ringle and Sarstedt, 2015). As such, this study also assessed discriminant validity using this newly proposed method (see Table 4.13).

Table 4.14 Results of HTMT ratio

	PTB	PC	PCA	PCM	PCS	ML	MT	MTA	MTC	SE	ALO
PTB											
PC	.185										
PCA	.099	-									
PCM	.128	-	.593								
PCS	.232	-	.387	.631							
ML	.291	.526	.368	.423	.409						
MT	.294	.511	.390	.354	.286	.837					
MTA	.228	.378	.384	.290	.239	.827	-				
MTC	.250	.360	.287	.330	.262	.465	-	.576			
SE	.222	.543	.569	.323	.296	.739	.750	.661	.492		
ALO	.250	.428	.399	.291	.268	.635	.849	.795	.515	.686	

HTMT ratio that is greater than .85 (Kline, 2011) would indicate a problem of discriminant validity. Table 4.14 shows that all ratios were below .85. Hence, it was confirmed that there is no discriminant validity problem between all constructs in the measurement model.

Contradicting with the results of previously employed in the EFA stage, all latent variables under study had been proven to be unique and distinct from one another (discriminant validity). In addition, all items were perfectly converged to measure their own intended construct (convergent validity), except for Psychological Conditions: Safety (PCS). Nevertheless, PCS was retained as it has enough indicators (minimum of three items) to measure a concept (variable) even after eliminating some items that did not converge together. Although with three items, PCS still demonstrated sufficient convergent validity (AVE = .620 > .50) and satisfactory composite reliability (ρC = .829 > .70). Since all requirements of construct validity were fulfilled through CFA, this study proceeded to the structural model assessment stage in the next section.

4.10 Structural model

Structural model analysis, also known as significance testing, is the process of testing whether a certain relationship between two or more constructs are likely to occur by chance or otherwise (Hair et al., 2017; Saunders, Lewis and Thornhill, 2016). In this study, structural model analysis

was performed to answer the research questions and subsequently fulfil the research objectives established on the outset of this study. Using bootstrapping procedures with 5000 resamples (Hair et al., 2014), the empirical t-values were computed to decide the significance of the hypothesised relationships. The structural model for this study is illustrated in Figure 4.3.

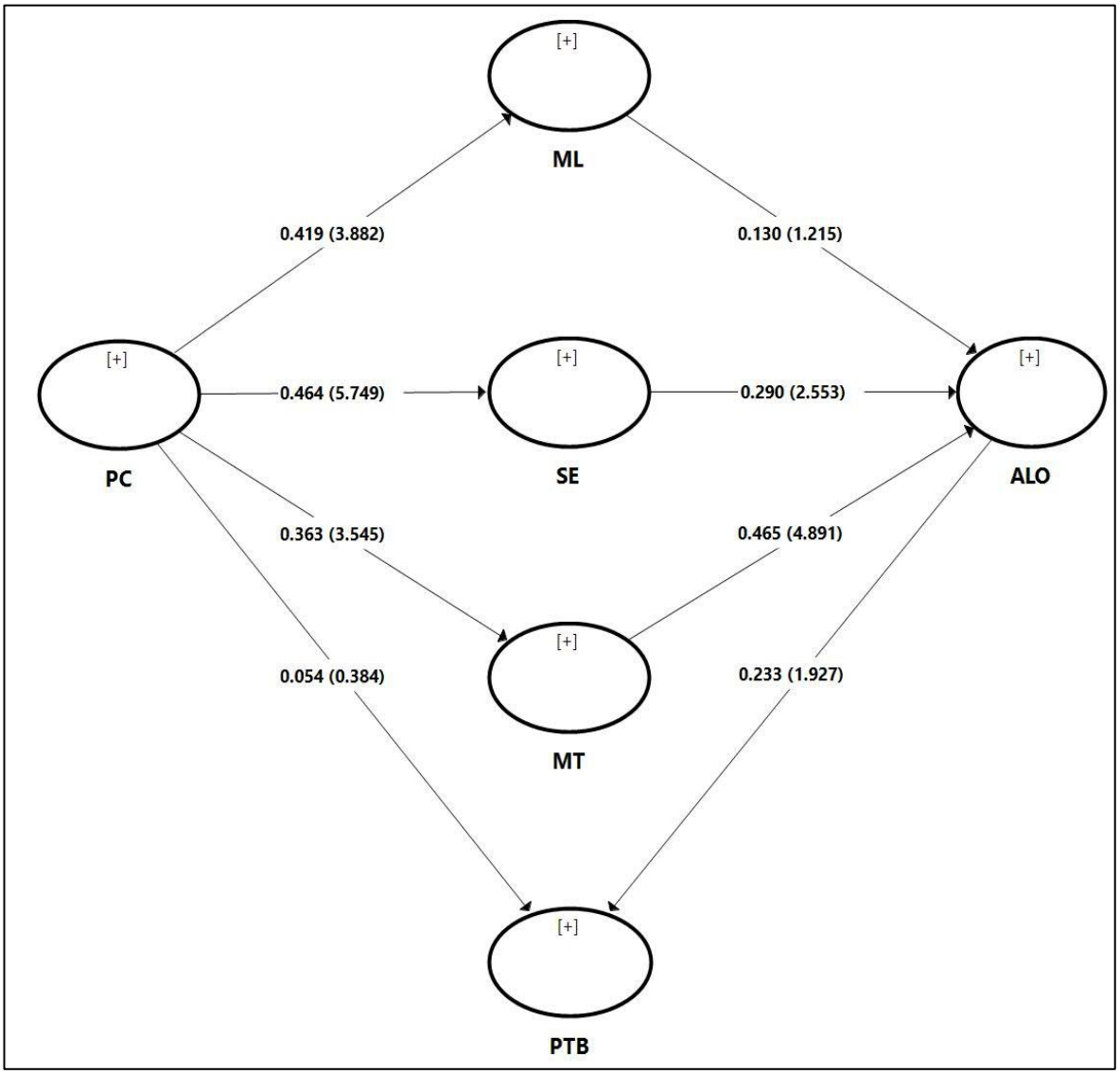


Figure 4.3 Structural model

Figure 4.3 illustrates the structural model of this study that demonstrates the constructs (i.e. PC, ML, MT, SE, ALO and PTB) and their path relationships (i.e. hypotheses). The arrows represent the relationships between constructs with the values of path coefficient (β) and the empirical t-values (values inside brackets). PTB is the endogenous (dependent) variable, while PC, ML, MT, SE and ALO are the exogenous variables (predictors) of PTB. ML, MT and SE also work as mediators between PC and ALO, while ALO works as the mediator between ML, MT and SE with PTB.

Following the recent guidelines advocated by Hair et al. (2019), structural model analysis involves five assessment sequences which include the evaluation of; i) collinearity issues, ii) variance explained (R^2) and effect sizes (f^2), iii) predictive relevance (Q^2), vi) predictive power ($Q^2_{predict}$), and v) significance of relationships. As such, this study presents the result of structural model analysis following these sequences.

4.10.1 Collinearity assessment

Collinearity issues (Hair et al., 2014), also called multi-collinearity (Pallant, 2016), occur when two or more predictors are highly correlated. It causes the estimated path coefficients to fluctuate widely (Cooper and Schindler, 2014) and thus biasing the structural model (Bowerman and O'connell, 1990). Hair et al. (2017) suggested the evaluation of variance inflation factor (VIF) values to assess the severity of collinearity issue in a PLS-SEM path model (see Table 4.15).

Table 4.15 Results of collinearity assessment

Constructs	Collinearity (VIF)				
	ML	**MT**	**SE**	**ALO**	**PTB**
Psychological Conditions (PC)	1.000	1.000	1.000		1.150
Motivation to Learn (ML)				2.240	
Motivation to Transfer (MT)				1.974	
Self-Efficacy (SE)				1.951	
Affective Learning Outcome (ALO)					1.150

A VIF statistic of 3.3 or greater would suggest that collinearity issue may mislead the structural model findings (Diamantopoulos and Siguaw, 2006). Table 4.15 reveals all VIFs did not exceed 3.3. Hence, collinearity is not a severe problem in this structural model and the results produced would not be misled.

4.10.2 Variance explained and effect sizes

R^2 value or known as coefficient of determination interprets the proportion or percentage of variance in endogenous construct that are explained by exogenous constructs (Hair et al., 2017). R^2 also indicates the structural model's predictive power (Hair et al., 2017) and represents the combined effect of several exogenous constructs on endogenous construct connected to it

(Ramayah et al., 2018). Generally, R^2 values of .26, .13, and .02 are regarded as substantial, moderate, and weak respectively (Cohen, 1988).

ML and SE have moderate variance explained with $R^2 = 0.122$ and $R^2 = 0.207$. These coefficients indicate PC has explained 12.2% and 20.7% of variance in ML and SE respectively (see Figure 4.4). These results are implying that Psychological Conditions has demonstrated moderate predictive power on Motivation to Learn and Self-Efficacy. Meanwhile, MT has small variance explained at $R^2 = 0.122$ and shows that Psychological Conditions has weak predictive power on Motivation to Transfer.

On the other hand, ALO has substantial variance explained ($R^2 = 0.544$) and implying that ML, MT and SE have explained 54.4% of variance in ALO. These results translate that Motivation to Learn, Motivation to Transfer and Self-Efficacy has demonstrated substantial predictive power on Affective Learning Outcome. However, PTB has weak variance explained with $R^2 = 0.048$ only. It means the combined effects of Psychological Conditions and Affective Learning Outcome only produce weak predictive power (4.8%) on Post-Training Behaviour.

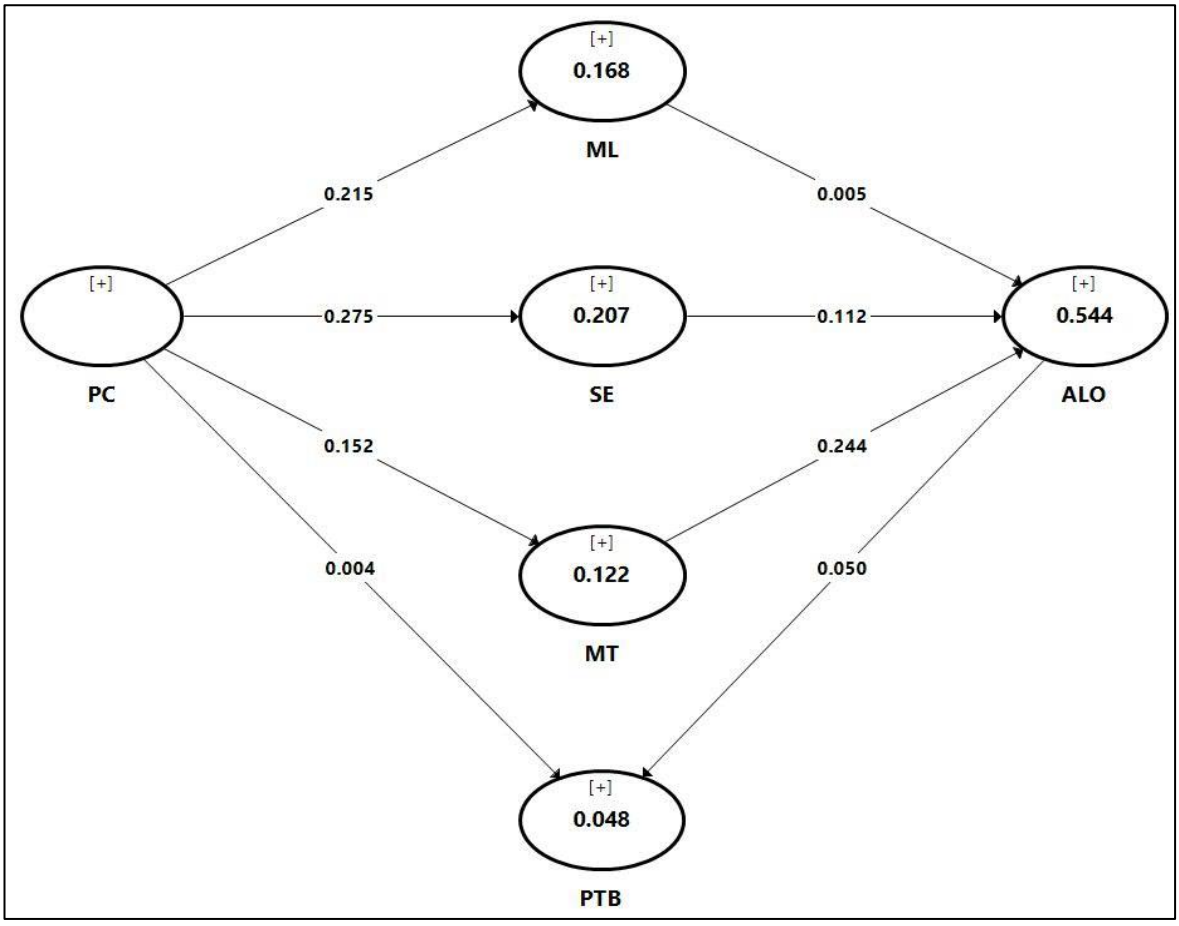


Figure 4.4 Path model with R^2 and f^2 values

Note. Values on arrows indicate f^2. Value within endogenous construct represent R^2

Note. For better visual, see Appendix I

In assessing structural model, Hair et al. (2014) also suggest that the change in the R^2 value when a specified exogenous construct is omitted from the model should be examined. The change in the R^2 value is called effect sizes (f^2). In this study, effect sizes (f^2) is reported to evaluate whether the omitted construct has a substantive impact on the endogenous construct (see Table 4.15). As recommend by Hair et al. (2014), Jacob Cohen's guideline is used to determine the magnitudes of f^2. The magnitudes are 0.02, 0.15, and 0.35, representing small, medium, and large effects respectively (Cohen, 1988).

Table 4.16 Results of variance explain (R^2) effect sizes (f^2)

Relationships	Effect Size		Variance Explained (R^2)
	(f^2)	Magnitude	
H1: PC → ML	.215	Medium	.168
H2: PC → MT	.152	Medium	.122
H3: PC → SE	.275	Medium	.207
H4: ML → ALO	.005	None	
H5: MT → ALO	.244	Medium	.544
H6: SE → ALO	.112	Small	
H7: PC → PTB	.004	None	.048
H8: ALO → PTB	.050	Small	

Table 4.16 shows that PC has contributed medium effects to all its endogenous constructs (ML, MT and SE) at $f^2 > 0.15$, except PTB. PC exhibits too small f^2 value ($f^2 = 0.004 < 0.02$) which indicate no effect on PTB. Further, MT has medium effect on ALO with $f^2 = 0.244$, while SE has small effect on ALO with $f^2 = 0.112$. In contrast, ML has no effect on ALO at $f^2 < 0.02$. Lastly, ALO shows small effect size on PTB at $f^2 = 0.049$. All results that exhibit no effect ($f^2 < 0.02$) hinted that there might be non-significant relationships between the associated constructs. However, further explanation regarding the significance of relationships between constructs will be present in detailed later in 4.9.6.

4.10.3 Effects of control variables

Control variables are unwanted but measurable variables that have potential effects on the dependent variable (Saunders, Lewis and Thornhill, 2016; Salkind, 2018). Usually, they are demographic factors which whose effects must be controlled or neutralised. According to Singh

(2006), certain variables appear repeatedly as control variables, although they are sometimes studied as moderator variables. For instance; sex, intelligence and socio-economic status are three demographic factors that are commonly controlled. Hence, the effect of three demographic information on the dependent variable gathered in this study namely gender, education levels, and position grade are observed.

Since, education levels are often associated with individual intelligence (Ritchie and Tucker-Drob, 2018; Deary and Johnson, 2010), effects of education levels are tested to represent respondents' intelligence. Meanwhile, position grades are assessed to represent respondents' socio-economic status since higher grade implies higher salary rate for government servants in Malaysia. Thus, this study generates dummy constructs with formative indicators following procedures for analysing control variables in PLS-SEM model demonstrated by Henseler, Hubona and Ray (2016) (see Figure 4.5 to Figure 4.7). Each indicator represents every underlying category of the control variable.

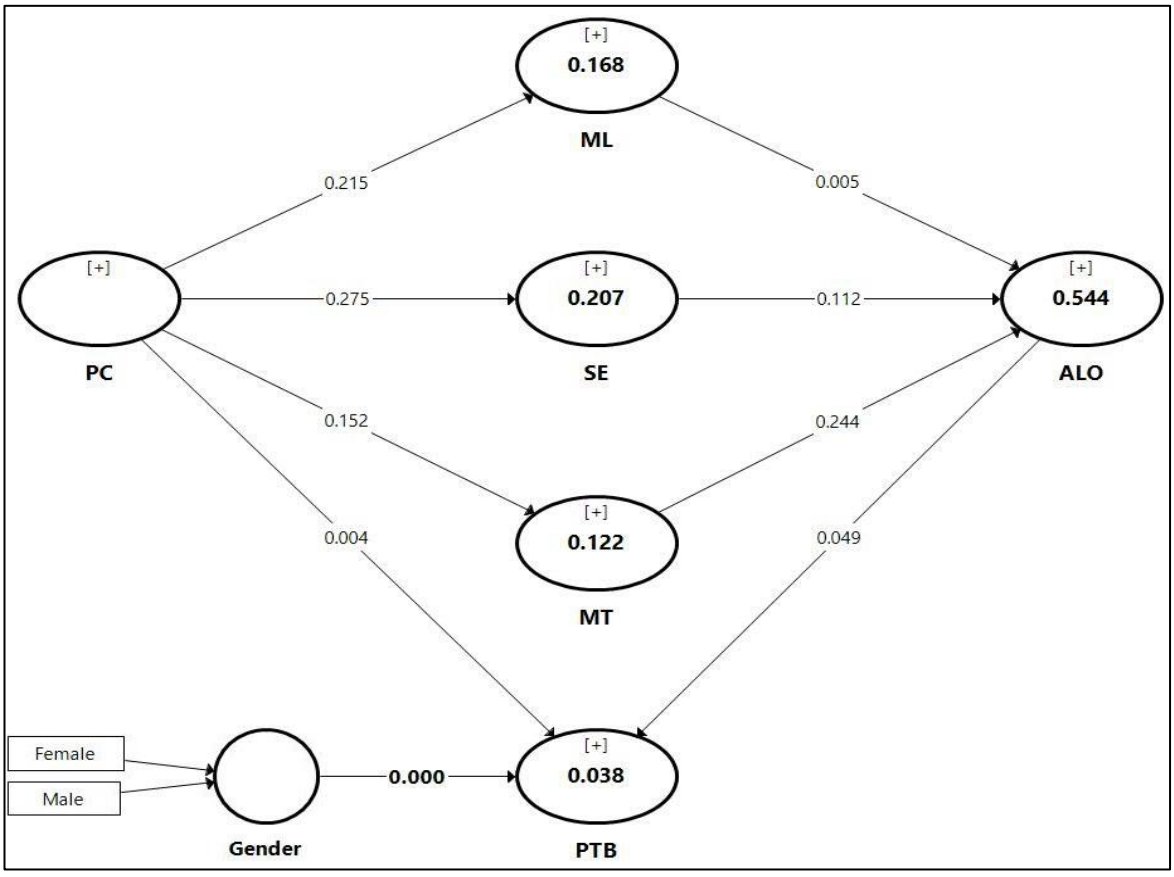


Figure 4.5 Effect of gender on post-training behaviour

Note. For better visual, see Appendix J

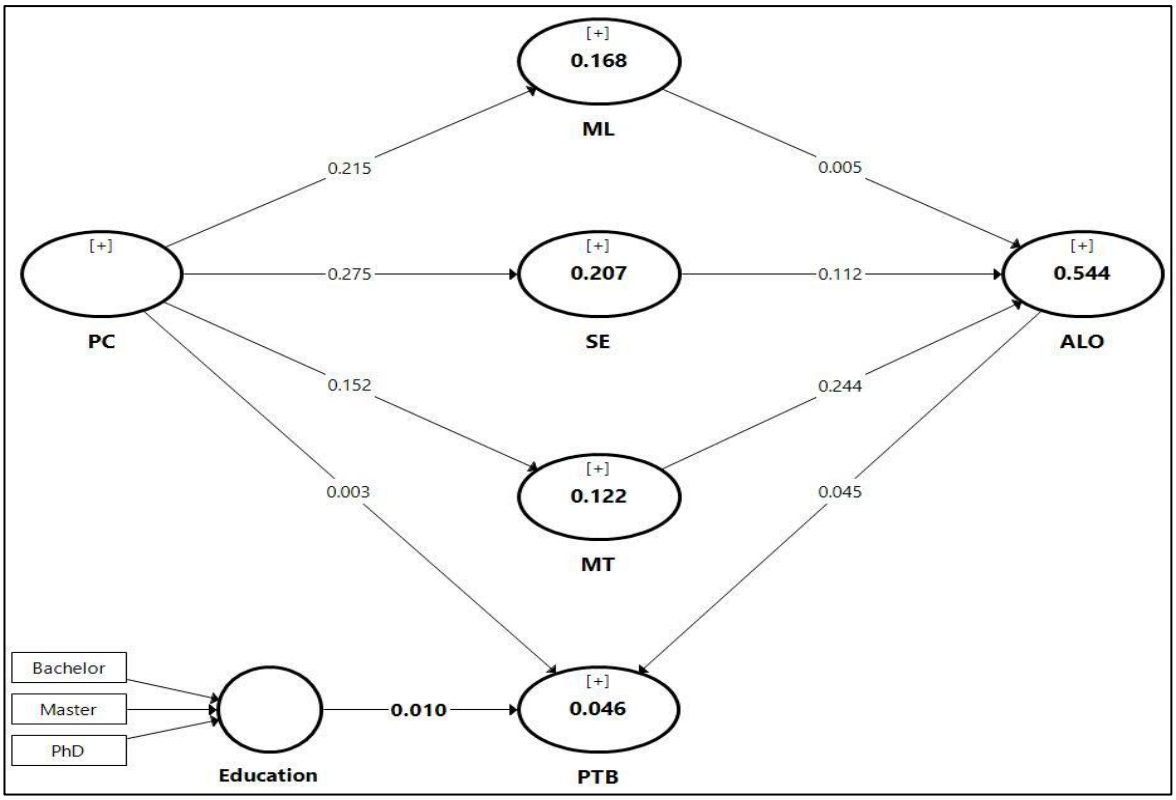


Figure 4.6 Effect of education levels on post-training behaviour

Note. For better visual, see Appendix K

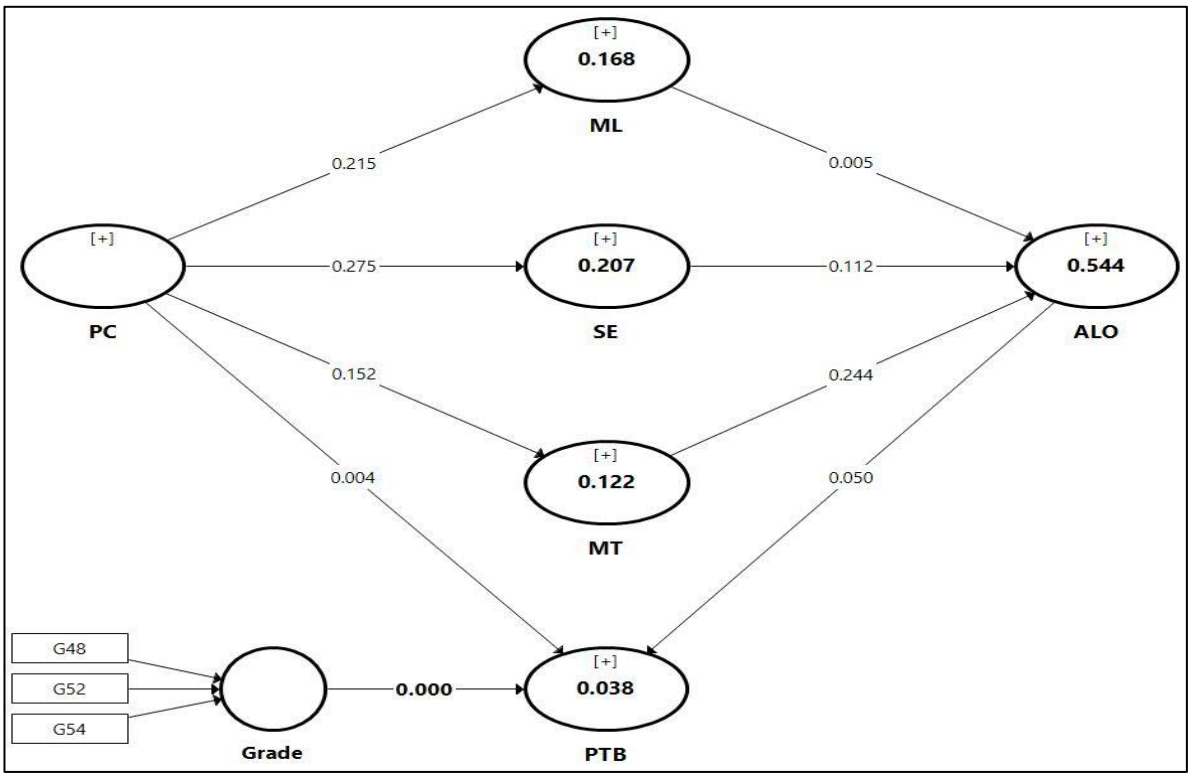


Figure 4.7 Effect of positive grades on post-training behaviour

Note. For better visual, see Appendix L

Figure 4.5 to Figure 4.7 demonstrate the results of control variables analysis in PLS-SEM structural model. In those figures, values inside the constructs represent variance explained, R^2, while values on the arrows indicate effect size, f^2. This study interprets the effects of control variables on the dependent variable based on the changes in variance explained, R^2. The observation of changes in R^2 values before and after the inclusion of control variables in the PLS-SEM structural model to evaluate the effect of control variables are also evident in Ngah, Zainuddin and Ramayah (2017) study. In addition, this study reports effect size, f^2 to provide more evident for thorough evaluation of control variables effect on Post-Training Behaviour (see Table 4.17).

Table 4.17 Effects of control variables

Relationships	R^2 without Control Variables	R^2 with Control Variables	R^2 Changes (%)	f^2
Gender → PTB		.038	1.0	-
Education → PTB	.048	.046	.20	-.010
Grade → PTB		.038	1.0	-

Table 4.17 summarised that all control variables only demonstrate very small R^2 changes, ranging from 0.2% to 1%. Similarly, f^2 values also indicate no effect ($f^2 < 0.02$) for all tested control variables. Therefore, it is evident that control variables do not influence dependent variable prediction in this study.

4.10.4 Predictive relevance of the model

Furthermore, predictive relevance (Q2) of the model was also assessed to examine whether the model accurately predicted data not used in the estimation of model parameters. In PLS-SEM, Q2 value is computed using the blindfolding procedure. Blindfolding is a sample reuse technique that omits part of the data matrix and uses the model estimates to predict the omitted part. It indicates a model's out-of-sample predictive power (Hair et al., 2017; Chin, 1998; Henseler, Ringle and Sinkovics, 2009).

Q2 values larger than 0 would indicate that the model has predictive relevance for a certain endogenous construct and otherwise (i.e., if the value is less than 0) (Hair et al., 2014; Fornell and Cha, 1994). Overall, all endogenous constructs in this structural model demonstrated Q2 values above 0 (see Table 4.18). Hence, these values would suggest that this model has sufficient predictive relevance.

Table 4.18 Results of predictive relevance (Q^2) and effect sizes (q^2)

Relationships	Predictive Relevance (Q^2)	Magnitude
H1: PC → ML	.093	Small
H2: PC → MT	.085	Small
H3: PC → SE	.123	Small
H4: ML → ALO	.341	Medium
H5: MT → ALO		
H6: SE → ALO		
H7: PC → PTB	.042	Small
H8: ALO → PTB		Small

Table 4.18 exhibits that all endogenous constructs have Q^2 exceeding 0, suggesting that all relationship predictions performed in this study are relevant. Nevertheless, recent rule of thumb introduced by Hair et al. (2019) further categorised Q^2 values of 0.01 to 0.249 as small, 0.25 to 0.499 as medium, and 0.50 and higher as large predictive accuracy. Hence, majority of endogenous constructs in this structural model demonstrate small predictive accuracy at Q^2 values ranging from 0.042 to 0.123, except ALO. ALO shows medium predictive accuracy at Q^2 = 0.341. Overall, this model has sufficient predictive relevance despite most produced magnitudes are small.

4.10.5 Predictive power of the model

Structural model predictive power is measured based on Q^2_predict and root square mean error (RMSE) generated from PLSpredict procedure (Shmueli et al., 2016; Shmueli et al., 2019). Hair et al. (2019) recommended the reporting of Q^2_predict to ensure that a PLS-SEM structural model has a substantiated model's predictive power. PLSpredict is a set of procedures for out-of-sample prediction that involves estimating the model on an analysis (training) sample and evaluating its predictive performance on a holdout data sample (Hair et al., 2019; Shmueli et al., 2016). Interpretation of out-of-sample predictive power should focus on the model's key endogenous construct (Hair et al., 2019; Shmueli et al., 2019), which is Post-Training Behaviour (PTB) in this study (see Table 4.19).

Table 4.19 Results of PLSpredict

Items	PLS-SEM		LM	PLS-SEM - LM RMSE
	RMSE	Q^2_predict	RMSE	
POST01	.790	.001	.762	.028
POST02	.870	.006	.844	.026
POST03	.815	.036	.803	.012
POST04	1.013	-.025	.989	.024
POST05	1.051	-.009	1.016	.035
POST06	1.032	-.008	.998	.034
POST07	1.073	-.010	1.028	.045
POST08	1.086	-.003	1.042	.044
POST09	1.060	-.029	1.039	.021
POST10	1.065	-.010	1.032	.033
POST11	1.025	-.001	.983	.042
POST12	.977	.004	.951	.026

Note. LM = Linear regression Model, RMSE = Root Mean Square Error

Table 4.19 presents the result of out-of-sample predictive power based on Q^2_predict and root square mean error (RMSE). Following Shmueli et al. (2019) guidelines, the Q^2_predict statistic should be evaluated first to verify that the predictions outperform the most naïve benchmark, defined as the indicator means from the analysis sample. Similar to Q^2 values for measuring predictive accuracy, Q^2_predict of over zero ($Q^2_{predict} > 0$) indicates the structural model is having sufficient out-of-sample predictive power (Hair et al., 2019). Apparently, $Q^2_{predict}$ for all indicators of Post-Training Behaviour are more than zero (i.e. ranging from 0.001 to 0.029). Thus, this model out-of-sample predictive power is sufficient.

Then, researchers need to evaluate the prediction statistics and in most instances, researchers should assess the RMSE (Hair et al., 2019). According to Shmueli et al. (2019), when none of the indicators of key endogenous construct in the PLS-SEM analysis has higher RMSE values compared to the naïve LM benchmark, the structural model has high predictive power. The negative values of PLS-SEM – LM RMSE for every PTB indicators (POST01 to POST12) in Table 4.18

are implying that none of the PLS-SEM RMSE values are higher than the LM RMSE values. Hence, this structural model has high predictive power.

4.10.6 Significance testing

Conventional way of deciding the significance of hypothesised relationships is based on probability value (*p*-value). *p*-value represents the probability of error for assuming that a path coefficient is significantly different from zero (Hair et al., 2017). *p*-value of 0.01, 0.05, and 0.10 represent 1%, 5% and 10% of error probability. It also means that only 1%, 5% or 10% of the hypothesised relationships occur by chance.

However, American Statistical Association (ASA) highlights that reporting *p*-value alone does not provide a sound measure of evidence regarding a model or hypothesis (Ramayah et al., 2018). Therefore, this study also reports other measures such as empirical *t*-value, path coefficient (*β*) and confidence interval as additional evidence to accept or reject the hypothesised relationships (Hair et al., 2014; Lin, Lucas and Shmueli, 2013; Aguinis et al., 2010) (see Table 4.20 and Table 4.21).

Empirical *t* value is the test statistic value obtained from the data set at hand, while critical *t*-value is the benchmark which the significance of a coefficient is determined (Hair et al., 2017). The null hypothesis of no effect is rejected if the empirical *t*-value is larger than the critical *t*-value. Commonly used benchmark of critical *t*-value in two-tailed tests are 2.57, 1.96, and 1.65, for $p < 0.10$, $p < 0.05$, *and* $p < 0.01$ respectively. Meanwhile, for one-tailed test are 2.33, 1.65, and 1.28, for $p < 0.10$, $p < 0.05$, *and* $p < 0.01$ (Hair et al., 2014). Using bootstrapping procedures with 5000 resamples (Hair et al., 2014), the empirical *t*-values are computed to decide the significance of the hypothesised relationships.

Path coefficient is the estimated path relationship between latent variables in a structural model which is identical to standardized beta (*β*) values in a regression model (Hair et al., 2014, Hair et al., 2017). Kock and Hadaya (2018) assert that *β* values that are ranging from 0 to 0.1 may indicate the hypothesised relationship is not significant, while *β* values that are exceeding 0.2 are more likely indicating a significant relationship. Meanwhile, the values in between (i.e. 0.11 to 0.19) are cannot clearly determined the significance of hypothesised relationship.

In the same vein, confidence interval values strengthen the reporting of significance testing by providing a measure of accuracy for *p*-value. The threshold of *p*-value ($p < 0.10$, $p < 0.05$, and $p < 0.01$) only provide a rough benchmark for researchers to accept or reject null hypothesis, thus

resulting in loss of information (Aguinis et al., 2010). Whereas, confidence interval demonstrates how close the lower and upper bound limits to the zero point (Ramayah et al., 2018). Confidence interval upper limit (UL) and lower limit (LL) values must be either both positive or both negative which indicates zero does not fall into the range of upper and lower bound values (Hair et al., 2017).

Table 4.20 Results of significance testing (direct relationships)

Relationships	*β*	*t -value*	*p -value*	Confidence Interval		Decision
				LL	UL	
H1: PC → ML	.421	3.870	<.001	.200	.571	Supported
H2: PC → MT	.363	3.582	<.001	.179	.512	Supported
H3: PC → SE	.464	5.723	<.001	.302	.575	Supported
H4: ML → ALO	.069	.587	.279	-.128	.258	Not Supported
H5: MT → ALO	.461	4.720	<.001	.082	.606	Supported
H6: SE → ALO	.310	2.660	.004	.103	.490	Supported
H7: PC → PTB	.054	.384	.350	-.222	.245	Not Supported
H8: ALO→PTB	.232	2.158	.015	.007	.371	Supported

Note. One-tailed test

Table 4.20 presents the result of all direct relationships in the structural model. There are significant and positive relationships between; i) PC and ML (β =.421, t = 3.870, p < .001, LL = .200, UL = .571), ii) PC and MT (β = .363, t = 3.582, p < .001, LL = .179, UL = .512), iii) PC and SE (β = .464, t = 5.723, p < .001, LL = .302, UL = .575), iv) MT and ALO (β = .461, t = 4.720, p < .001, LL = .082, UL = .606), v) SE and ALO (β = .310, t = 2.660, p = .004, LL = .103, UL = .490), and ALO and PTB (β = .232, t = 2.158, p = .015, LL = .007, UL = .371). Thus, H1, H2, H3, H6, H7 and H9 are supported.

These findings interpret that Psychological Conditions have positive influence on Motivation to Learn, Motivation to Transfer and Self-Efficacy. In other words, as level of Psychological Conditions are increased, the level of Motivation to Learn, Motivation to Transfer and Self-Efficacy are also increased. Similarly, Motivation to Transfer and Self-Efficacy also demonstrate positive influence on Affective Learning Outcome. As the level of Motivation to Transfer and Self-Efficacy are increased, the level of Affective Learning Outcome is also increased.

On the other hand, there are non-significant relationships between PC and PTB (β = .054, t = .384, p = .350, LL = -.222, UL = .245) as well as ML and ALO (β = .069, t = .587, p = .279, LL = -.128, UL = .258). These results are implying that Psychological Conditions does not affect Post-Training Behaviour and Motivation to Learn does not contribute to Affective Learning Outcome. Thus, H4 and H8 are not supported.

Further, indirect effects of Motivation to Learn, Motivation to Transfer and Self-Efficacy and Affective Learning Outcome are tested (see Table 4.20). There are several approaches to test mediation effect or indirect relationship which are including; i) Baron and Kenny's causal procedure method, ii) Sobel Test, and iii) bootstrapping the indirect effect (Ramayah et al., 2018). This study has decided to employ the bootstrapping the indirect effect approach as develop by Preacher and Hayes (2004) and advocate by Preacher and Hayes (2008), (Preacher and Hayes, 2004) due to several reasons as the following:

i. Baron and Kenny's causal procedure method has been criticised as having very low statistical power and the multiple steps involved are causing false conclusion that there is mediation effect when actually there is no mediation effect (Rungtusanatham, Miller and Boyer, 2014).
ii. Sobel test is not appropriate to be used because the distributional assumptions do not hold for the indirect effect that will yield lower statistical power than other alternatives especially in a study with non-normal data. Whereas, this study possesses non-normal data distribution.
iii. Preacher and Hayes (2004) bootstrapping the indirect effect approach works best for multiple mediator models. This study has four mediators namely Motivation to Transfer, Motivation to Learn, Self-Efficacy and Affective Learning Outcome. Thus, it is perfectly suited for this study.

Conventionally, researchers are also advised to conclude the mediation results by identifying types of mediation; full or partial mediation. However, such concepts are rooted in the Baron and Kenny's causal procedure method (Ramayah et al., 2018; Baron and Kenny, 1986). Since this study is adopting Preacher and Hayes (2004) bootstrapping the indirect effect method, discussing types of mediation is not necessary.

In fact, through bootstrapping method, only three hypotheses need to be considered; i) IV to Mediator, ii) Mediator to DV, and iii) indirect relationship between IV and DV, without needing to articulate direct relationship between IV and DV. Whereas, to determine whether a mediation is full or partial, require information on both direct and indirect IV-DV relationship (Zhao, Lynch and

Chen, 2010; Baron and Kenny, 1986). Hence, discussion on types of mediation is not practical for this study.

Table 4.21 Results of hypotheses testing (mediating relationships)

Relationships	*β*	*t -value*	*p -value*	Confidence Interval (BC)		Decision
				LL	UL	
H9: PC → ML → ALO	.029	.552	.581	-.037	.166	Not Supported
H10: PC → MT → ALO	.167	2.774	.006	.068	.305	Supported
H11: PC → SE → ALO	.144	2.314	.021	.026	.264	Supported
H12: ML → ALO → PTB	.016	.496	.620	-.031	.105	Not Supported
H13: MT → ALO → PTB	.107	1.926	.054	-033	.088	Not Supported
H14: SE → ALO → PTB	.072	1.550	.121	-.019	.162	Not Supported

Note. Two-tailed test, BC = Bias Corrected

As the results, Table 4.21 exhibits that H9, which represent the indirect effects of ML on PC and ALO relationship is not significant at $\beta = .054$, $t = 1.062$, $p = .288$, LL = -.037, UL = .166. This non-significant effect means Motivation to Learn does not mediate the relationship between Psychological Conditions and Affective Learning Outcome. Hence, H9 is not supported.

Similarly, ALO there are non-significant indirect effects of ALO on ML → PTB, MT → PTB, and SE → PTB relationships at $t < 1.96$ and $p > .05$. Thus, H12, H13 and H14 are also not supported. Hence, it is implying that Affective Learning Outcome does not mediate relationships between Motivation to Transfer and Post-Training Behaviour, Motivation to Learn and Post-Training Behaviour as well as Self-Efficacy and Post-Training Behaviour.

On the contrary, H10 and H11 are supported as there are significant indirect effects demonstrate by MT and SE on PC and ALO relationship at $\beta = .167$, $t = 2.774$, $p = .006$, LL = .068, UL = .305 and at $\beta = .144$, $t = 2.314$, $p = .021$, LL = .026, UL = .264. This significant effect means Motivation to Transfer and Self-Efficacy mediate the relationship between Psychological Conditions and Affective Learning Outcome.

4.11 Chapter summary

Data screening stage has properly addressed issues of non-response bias, missing data, outliers and common method variance. Then, the measurement model analysis confirms that all constructs are valid and reliable. Furthermore, findings from the hypotheses testing reveal that majority of direct relationships are statistically significant except for H4: Relationship between Psychological Conditions and Post-Training Behaviour and H5: Relationship between Motivation to Learn and Affective Learning Outcome (see Table 4.22).

Meanwhile, out of six mediation relationships, two hypotheses are supported (H10, H11 and H13) while the other four are not supported (H9, H12, H13, and H14). Relationship between Psychological Conditions and Affective Learning Outcome is mediated by Motivation to Transfer (H10) and Self-Efficacy (H11) while Affective Learning Outcome does not mediate any hypothesised relationships.

ML, MT and SE have moderate level of variance explained (R^2), while ALO has substantial variance explained. However, PTB has weak variance explained as the level of variance explained is highly dependent on number of predictors. After all, ALO has most number of predictors (three predictors) compare to ML, MT, SE and PTB (one predictor for each construct). Lastly, all exogenous constructs have predictive relevance for all endogenous constructs under study with all Q^2 values larger than 0.

Table 4.22 Summary of the findings

Relationships	Results	Effect Sizes	Predictive Power
H1: PC → ML	Supported	Medium	R^2 = .168 (Moderate)
H2: PC → MT	Supported	Medium	R^2 = .122 (Weak)
H3: PC → SE	Supported	Medium	R^2 = .207 (Moderate)
H4: ML → ALO	Not Supported	None	
H5: MT → ALO	Supported	Medium	R^2 = .544 (Substantial)
H6: SE → ALO	Supported	Small	
H7: PC → PTB	Not Supported	None	R^2 = .048
H8: ALO→PTB	Supported	Small	(Weak)
H9: PC → ML → ALO	Not Supported		
H10: PC → MT → ALO	Supported		N/A
H11: PC → SE → ALO	Supported		

Table 4.22 (Continued)

Relationships	Results	Effect Sizes	Predictive Power
H12: ML → ALO → PTB	Not Supported		
H13: MT → ALO → PTB	Not Supported		
H14: SE → ALO → PTB	Not Supported		

Chapter 5 Discussion

5.1 Introduction

This chapter concentrates on discussion of findings. It will elaborate the findings based on the research objectives and will continue to address the research questions. The final part presents the summary of the discussion.

5.2 Discussion of the results

5.2.1 The influence of independent variables on mediating variables and dependent variable

5.2.1.1 Psychological conditions of personal engagement and motivation to learn

The analysis chapter provided a few significant findings for this study. This section discusses the result of the direct relationship between variables involved in this study. This study examined the direct influence of psychological conditions (i.e., psychological meaningfulness, psychological safety, and psychological availability) on motivation to learn, motivation to transfer, and self-efficacy. In addition, a direct relationship between motivation to learn, motivation to transfer, and self-efficacy on affective learning was examined in the present study. Apart from that, this study also examined the direct relationship between psychological conditions of engagement on post-training behaviour as well as the direct relationship between affective learning on post-training behaviour.

The findings showed that psychological conditions of personal engagement have significant influence on motivation to learn. As previously mentioned, the psychological conditions of personal engagement tested for the present study were based on the psychological conditions of engagement as proposed by Kahn (1990). These comprises psychological meaningfulness, psychological condition availability, as well as psychological condition safety. Psychological meaningfulness was defined as sense of return on investments of self in role performance (Kahn, 1990). This dimension is related to individual perceptions that their work is significant and valuable to themselves as well as to other members in the organisation (Fletcher and Schofield, 2019). Furthermore, individuals who experience meaningfulness with their work were also being characterised as eager to instigate new experience and open for changes to face future development in their work (Binyamin and Brender-Ilan, 2018). Kahn (1990) asserted that

psychological meaningfulness is influenced by task characteristics, role characteristics, and work interactions.

The current study found that psychological meaningfulness significantly affects motivation to learn. A possible explanation for this might be that when employees feel personally attached with their work, and believe that it gives value to themselves and others, it is worth for them to exert extra effort to the task and they are willing to improve their KSA through learning. On the contrary, if the managers perceived that their role is not important and meaningless, it will lead them to understand that it is not beneficial for them to perform effectively on the job. They also will perceive that their job is not challenging and not significant. As a result, it is not worth to participate in employee development activities to improve their KSA. Hence, it is crucial for the managers to experience meaningfulness in the work they perform to ensure that they are willing to equip themselves with KSA of talented managers.

As the middle managers in public service sector in Malaysia, the Administrative and Diplomatic Officers are directly involved in government policy making. Apart from that, they are also responsible in generalising the country's development strategies to strengthen administrative tasks, social infrastructure, and economic growth (Masrek , Noordin, Shuhidan and Yusof, 2016). In relation to task characteristics as one of the determinants of psychological meaningfulness, when managers need to perform their role as decision and policy makers, the task is challenging. This is because any decision made by the middle managers, will affect government policies. Therefore, this challenging and significant task will motivate them to learn how to become good decision makers. Performing managerial roles, particularly decision making, require the managers to learn the skill to improve their ability as a decision maker. Accordingly, being able to perform this critical responsibility on behalf of the government, it gives value and purpose to their role as managers.

Noe, Tews and Dachner (2010) suggested that psychological meaningfulness motivates individuals to exert effort toward learning. This notion is related to motivation to learn. Perceived utility of training programme represents the experience of psychological meaningfulness. Perceived utility of the training refers to employees' perception that the training programme has value and is useful to their work, as well as giving positive effect on their performance (Ford and Noe, 1987). Thus, it is related to psychological meaningfulness because when managers perceive that the leadership development programme could provide value for their career, it would motivate them to learn during the programme. Perceived utility of the training has been confirmed to have positive influence on motivation to learn. As mentioned previously, the M-LEAP and E-LEAP are compulsory development programmes for future leaders. In other words, it is compulsory for the

managers to enrol in this programme for their career development. These assessment programmes are meant to develop the KSA of future leaders. Thus, it reflects the perceived utility of the training programme. Perceived utility of the training programme was found to influence participant's motivation to learn. A number of studies had found the association between perceived utility and motivation to learn (Von Treuer, McHardy and Earl, 2013; Bell and Ford, 2007). These findings warrant that employees who experience value of their work would express desire to learn during training.

This study reported that psychological condition safety positively influences motivation to learn. Kahn (1990) viewed psychological safety as the feeling of being able to show and employ one's self without fear of negative consequences to self-image, status, or career (p.708). The antecedents of psychological safety are interpersonal relationships, group and intergroup dynamics, management style and process, and organisational norms. Rothman and Welsh (2013) stated that psychological safety could be influence by co-worker support, supervisor support, and self-consciousness. A psychologically safe work environment helps to develop employee trust and respect toward their workplace. Most importantly, it may reduce the feelings of being rejected, embarrassed, or being treated negatively when taking interpersonal risks (Roussin and Webber, 2012). Edmondson et al. (2016) believed that hierarchy, leadership effectiveness, and work type affect psychological safety in the workplace. Noe (1986) pointed out that, one condition to increase motivation to learn among trainees is a supportive work environment. It refers to providing the necessary resource to perform tasks, and receiving positive interpersonal support from peers and supervisor, including open communication, feedback and reinforcement.

A likely explanation on the positive relationship between psychological safety and motivation to learn is that, when performing their role as a leader in the public sector, the manager will face uncertainty workplace situations. For instance, the managers might have to restructure the task of their subordinates, relocate staff, and monitor the subordinate career progress. The managers will encounter risks on any decision making regarding these issues. The subordinates or peers might accept or refuse the decision made by managers. In addition, they are responsible to execute the plan and deliver information to co-workers as well as subordinates. Apart from that, they have to inform top-level management regarding the outcomes of the plan or strategies that have been implemented. Executing organisational plans require managers to express the idea to their subordinates, and receive feedback from subordinates, co-workers, and their superiors. The feedback or inputs from work environment could motivate managers to learn how to overcome their weaknesses when performing a task. On the other hand, if the managers have been exposed to negative a work environment that could bring psychological threats, it will demotivate them from learning.

A few empirical studies were found to support the positive impact of psychologically safe work environment on motivation to learn (Park and Kim, 2018; Ng, 2015; Al-Eisa, Furayyan and Alhemoud, 2009). In a recent empirical study by Kim, Park and Kang (2019), it was revealed that supervisory support positively influences motivation to learn among teachers.

The results indicated support that psychological availability has a positive effect on motivation to learn. Psychological availability describes the feelings of having the physical, emotional, or psychological resources to engage in a particular event (Kahn, 1990). Psychological availability is influenced by the resources, work security, and external activities that employees receive (May, Gilson and Harter, 2004). According to May, Gilson and Harter (2004), when performing a task, employees depend on physical, emotional, and cognitive resources. Furthermore, Shuck (2020) described psychological availability in two dimensions, namely tangible and intangible availability of resources. Tangible resources comprise supplies, sufficient budget, and manpower. Meanwhile, intangible resources consist of opportunities for learning and skill development, job fit, and organisational commitment. Binyamin and Carmeli (2010) asserted that psychological availability captures the readiness and confidence of individuals when they encounter distraction while performing the job. Distractions may occur in terms of depletion of physical energy, depletion of emotional energy, individual insecurity, and outside lives (Kahn, 1990).

The association between psychological availability and motivation to learn could be explained by two characteristics, that is, perceived barriers and enablers. Klein, Noe and Wang (2006) asserted that perceived barriers and enablers influence motivation to learn. Environmental conditions or event can be perceived either as barriers or enablers. Barriers refer to factors related to learner, instructional, or contextual aspects where it can prevent, disrupt, or hinder the learning process (Martins, Zerbini and Medina, 2019). Enablers are related to factors that facilitate employees to learn the content of training programme (Klein, Noe and Wang, 2006). In the organisational context, employees experience psychological availability, that is, they are willing to engage in their tasks if the organisation provides sufficient resources. From the training and development perspective, providing opportunities for learning is one of the intangible resources. This condition could be regarded as enablers that could improve employees' KSA. Hence, it could trigger their motivation to learn. On the contrary, if the organisation is reluctant to support employees for personal development, employees will distract themselves from engaging in their work. This is because employees will perceive this condition as a barrier that will disrupt their motivation to learn.

In the Malaysian context, the M-LEAP and E-LEAP is part of the succession planning designed for middle managers. These programmes can be considered as a resource to improve the managers'

KSA. Therefore, it implies that managers are more likely to learn because they perceive the assessment programme as an enabler to improve their knowledge and skills.

5.2.1.2 Psychological conditions of personal engagement and motivation to transfer

Psychological conditions of personal engagement exhibits positive influence on motivation to transfer. The result denotes that psychological meaningfulness, psychological safety, and psychological availability are positively associated to motivation to transfer. As defined in Chapter 2, motivation to transfer refers to trainees' desire to use the knowledge and skills mastered in the training programme at the workplace (Noe, 1986). Positive influence of psychological meaningfulness on motivation to transfer indicates that employees are motivated to transfer training back to their workplace when they experience meaningfulness in the work they perform. Acquisition of KSA needed to perform the task could be regarded as an investment in one's work role. It also could increase personal value and significance of one's work. Therefore, it creates the sense of meaningfulness for employees. In addition, employees believe that by investing their effort to enrich their KSA from training, they understand that it could be useful to achieve value outcomes of the job. Therefore, this condition is a motivating factor for employees to utilise the KSA learned from training, and transfer it to the work setting.

Experiencing meaningfulness in work also increases training instrumentality. Instrumentality in training explains the conditions when employees perceive certain rewards after successfully applying what they have learned in training back to the workplace. It also represents an individual's belief that by performing a specific behaviour, it will result to a desired outcome (Bhatti et al., 2013; Chiaburu and Lindsay, 2008). In relation to public sector managers, this proves that when managers perceive that by participating in leadership assessment, they could improve their credibility to learn and use the knowledge, thus it could result in performance improvement, as they are more likely to apply what knowledge and skills learned in training. Furthermore, this leadership assessment programme is a path for the career progress, so it increase manager perception on the expected reward they will received, i.e., career promotion. In return, the managers will be eager to apply new learning to the job. This finding is in line with previous research (Bhatti et. al., 2014; van der Locht, Van Dam and Chiaburu, 2013; Bhatti et al., 2013; Chiaburu and Lindsay, 2008).

The results also indicated that psychological safety and psychological availability are associated with motivation to transfer. This denotes that when managers work in a supportive environment that creates psychological safety experience, they are able to receive enough available resources to perform the job, so it is desirable for them to apply and use knowledge acquired from training programmes. Brown and Leigh (1996) asserted that supportive work management that allows

flexibility for employees to perform the task, having clear role expectation and self-concepts, helps to create a psychologically safe environment. Thus, when employees perceive they encounter a psychological safe environment, it influences motivation to transfer. The findings regarding the influence of psychological safe work environment on motivation transfer are in line with past research, showing that work environment (e.g., Massenberg, Spurk and Kauffeld, 2015; Towler, Watson and Surface, 2014; Bhatti et al., 2013; Chiaburu, Sawyer and Thoroughgood, 2010) is an important factor to influence motivation to transfer. In a recent meta-analysis study by Hughes et al. (2019), they addressed the peer and supervisor support that play key roles to sustain the training. Training sustainment has been defined as the prolonged use of training over time (Huges et al., 2019) and it is related to one of the transfer dimension, that is, maintenance. Blume et al. (2010) asserted that two dimensions involved to define transfer of training are generalisation and maintenance. Thus, training sustainment reflects the ability of trainees to use training and they are able to maintain the changes of the behaviour over longer periods of time.

In relation to psychological availability, availability of resources (physical, emotional, and cognitive) influences trainee motivation to transfer. These resources are associated with identical elements, that is, one of the learning principle. Identical elements refer to the extent of the stimuli and responses in training setting that are similar to the real work environment (Van der Locht, Van Dam and Chiaburu, 2013). Providing a training setting that resembles the real work setting is crucial, particularly for management training. For the present study, during the assessment programme, managers were exposed with same stimulus with the workplace, such as decision-making and negotiation activities (cognitive resource), role play (emotional resource), and management game (physical resource). Thus, by experiencing these identical elements during training, this can motivate the managers to use and practice what they learned back to workplace.

5.2.1.3 Psychological conditions of personal engagement and self-efficacy

Findings from this study suggested that psychological conditions of personal engagement positively predicted self-efficacy of managers. Self-efficacy can be defined as a judgement an individual makes about his or her ability to perform a given task (Bandura, 1982). In the training context, self-efficacy exhibits the trainees' judgement about their capability to perform successfully in training (Al-Eisa, Furayyan and Alhemoud, 2009). It was posited that the higher the trainees' self-efficacy, the more confidence they will have in their ability to successfully acquire targeted skills and perform trained tasks (Grossman and Salas, 2011).

The positive link between psychological conditions and self-efficacy explains that when managers find meaningful experience with the task, being able to access the resource to perform the task, and they receive supportive interactions in their work context, the managers acquire more

confidence and belief in his or her abilities to performed the job. Apart from that, experiencing psychological safety can instil manager's confidence in expressing their idea pertaining to work. An empirical work by Luthans and Peterson (2002) for instance, found support that employee engagement has direct impact on managers' self-efficacy.

The significant association between psychological conditions, motivation to transfer, and motivation to learn are in accordance with the Theory of Planned Behaviour (Ajzen, 1991). According to Ajzen, the theory of planned behaviour is a theory designed to predict and explain human behaviour in specific contexts (Ajzen, 1991, p.181). It also explains the degree to which individuals are capable of performing a given behaviour, the extent to which they have requisite resources, and belief in that they can overcome whatever obstacles that may occur (Ajzen, 2002, p.677).

The theory posited that intention behaviour determines human behaviour. The intention behaviour are influenced by three components, namely attitude toward behaviour, subjective norm, and perceived behavioural control. The attitude toward behaviour explains the dispositioned to respond favourable or unfavourable to specific behaviour (Ajzen, 1991). Attitudes toward meaningfulness in work will lead to favourable behaviour of managers. This is because, when managers perceive that the task performed is worthwhile, useful, and valuable, they will give effort and are willing to portray positive behaviour that is acceptable for themselves as well as other members in the organisation. In addition, as middle managers in public sector, they are the Management and Professional Group, and they are responsible to map the future oriented strategies and action plans to address the challenges that protect national and public interests. A study by Gegenfurtner et al. (2009) supported the theory of planned behaviour where attitude toward training was found to be significant with autonomous motivation to transfer.

The second component, subjective norm refers to perceived social pressure to perform or not to perform the behaviour (Ajzen, 1991). This component is related to psychological safety that is concerned with feedback from the work environment (e.g., supervisor, subordinates, and peers) and the consequences of the performed behaviour of the managers. The third component of prediction on intention behaviour is perceived behaviour control. Perceived behaviour control is defined as perceived ease or difficulty of performing the behaviour (Ajzen, 1991, p.188). The perceived behaviour control is associated with psychological availability. This is because, if managers believe that they could overcome any obstacles, such as lack of opportunity to learn and insufficient resources (tangible and intangible resources), it can motivate them to successfully perform the intended behaviour.

5.2.1.4 Psychological conditions of personal engagement and post-training behaviour

The psychological conditions of personal engagement were found to have no impact on post-training behaviour. It denotes that when employees personally engage with their task, it does not directly indicate any changes in their behaviour. Plausible explanation of the insignificant direct relationship between psychological conditions and post-training behaviour is that, managers may feel that after they complete the assessment programme, most of them are promoted to higher positions. For example, managers with Grade 52 who successfully complete the assessment, they are promoted to a higher Grade, which is Grade 54. This means that they will perform more complicated roles and most probably face more challenging tasks as compared to the previous grade (Grade 52). This will create different meaning and value to the new task. Thus, this requires a certain period for managers to personally engage with the task that could influence the change in their behaviour. In addition, they have to adapt with the new work environment, such as different group of subordinates, different colleagues, as well as different supervisor. The managers will face with uncertainty about being accepted by the new team. Therefore, it reduces the level of feeling psychologically secure when performing the task. This is in line with the work by Creon and Shermuly (2019) who found that when an individual works with new and smaller groups, it decreases their level to transfer.

5.2.2 The direct relationship between motivation to learn, motivation to transfer, self-efficacy, and affective learning

The current study reported that motivation to transfer and self-efficacy significantly influence affective learning. It shows that when managers have desire or intention to apply new knowledge and belief that they have capability and ability to perform the task, it will facilitate the learning process. Motivation to transfer and self-efficacy were found to be crucial factors to facilitate the learning process. For instance, managers with low motivation will choose not to use or apply what they have learned during training back to workplace, and they do not believe they could perform well, as they are not willing to learn during training. The positive link between motivation to transfer and learning provides additional view on the importance of motivation to transfer in predicting learning. This is because, most of the previous studies focused on the link between motivation to learn, learning, and transfer (e.g., Kodwani and Prashar, 2019; Weissbein et al., 2011; Zumrah, 2013). The findings also highlighted the importance of self-efficacy that predicts learning among trainees. According to Grossman and Salas (2011), trainees with higher self-efficacy will be more confident with their ability to learn and apply new knowledge. Thayer and Teachout (1995) developed a transfer model and demonstrated that self-efficacy has direct linkage to learning. The result of this study is consistent with the findings by Dierdoff, Surface and

Brown (2010) in their study on frame of reference training. In addition, Esfandagheh, Harris and Oreyzi, (2012) also reported a positive relationship between pre-training self-efficacy and learning outcomes.

5.2.3 The mediating role of motivation to transfer, self-efficacy, and affective learning

Based on the findings of the study, two mediation analyses were supported. The results indicated that motivation to transfer mediates the relationship between psychological conditions of personal engagement and affective learning. It explains that when managers feel that their work is valuable and meaningful, they are being supported with positive work environment, and they have been given sufficient resource to perform, they are willing to apply and use any new knowledge gained from development programmes. As a result, it facilitates the learning process to gain new KSA. If managers do not experience psychological attachment to their work, it will directly hinder the intention to use new KSA, and as a result, the learning process will not occur.

Self-efficacy was found to mediate the relationship between psychological conditions and affective learning. This finding suggested that having psychological presence at work, that is, experiencing meaningfulness, psychologically safe and available, increased managers' belief, and confident in their abilities, helps managers to learn during training.

These findings are related to the empirical work by Fletcher (2016) on training intervention and personal role engagement. Apart from that, the results of this study met the recommendation by Wollard and Shuck (2011), and Shuck and Herd (2012) regarding the need to examine engagement from Kahn's framework in developing employee performance through training and development.

Based on these findings, it can be confirmed that psychological conditions of engagement are antecedents to determine the transfer of training, that is, changes in behaviour of managers. Even though the findings failed to prove a direct relationship between psychological conditions of personal engagement and training effectiveness (i.e., post-training behaviour), there are direct links between psychological conditions of personal engagement, motivation to learn, motivation to transfer, and self-efficacy. Therefore, it is suggested that psychological conditions of personal engagement must exist and could be regarded as pre-training conditions of transfer of training.

Apart from that, these findings contribute to the employee engagement field particularly from Kahn's theory of personal engagement that treats the psychological engagement as an antecedent of employee performance. This study answers a call from meta-analysis work by

Bailey et al. (2017) who stressed that due to the lack of research on Kahn's theory of personal engagement, more studies should be conducted to examine this theory.

5.2.4 Discussion of insignificant findings

The present study showed that no significant impact exists between motivation to learn and affective learning. It explains that even though trainees were motivated to learn, it does not give any influence or changes in their affective learning outcomes. The findings contradict with previous empirical works (Chauhan et al., 2017; Bhatti et al., 2014; Diamantidis and Chatzoglou, 2014). A possible explanation on this result is that, it is related to content relevance or training design. The content of the assessment course attended by managers consisted of management game, case study, problem solving, negotiation, and debate. These activities might be related to the actual tasks performed by managers, however, the training content should be more complex and challenging in order to motivate the managers to learn during the training. According to Burke et al. (2007), in order to successfully transfer the training, it is important for trainees to understand relationship between training content and work task.

The findings failed to support the mediating role of affective learning on the relationship between motivation to learn and post-training behaviour, motivation to transfer, and post-training behaviour, as well as self-efficacy and post-training behaviour. A plausible explanation is that even though managers are willing and have desire to learn, and believe that they are capable to learn during training, it does not necessarily mirror the occurrence of learning process, thus it does not affect changes in their behaviour. The reasons might be that the managers may perceive that content or the process of learning is too simple, or uninteresting, so they will not learn during training. These findings are in contrast with previous studies (Ng and Ahmad, 2018; Bhatti et al., 2014; Dierdoff, Surface and Brown, 2010).

In addition, motivation to learn does not mediate the relationship between psychological conditions of personal engagement and affective learning. The psychological conditions of personal engagement were found to be significantly associated with motivation to learn, but no positive link was found between motivation to learn and affective learning. This implies that managers who psychologically engage with their task and are willing to learn during training, do not experience impact of the learning process. A plausible explanation is that, the learning environment such as the venue and schedule of learning process could hinder managers' motivation to learn. Based on the content of the training programmes, the M-LEAP and E-LEAP programmes were conducted in four days with a full schedule. The pressure to understand the content and activities of the training programme is crucial. This is because at the end of the

training programme, the participants need to enrol in a formal examination and should fulfil a certain grade of the examination. Therefore, this could reduce motivation to learn among managers. The finding of this study contradicted with the work done by Sitzmann et al. (2009) who found a positive link between motivation to learn and affective learning.

5.2.5 The effect of control variables

The study used demographic factors as control variables. The findings of the study reported that there were no associations between gender, age, race, work grade, and job tenure with independent, mediating, and dependent variables. These findings were in line with other studies. In training transfer, Chiaburu et al. (2010) reported that there is no significant relationship between age, gender, education level, and job tenure with training transfer. Schmidt (2009) also indicated no positive relationship between education level, age, gender, race, and job training satisfaction. Blume et al. (2010) in a meta-analysis reported that there is small correlation between age, education, and male gender, with training transfer. Another meta-analysis work by Gegenfurtner and Vauras (2012) found no support between age and motivation to learn, but showed strong moderating effect on motivation to learn and transfer. Gegenfurtner, Schmidt-Hertha and Lewis (2020) also reported that older workers were more interested in training content, but not in transferring the training.

In employee engagement studies, a few findings examined the relationship between demographic and the level of engagement. Vera et al. (2016), and Dikkers, Van Engen and Binkenburg (2010) in their empirical work reported no significant findings between gender, age, and work experience on employee engagement.

In relation to the association between demographic and continuous variables, only two demographic factors were reported to have influence on the continuous variable. Education level was found to have a positive impact on psychological safety. In addition, position/job title showed positive association with controlled motivation to transfer.

The positive relationship between education level and psychological safety could explain that the higher level of education qualification the manager has, the more confident they are to voice out ideas, take risks, and discuss work-related issues openly. This implied that managers believe that they are being trusted to perform the task based on the qualification they are employed under. It also showed that education level represents a hierarchical status. This is because, when managers earn high level of education, they are recognised as an expert to perform the job. In a study performed by Edmonson et al. (2016), employees with higher status represent a higher level of

psychological safety. The findings of the present study were also in line with Kooij, Tims, and Akkermans (2017), Gadot, Zalmanovitch and Belonogov (2012), and Avery (2007).

In relation to the positive link between position/job title and controlled motivation to transfer, the findings explained that managers who have a higher position are willing to transfer KSA to the job compared to those with lower level positions. As explained previously, Gegenfurtner et al. (2009) classified two types of motivation to transfer, namely autonomous motivation to transfer and controlled motivation to transfer. Autonomous motivation to transfer reflects the willingness of the employee to transfer the knowledge driven by internal values. Controlled motivation to transfer is associated with external factors such as rewards or sanctions (Gegenfurtner et al., 2009). Thus, it plausible to explain that the positive link between position/job title and controlled motivation to transfer of managers was derived by rewards of being promoted to higher positions. Thus, the managers exhibited more effort to transfer the knowledge due to the rewards that they will potentially received.

The positive link between education level with psychological safety could be related to uncertainty avoidance dimensions as suggested by Hofstede (1983). It is important to understand these social demographic factors in the organisation. This is because it could increase and encourage participative culture in the organisation. To feel psychologically secure will increase the manager's participation in decision- making as well as create openness to receive feedback from subordinates. Organisations with high uncertainty avoidance culture will create unsafe psychological experience. Therefore, it could discouraged participative action by managers. In relation to positive link between position/job title and motivation to transfer, it could also be related to individualism collectivism dimension. This is because the managers need supportive co-workers and subordinates that facilitate the motivation to transfer process. With high collectivism organisation members, it could increase the success to transfer KSA.

5.3 Summary of the chapter

This chapter presented the discussion on the role of psychological conditions of personal engagement as antecedent of training effectiveness. The study demonstrated that psychological conditions do play a predicting role to determine transfer of training. In addition, the findings suggested the important role of motivation to transfer as a predictor of affective learning, which in turn affects behaviour change of trainees. The overall results added to the body of knowledge on Kahn's personal engagement theory and the impact on employees' performance.

Chapter 6 Conclusion

6.1 Introduction

This chapter focuses on the conclusion of the thesis. This chapter is divided into three parts. The contributions of the study are presented in the next section. Next, limitations of the study were discussed. Finally, to close the chapter, recommendations for future research were discussed.

6.2 Contribution of the study

6.2.1 Theoretical contribution

The findings from this research made a few theoretical contributions. The present research extended the training transfer theory. Most importantly, this research found that psychological perspective on trainees' characteristics could be explained through psychological conditions of engagement, which comprise psychological meaningfulness, psychological safety, and psychological availability. Looking back to the seminal work of Baldwin and Ford (1988), they offered a notable training transfer framework. In this framework, three factors contribute to the transfer of training, namely trainee characteristics, training design, and work environment. The present study provided new dimensions in trainees' characteristics, namely psychological meaningfulness, psychological safety, and psychological availability. Given the importance of trainees' characteristics as antecedent of training transfer, the findings from this study provide psychological domains as a new perspective to enhance transfer of training.

In addition, the current study also provided an insight on within-person to transfer the training. Huang, Gardner and Moayer (2016) stated that individuals may differ in transferring the learned skills back to the workplace. According to Sitzmann and Weinhardt (2019), most of the studies in assessing training practice focused on between-person level to evaluate the effectiveness of the training. In addition, they asserted that it is crucial for researchers to diagnose training effectiveness at within-person level that could provide more reliable impact on transfer of training. Thus, the present study gave added literature on intra-individual or within-person process to transfer from personal engagement perspective.

This research added new knowledge on Kahn's psychological conditions of engagement. This research found that psychological conditions indirectly affects training effectiveness. In addition, this study added a discussion about the Kahn's work on psychological conditions of engagement in Malaysia, a non-Western country. Previous studies on employee engagement utilised the JDR perspective and used UWES as a measurement tool (e.g., Dubbelt, Demerouti and Rispens, 2019; Tesi, Aiello and Giannetti, 2019; Saari et al., 2017). In a recent meta-analysis work by Fletcher et al. (2019), they confirmed that only 11 studies were found to utilise Kahn's personal role of engagement in the public sector.

Apart from that, this study used May, Gilson and Harter (2004) to measure the psychological conditions of personal engagement. This measurement was derived from Kahn's perspective on personal engagement. Therefore, the findings from this study could be treated as a starting point to validate this type of measurement in the Malaysian context. In other words, to get more meaningful results, the measurement could be validated in the local language, that is Malay. A study by Inoue et al. (2010) for example utilised the Japanese version of Utrecht Work Engagement Scale (UWES) and reported acceptable reliability and validity to the original version of UWES. Therefore, the same approached could be performed with the measurement instrument developed by May et al. (2009).

The research focused on the leadership assessment programme in the public sector. The findings from this study provided additional understanding on how to maximise the benefits of training in the public sector. Most importantly, this study highlighted the important role of psychological conditions of engagement that reflects how employees are immersed in their work. In addition, this study added a discussion about the Kahn's work on psychological conditions of engagement in Malaysia, a non-Western country.

6.2.2 Practical contribution

Practical contribution is a vital issue in research. The findings of this study provided empirical evidence from the Malaysia Public Service Department pertaining to their effort to improve the KSA of the managers. The findings proved that the organisation should be aware about the psychological aspects of trainees before sending them to attend any training programmes. Apart from that, there should be a clear or precise clarification about what to achieve from the assessment programme (M-LEAP and E-LEAP) and the Malaysia Public Service Department should align these objectives with the training provider centre, that is INTAN.

6.2.3 Methodological contribution

In meta-analysis review by Blume et al. (2010) they stated that there are still limited studies using longitudinal approaches. This present study filled this gap by employing multiple times of data collection. This research collected the data at three different times, that is Time 1: before the participants join the training programme, Time 2: immediately after they finished the training programme, and Time 3: four months after participating in the training programme. Therefore, the findings from the study provides more rigorous results.

6.3 Limitations

This study is not without limitations. The present study used self-report, that is, data sourced from managers who participated in assessment programmes. Despite collecting the data at three different points in time, it is recommended to use multi-source data, for example subordinates and peers. This is because, subordinates and peers have daily interaction with managers at the workplace, they have the opportunity to observe changes in managers' behaviour.

Apart from that, the attrition is one of the common issues when evaluating the training programme. This study also suffered from the attrition, meaning to say that a few of the managers did not completed the evaluation process. In the present context, the low rate of response to the survey after four months upon completing the programme occurred due to transition of the position or the managers have been transferred to different ministries. Therefore, it limited the numbers of participants to be evaluated after four months of completing the assessment programme.

Another limitation arising from this study is the non-linear impact. Even though the structural model had confirmed the linear relationship between the variables, yet past scholars (Ford, Baldwin, and Prasad, 2018; Huang, Ford, and Ryan, 2016) argued that such relationships might not be linear at all the time as they are likely to be intervened by other factors.

In this study, these factors might be content of training programme and the level of respondents' knowledge. Therefore, to further investigate the possibility of the non-linear relationships between the examined variables, future study could replicate this framework in a different context, such as different training programme organised by INTAN.

For instance, this framework could be replicated in one prominent programme, that is, The Advanced Leadership and Management Programme. This is a mandatory course for Premier Grade officers in the public service. This is because, those officers hold higher positions in public service and play important roles in decision making. Therefore, the experience of psychological

conditions could flatten or decrease their motivation to apply the training, motivate their effort to learn, and also increase their self-efficacy to learn and transfer the training due to demands and challenges of work performed.

The operationalisation of psychological conditions of personal engagement is one of the limitation for the present study. Most of the scholars agreed that Kahn's personal engagement is a suitable framework to be used to explain the engagement concept (Bailey et al., 2015; Fletcher, 2016; Fletcher et al., 2019). However, there is still limited concrete operationalisation of this term in HRD field. Most of the research on engagement related to Kahn's work in HRD have been put forward by Shuck and colleagues (Lee, Rocco and Shuck, 2020; Shuck et al., 2017; Shuck, Rocco and Albornoz, 2011). The ensuing discussions however, focused on HRD field without giving specific attention to HRD practices, particularly transfer of training. Therefore, there is a concern about redundancy of the psychological condition construct with other motivational related constructs in transfer of training.

6.4 Recommendation

This research has highlighted a number of possible future studies. Firstly, in terms of measurement, it is recommended that future research could validate the survey of employee engagement in HRD context. One potential survey awaiting to be examined is the Employee Engagement Scale developed by Shuck, Nimon and Zigarmi (2016). The validation of this item could establish more revealing findings because the measurement items were grounded from Kahn (1990) conceptualisation of personal conditions of engagement. In relation to the measurement issue, the present study did not conduct multiple data collection on psychological conditions of engagement. The end of the present study was to identify behavioural changes of the trainees predicted by psychological conditions of engagement.

Therefore, future studies should consider to test the multiple data collection on this construct (psychological conditions of engagement) to identify if there are changes in the level of individual engagement. By doing this, it could explain the fluctuating level of engagement among individuals (Kahn, 1990).

Methodologically speaking, future research should emphasise on the longer time period on final wave of collecting the multiple data. The present study implied the third data collection four months after the training was completed. However, there should be more additional time of post-training data collection, such as six months, that could result in more observable changes of the participants' behaviour.

Another relevant direction for future research is to explore the role of the psychological availability construct in HRD field. Very limited research focused on psychological availability as a single dimension (e.g., Binyamin and Carmeli, 2010; Byrne et al., 2017). Most of the research in psychological conditions of engagement measured the psychological availability along with two other constructs, that are psychological meaningfulness and psychological safety (e.g., Barrick et al., 2015; Rothman and Welsh, 2013). It is valuable for researchers to understand how this construct (psychological availability) could determine employees' performance.

Future studies can further explore the potential link between psychological conditions of engagement and accountability to transfer training. Accountability is one of the understudied work environment factor that could facilitate transfer of training. According to Grossman and Burke-Smalley (2018), accountability has positive impact in transfer of training. When employees are accountable for what they are supposed to apply in the training, it is expected that it could enable them to adhere to performance expectation. Future research could examine how psychological conditions of engagement interact with the accountability construct to enhance positive transfer of training.

Another promising avenue for future research is to investigate the level of personal engagement based on training cohorts. Individuals' level of personal engagement are varied and fluctuate (Kahn, 1990). This is because the employee might experience different levels of meaningfulness, safety, and availability when performing their task. Thus, it could reflect the level of applying the KSA to their job.

The same conditions occur in transferring the KSA among individuals. Blume et al. (2010) for instance, were concerned about the trajectory level of transfer among trainees and between trainees. Huang, Gardner and Moayer (2016) posited that employees might vary in transferring the KSA, including initial attempts to transfer. This warrants that individuals who vary in their levels of engagement might also vary in their effort to transfer the training.

6.5 Summary of the chapter

This chapter provided the theoretical, practical, and methodological aspects of the study. Apart from that, a few limitations of the study were explain. In addition, future research directions were also suggested to enhance our understanding regarding the psychological conditions of personal engagement and transfer of training.

Appendix A

Participant Information Sheet

Study Title: Psychological conditions as an antecedent of training effectiveness

Researcher: Edora Ismail
ERGO number: 25529

Please read this information carefully before deciding to take part in this research. It is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?
I am a PhD student at Southampton Business School, University of Southampton United Kingdom. It is important for me to conduct this survey research as a requirement for my PhD qualification. I will ask you about the engagement construct and how it could influence on training effectiveness on the training programme that you participate.

Why have I been asked to participate?
You have been selected to participate in this survey as you are the participants of the training programme that is related to this research.

What will happen to me if I take part?
You are required to fill in the questionnaire at three stages that is before you attend the training program, immediately after you complete the training programme and four months after you participated in the training programme.

Are there any benefits in my taking part?
Your participation in this study will contribute to the body of knowledge particularly in helping the Public Service as well as the National Institute of Public Administration to improve the effectiveness of development activities among public servants specifically for the future leaders.

Are there any risks involved?
No risk involved in this study.

Will my participation be confidential?
This research comply with the Data Protection Act/University policy. All the information gained from the survey will be stored in my personal laptop that no one could access. The information will remain confidential and it will be coded so that the researcher do not identify the participants; neither you, or your organization will be explicitly identified in the thesis.

What should I do if I want to take part?
If you agree to participate in this study, a questionnaire will be given to you by the officer from Service Section at Public Service Department. They will contact you through email or phone.

What happens if I change my mind?
You have the right to withdraw from this research at any time.

What will happen to the results of the research?
This research is conducted in collaboration with the National Institute of Public Administration (INTAN) and it has been agreed that one copy of the report will be submitted to this institute. Apart from that, the findings from this research will be published and presented in academic conference.

Where can I get more information?
For further information, you can contact research supervisors:

1. **Professor Yehuda Baruch (Y.Baruch@soton.ac.uk)**
2. **J.K.Wang (J.K.Wang@soton.ac.uk)**

What happens if something goes wrong?
You may contact the research support officer, Dr Jennifer Sarha (risethic@soton.ac.uk) or Head of Research Governance, Research Governance Office, University of Southampton, Southampton, SO17 1BJ. Phone: 02380 595058, Email: rgoinfo@soton.ac.uk

Thank you.
Thank you for your time to read this information and your interest in participating in this research.

CONSENT FORM (1.0)

Study title: Psychological conditions as an antecedent of training effectiveness

Researcher name: EDORA ISMAIL
ERGO number: 25529

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (*15/02/2017 /version 1.0*) and have had the opportunity to ask questions about the study.	
I agree to take part in this research project and agree for my data to be used for the purpose of this study.	
I understand my participation is voluntary and I may withdraw (at any time) for any reason without my rights being affected.	
I agree to be contacted regarding future unspecified ethically approved research projects. I therefore consent to the University retaining my personal details, kept separately from the research data detailed above. I understand that I can request my details be deleted at any time.	
I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of ethically approved research studies.	

Name of participant (print name).....

Signature of participant.....

Date.....

Name of researcher (print name): EDORA ISMAIL

Signature of researcher: *Edora*

Date: 10/10/2017

Appendix B

Dimensions	**Items**
Psychological meaningfulness	The work I do on this job is very important to me My job activities are personally meaningful to me The work I do on this job is worthwhile My job activities are significant to me The work I do on this job is meaningful to me I feel that the work I do on my job is valuable
Psychological safety	If I make a mistake in this organisation, it is often held against me Members of this organisation are able to bring up problems and tough issues People in this organisation sometimes reject others for being different It is safe to take risk in this organisation It is difficult to ask other members of this organisation for help No one in this organisation would deliberately act in a way that undermines my efforts My unique skills and talents are valued and utilised when I am working with members of this organisation
Psychological availability	I am confident in my ability to handle competing demands at work I am confident in my ability to deal with problems that come up at work I am confident in my ability to think clearly at work I am confident in my ability to display the appropriate emotions at work I am confident that I can handle the physical demands at work
Motivation to transfer	While applying training at work, I can learn a lot This learning is important to me Successfully applying the training content is an exciting challenge for me This challenge is important to me Successful training application will probably be appreciated by my supervisor (e.g. through praise) This appreciation is important to me

Appendix B (Continued)

Dimensions	**Items**
Motivation to transfer	This appreciation is important to me Successfully applying the training content will probably result in a material reward, such as a financial bonus These material rewards are important to me
Motivation to learn	I am trying to learn as much as I can from this training programme Increasing my skills through training in my organisation has helped me to perform my job better I look forward to actively participating in training I use my own time to prepare for training courses by practicing and completing assignments I more clearly understood my strengths and weaknesses as a result of participating in the assessment centre I am motivated to learn the skills emphasized in the training programme I am going to put forth a lot of effort if needed to learn the material
Self-efficacy	I will be able to achieve most of the goals that I have set for myself When facing difficult tasks, I am certain that I will accomplish them. In general, I think that I can obtain outcomes that are important to me I believe I can succeed at most any endeavour to which I set my mind I will be able to successfully overcome many challenges I am confident that I can perform effectively on many different tasks. Compared to other people, I can do most tasks very well. Even when things are tough, I can perform quite well
Learning	Increase ability to identify problems Increase ability to solve practical problems Add to understanding of how to seek and use information for problem solving Increase ability to implement my decision Become more aware of my own feelings and beliefs Become more aware of the feelings and beliefs of others

Appendix B

Appendix B (Continued)

Dimensions	**Items**
Learning	Add to ability to provide meaningful feedback to team members Motivate people who work with me Learn to help people resolve conflicts Learn something important about myself as a leader Experiment new behaviour Learn new behaviour
Post-behaviour training	I often apply the training content in order to improve my performance The training programme helped me to improve my job performance I have incorporated the learned training content into my daily job activities Because of my training participation, I have greater confidence in my job Because of my training participation I rarely seek help from my peers Because of my training participation, I help my peers who have not participated in training when they have a on the job problem Because of my training participation, I feel more comfortable talking with my peers regarding job-related problems Because my training participation, my job anxiety has been significantly reduced Because of my training participation, I easily discuss with my supervisor about my work activities Because of my training participation, I make the right decision more quickly Because of my training participation, I am not afraid to discuss with my supervisor about my performance level Because of my training participation, my job performance has been increased

Appendix C

Section A: Personal Information

Please (√) in the appropriate box.

1 Gender

☐ Male

☐ Female

2. Age

☐ Less than 30 years old

☐ 30 to 39 years old

☐ 40 to 49 years old

☐ More than 50 years old

3. Ethnicity

☐ Malay

☐ Chinese

☐ Indian

☐ Other: Please specify. _____

4. Highest academic qualification obtained

☐ PhD

☐ Master

☐ Bachelor

5. Scheme Grade:
Please state: _____

6. Length of service for the current organization:

Please state: _____ (years and month/s)

Section B:

The following statements requires you to indicate how you feel about your experience in your job based on the given scale:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	The work I do on this job is very important to me	1	2	3	4	5
2	My job activities are personally meaningful to me	1	2	3	4	5
3	The work I do on this job is worthwhile	1	2	3	4	5
4	My job activities are significant to me	1	2	3	4	5
5	The work I do on this job is meaningful to me	1	2	3	4	5
6	I feel that the work I do on my job is valuable	1	2	3	4	5
7	I am confident in my ability to handle competing demands at work	1	2	3	4	5
8	I am confident in my ability to deal with problems that come up at work	1	2	3	4	5
9	I am confident in my ability to think clearly at work	1	2	3	4	5
10	I am confident in my ability to display the appropriate emotions at work	1	2	3	4	5
11	I am confident that I can handle the physical demands at work	1	2	3	4	5

The following statements requires you to indicate how you feel psychologically safe in performing your job based on the given scale:

Very Inaccurate	Inaccurate	Neither inaccurate or accurate	Accurate	Very accurate
1	2	3	4	5

		Very inaccurate	Inaccurate	Neither Inaccurate Or accurate	Accurate	Very accurate
12	If I make a mistake in this organization, it is often held against me	1	2	3	4	5
13	Members of this organization are able to bring up problems and tough issues	1	2	3	4	5
14	People in this organization sometimes reject others for being different	1	2	3	4	5

15	It is safe to take risk in this organization	1	2	3	4	5
16	It is difficult to ask other members of this organization for help.	1	2	3	4	5
17	No one on this organization would deliberately act in a way that undermines my efforts	1	2	3	4	5
18	My unique skills and talents are valued and utilized when I am working with members of this organization	1	2	3	4	5

Section C:

The following statements requires you to indicate your level of agreement or disagreement with respect to the following statement:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	While applying training at work, I can learn a lot	1	2	3	4	5
2	This learning is important to me	1	2	3	4	5
3	Successfully applying the training content is an exciting challenge for me	1	2	3	4	5
4	This challenge is important to me	1	2	3	4	5
5	Successful training application will probably be appreciated by my supervisor (e.g. through praise)	1	2	3	4	5
6	This appreciation is important to me	1	2	3	4	5
7	Successfully applying the training content will probably result in a material reward, such as a financial bonus	1	2	3	4	5
8	These material rewards are important to me	1	2	3	4	5
9	I am trying to learn as much as I can from this training program	1	2	3	4	5
10	Increasing my skills through training in my organization has helped me to perform my job better	1	2	3	4	5
11	I look forward to actively participating in training	1	2	3	4	5
12	I use my own time to prepare for training courses by practicing and completing assignments	1	2	3	4	5
13	I more clearly understood my strengths and weaknesses as a result of participating in the assessment centre	1	2	3	4	5
14	I am motivated to learn the skills emphasized in the training program	1	2	3	4	5
15	I am going to put forth a lot of effort if needed to learn the material	1	2	3	4	5

16	I will be able to achieve most of the goals that I have set for myself	1	2	3	4	5
17	When facing difficult tasks, I am certain that I will accomplish them.	1	2	3	4	5

Please indicate your level of agreement or disagreement to the following statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Statement: The management game, problem solving and negotiation activities in this training programme allows me to:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Increase ability to identify problems	1	2	3	4	5
2	Increase ability to solve practical problems	1	2	3	4	5
3	Add to understanding of how to seek and use information for problem solving	1	2	3	4	5
4	Increase ability to implement my decision	1	2	3	4	5
5	Become more aware of my own feelings and beliefs	1	2	3	4	5
6	Become more aware of the feelings and beliefs of others	1	2	3	4	5
7	Add to ability to provide meaningful feedback to team members	1	2	3	4	5
8	Motivate people who work with me	1	2	3	4	5
9	Learn to help people resolve conflicts	1	2	3	4	5
10	Learn something important about myself as a leader	1	2	3	4	5
11	Experiment with new behaviour	1	2	3	4	5
12	Learn new behaviour	1	2	3	4	5

Section D:

Post-Behaviour training

The following statements requires you to indicate your level of agreement or disagreement with respect to the following statement:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I often apply the training content in order to improve my performance	1	2	3	4	5
2	The training program helped me to improve my job performance	1	2	3	4	5

3	I have incorporated the learned training content into my daily job activities	1	2	3	4	5
4	Because of my training participation, I have greater confidence in my job	1	2	3	4	5
5	Because of my training participation I rarely seek help from my peers	1	2	3	4	5
6	Because of my training participation, I help my peers who have not participated in training when they have a on the job problem	1	2	3	4	5
7	Because of my training participation, I feel more comfortable talking with my peers regarding job-related problems	1	2	3	4	5
8	Because my training participation, my job anxiety has been significantly reduced	1	2	3	4	5
9	Because of my training participation, I easily discuss with my supervisor about my work activities	1	2	3	4	5
10	Because of my training participation, I make the right decision more quickly	1	2	3	4	5
11	Because of my training participation, I am not afraid to discuss with my supervisor about my performance level	1	2	3	4	5
12	Because of my training participation, my job performance has been increased	1	2	3	4	5

Thank you for your participation

Appendix D

Year	Author/s	Context	Variables
2018	Nazli & Khairudin	An empirical work was conducted among Malaysia civil defence force. The survey intent to identify the role of transfer of training mediates the relationship between organizational learning culture, psychological contract breach, work engagement, training simulation and organizational citizenship behaviour.	Organizational learning culture, psychological contract breach, work engagement, training simulation, transfer of training, OCB.
2016	Shantz et al.	The main objective of this study is to examine the role of work engagement mediates the relationship between HRM practices and the quality of care and safety in healthcare organisation. This study involving two different work groups i.e; nurses and administrative staff JD-R model	HRM practices (training, participation in decision making, opportunities for development and communication) Quality of care Safety

Appendix D (Continued)

Year	Author/s	Context	Variables
2015	Fletcher, L.	The aim of this paper is to identify how personal role engagement and work engagement can predict work role behaviour. Another objective of this study is to examine the role of these two variables that could mediate the relationship between training and work role behaviour.	Personal role engagement, work engagement, work role behaviour (proficiency, adaptability, proactivity) Training perceptions
2015	Rangel et al.	The purpose of this study is to identify how trainer's expressiveness can predict trainees' intentions to transfer. The relationship were examined based on the role of trainee engagement as mediating factor and the role of trainees' learning style as a moderating variable.	Trainer expressiveness, trainee engagement, trainee experimental learning style, transfer intentions
2015	Maden, C.	The main objective of this study is to examine the perceptions on High Involvement Human Resource Practices (HIHRP) as predictor for work engagement, learning goal orientation and proactive behaviours.	HIHRP (empowerment, competence development, information sharing, recognition and fair reward) Work engagement Learning goal orientation, individual innovation, feedback inquiry behaviours
2014	Suan, C.L., & Nasarudin, A.M.	This study investigate the role of HRM practices (service training, service rewards, performance appraisal and information sharing) as predictors for work engagement among frontline employees.	Service training, service rewards, performance appraisal, information sharing, work engagement

Appendix D

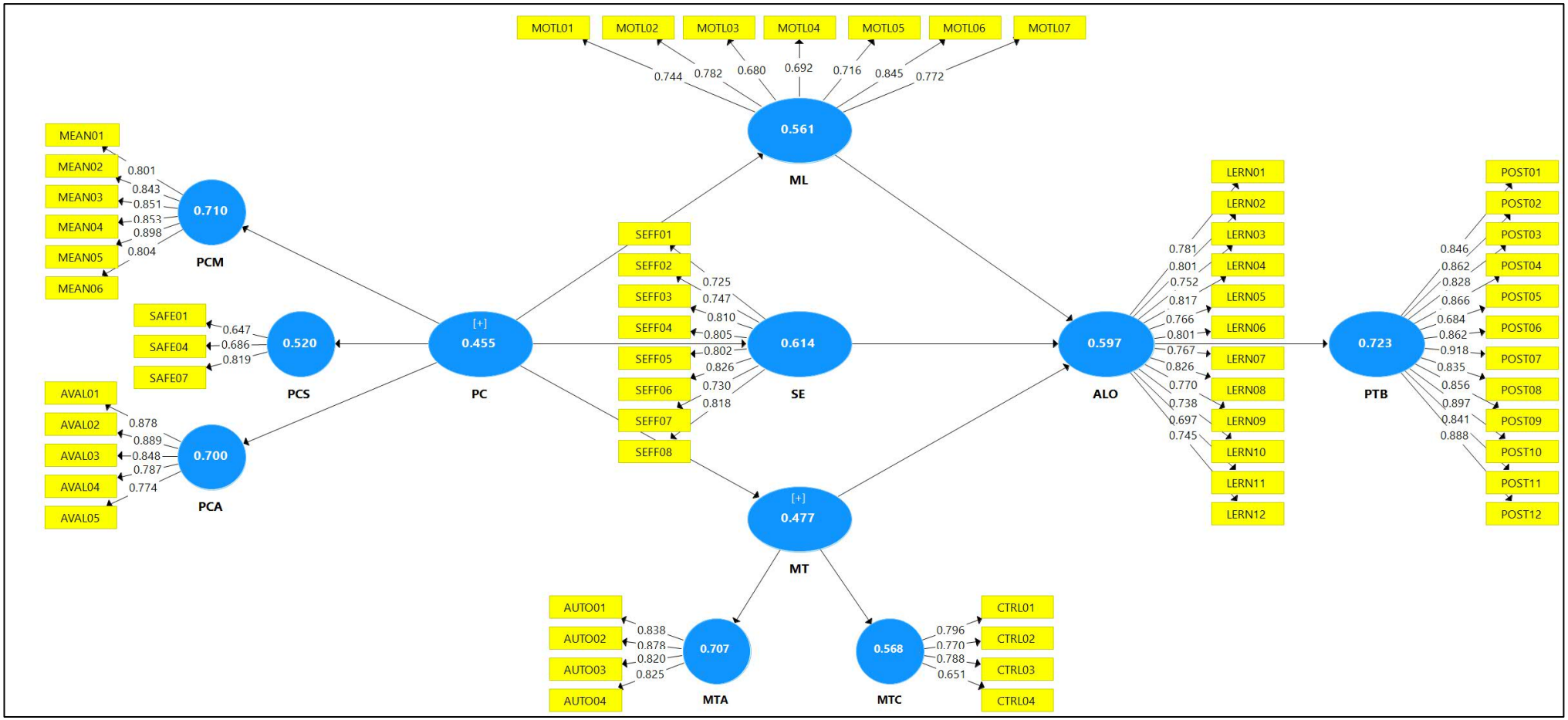
Appendix D (Continued)

Year	Author/s	Context	Variables
2013	Karatepe, O.M.	The aim of this study is to examine the role of work engagement as a mediator on the relationship between HPWP, job performance and extra-role customer service.	HPWPs (training, empowerment and rewards), job performance and extra-role behaviour.
2013	Johari et al.	The objective of this study is to investigate the role of HRM practices that influence employee engagement	HRM practices (training and development, financial and non-financial recognition, fringe benefits and supervisor-subordinate relationship), Employee engagement
2013	Gillet et al.	The objective of the study is to examine the role of perceived organizational support, motivation and supervisor support on employee engagement	Perceived organizational support, contextual and situational motivation, supervisor support and employee engagement.
2013	Trinchero et al.	The focus of this paper is to examine the perceived organisational support, satisfaction with training and development and discretionary power as antecedents for employee engagement	Perceived organisational support, training and development, discretionary power, Employee engagement
2012	Rurkkhum & Bartlett	This study aim to identify the relationship between employee engagement and OCB. In this study, the perceptions on HRD practices were included as moderator.	OCB, employee engagement, HRD practices (organisational support, access to HRD opportunities, support for HRD opportunities, benefits of training, formal career management support)

Appendix D (Continued)

Year	Author/s	Context	Variables
2012	Albdour & Altarawneh	The purpose of this study is to determine the impact of Corporate Social Responsibility dimensions on job and organisational engagement.	Training and education, human rights, health and safety, work life balance and workplace diversity. Job engagement Organisational engagement
2012	Chen & Chen	The main objective of this study is to identify the predictors and consequences of burnout and work engagement and how it impact the health problem and turnover intention of employees.	Job Resource (social support and possibility for development) Job Demand (Work-family conflict) Burnout, health problems and turnover intention
2011	Andrew & Sofian	The main objective of the paper is to examine the relationship between six dimensions in organisation and employee engagement (job and organisational engagement)	Employee communication, employee development, co-employee, image of the firm, reward and recognition, leadership, job engagement, organisational engagement
2009	Hadre & Reeve	Using ***training as intervention***, this study aim to investigate the role of management style that influence employees' motivation to become engage in their workplace.	Autonomous-supportive motivation style, Autonomous motivation, employee engagement

Appendix E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MOTL04
MOTL05
MOTL06
MOTL07
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0.716
0.845
0.772
0.561
ML
MEAN01
MEAN02
MEAN03
MEAN04
MEAN05
MEAN06
0.801
0.843
0.851
0.853
0.898
0.804
0.710
PCM
SAFE01
SAFE04
SAFE07
0.647
0.686
0.819
0.520
PCS
[+]
0.455
PC
SEFF01
SEFF02
SEFF03
SEFF04
SEFF05
SEFF06
SEFF07
SEFF08
0.725
0.747
0.810
0.805
0.802
0.826
0.730
0.818
0.614
SE
AVAL01
AVAL02
AVAL03
AVAL04
AVAL05
0.878
0.889
0.848
0.787
0.774
0.700
PCA
[+]
0.477
MT
0.597
ALO
LERN01
LERN02
LERN03
LERN04
LERN05
LERN06
LERN07
LERN08
LERN09
LERN10
LERN11
LERN12
0.781
0.801
0.752
0.817
0.766
0.801
0.767
0.826
0.770
0.738
0.697
0.745
0.723
PTB
POST01
POST02
POST03
POST04
POST05
POST06
POST07
POST08
POST09
POST10
POST11
POST12
0.846
0.862
0.828
0.866
0.684
0.862
0.918
0.835
0.856
0.897
0.841
0.888
AUTO01
AUTO02
AUTO03
AUTO04
0.838
0.878
0.820
0.825
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MTC
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CTRL02
CTRL03
CTRL04
0.796
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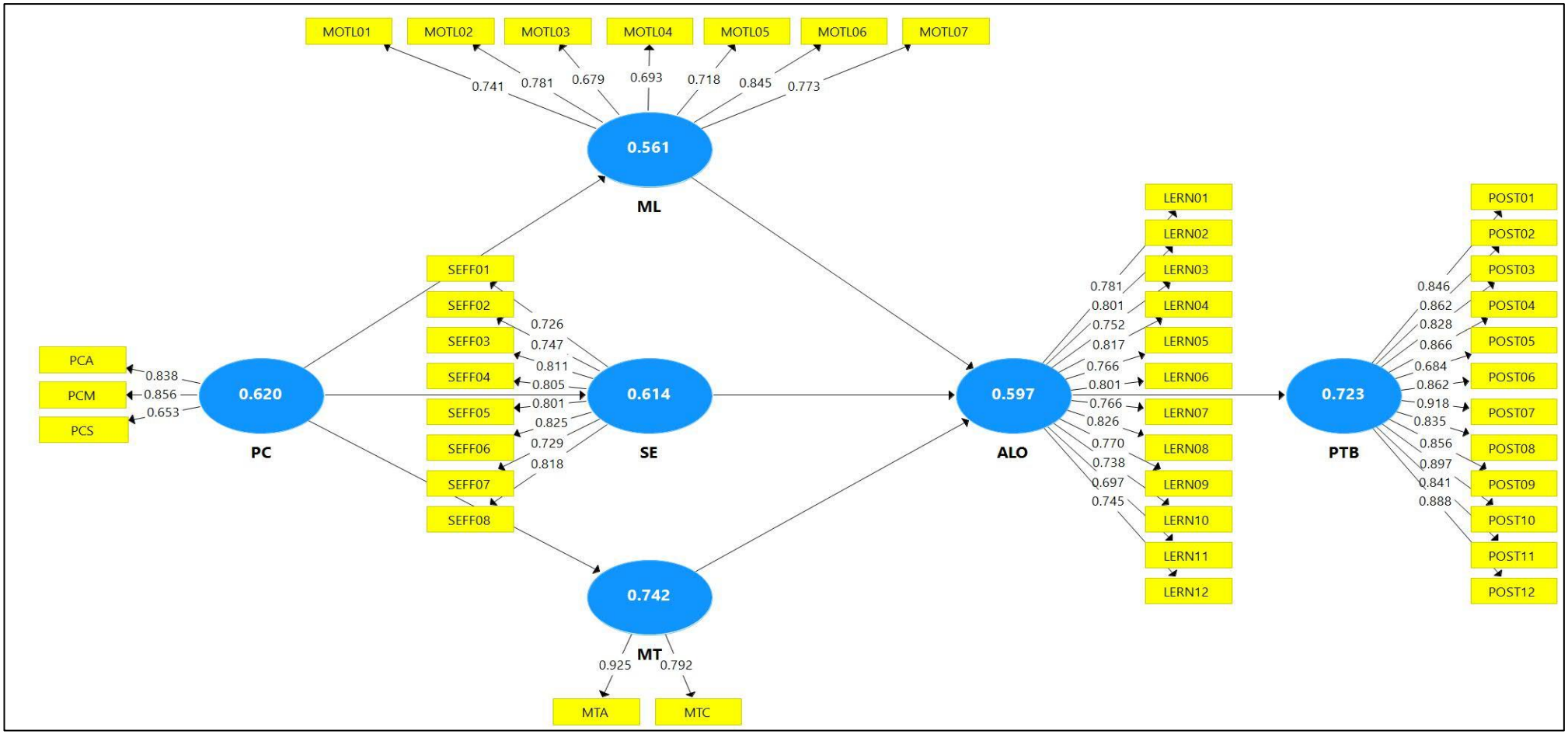
0.788
0.651

Appendix F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PCM
PCS
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0.620
PC
SEFF01
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SEFF04
SEFF05
SEFF06
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0.811
0.805
0.801
0.825
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0.818
0.614
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MT
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0.792
MTA
MTC
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ALO
LERN01
LERN02
LERN03
LERN04
LERN05
LERN06
LERN07
LERN08
LERN09
LERN10
LERN11
LERN12
0.781
0.801
0.752
0.817
0.766
0.801
0.766
0.826
0.770
0.738
0.697
0.745
0.723
PTB
POST01
POST02
POST03
POST04
POST05
POST06
POST07
POST08
POST09
POST10
POST11
POST12
0.846
0.862
0.828
0.866
0.684
0.862
0.918
0.835
0.856
0.897
0.841
0.888

Appendix G

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Bartlett's Test of Sphericity	Approx. Chi-Square	5530.308
	df	2080
	Sig.	.000

Appendix H

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.122	27.880	27.880	17.851	27.463	27.463	8.965	13.793	13.793
2	8.024	12.344	40.224	7.812	12.018	39.482	6.655	10.239	24.031
3	4.878	7.504	47.729	4.601	7.078	46.560	4.993	7.682	31.713
4	2.649	4.076	51.805	2.382	3.665	50.225	4.957	7.626	39.340
5	2.417	3.718	55.523	2.110	3.246	53.470	3.916	6.025	45.365
6	2.383	3.666	59.188	2.053	3.158	56.629	3.589	5.521	50.886
7	1.929	2.968	62.157	1.584	2.437	59.066	3.461	5.325	56.211
8	1.644	2.529	64.686	1.311	2.016	61.082	2.287	3.519	59.730
9	1.589	2.444	67.130	1.233	1.897	62.979	1.234	1.898	61.628
10	1.485	2.284	69.414	1.099	1.690	64.670	1.159	1.782	63.410
11	1.257	1.935	71.349	.931	1.433	66.102	1.083	1.666	65.076
12	1.205	1.853	73.202	.807	1.242	67.345	1.006	1.548	66.625
13	1.112	1.710	74.912	.750	1.154	68.498	.978	1.505	68.130
14	1.080	1.661	76.573	.709	1.090	69.589	.948	1.459	69.589
15	.978	1.505	78.078						
16	.904	1.391	79.469						
17	.823	1.267	80.736						
18	.787	1.210	81.946						
19	.765	1.177	83.123						
20	.741	1.139	84.263						
21	.722	1.110	85.373						
22	.657	1.011	86.384						
23	.606	.932	87.316						
24	.570	.877	88.193						
25	.553	.851	89.044						

Appendix I

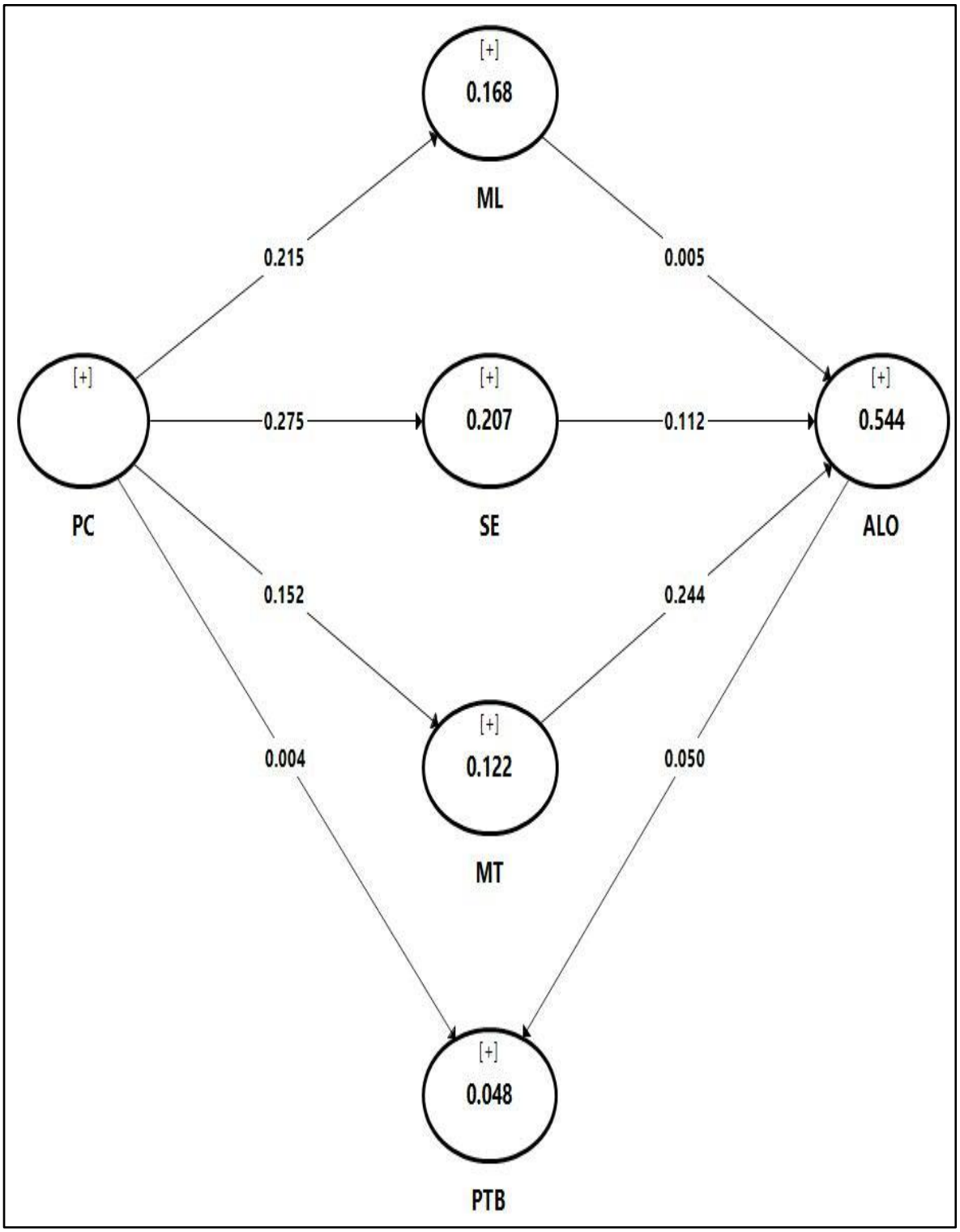
Rotated Factor Matrix[a]

	Factor													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MEAN1			.762											
MEAN2			.796											
MEAN3			.767											
MEAN4			.787											
MEAN5			.828											
MEAN6			.720											
ABLE1						.816								
ABLE2						.808								
ABLE3						.716								
ABLE4						.561								
ABLE5						.569								
SAFE1									-.410			.461		
SAFE2														.555
SAFE3									-.575					
SAFE4											.639			
SAFE5														
SAFE6									.421					
SAFE7			.486											
AUTO1		.493												
AUTO2		.539												
AUTO3		.444		.411										
AUTO4		.615								.431				
CTRL1								.472						
CTRL2								.456		.473				
CTRL3								.773						
CTRL4								.657						
MOTL1		.670												
MOTL2		.619												
MOTL3		.523												
MOTL4		.527												
MOTL5		.643												
MOTL6		.747												
MOTL7		.657												
SEFF1		.515												
SEFF2		.497			.420								.426	
SEFF3		.556			.429									
SEFF4					.821									
SEFF5					.784									
SEFF6					.668									
SEFF7					.535									
SEFF8					.616									
LERN01		.402					.697							
LERN02							.726							
LERN03		.524					.624							
LERN04				.466			.610							
LERN05				.690										
LERN06				.721										
LERN07				.496										
LERN08				.529			.416							
LERN09				.408			.403							
LERN10				.416			.412							
LERN11				.848										
LERN12				.840										
POST01	.789													
POST02	.818													
POST03	.793													
POST04	.846													
POST05	.695													
POST06	.800													
POST07	.910													
POST08	.873													
POST09	.885													
POST10	.909													
POST11	.839													
POST12	.842													

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 24 iterations.

Appendix J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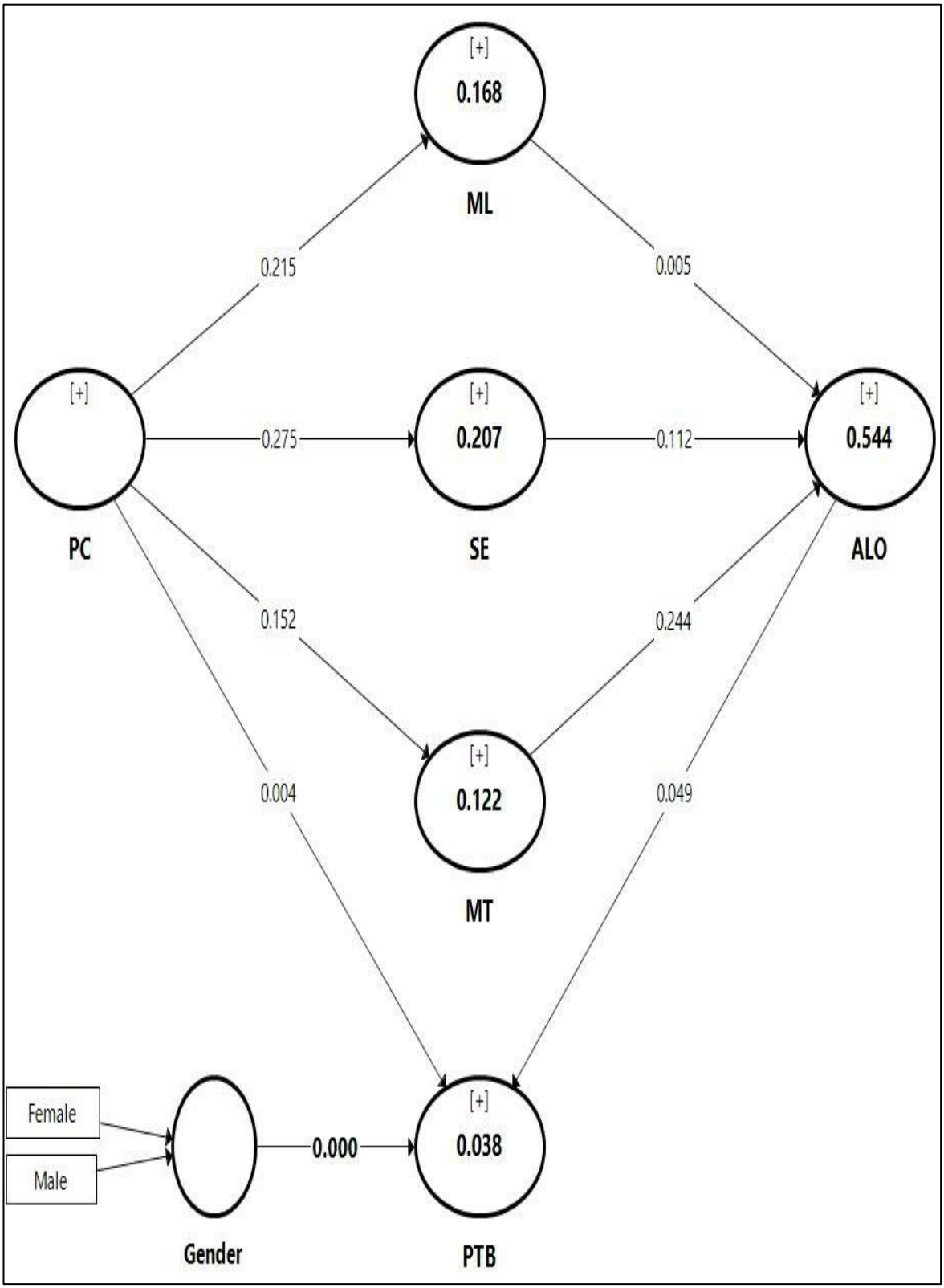
0.215
0.005
[+]
PC
0.275
[+]
0.207
SE
0.112
[+]
0.544
ALO
0.152
0.244
[+]
0.122
MT
0.004
0.050
[+]
0.048
PTB

Appendix K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ML
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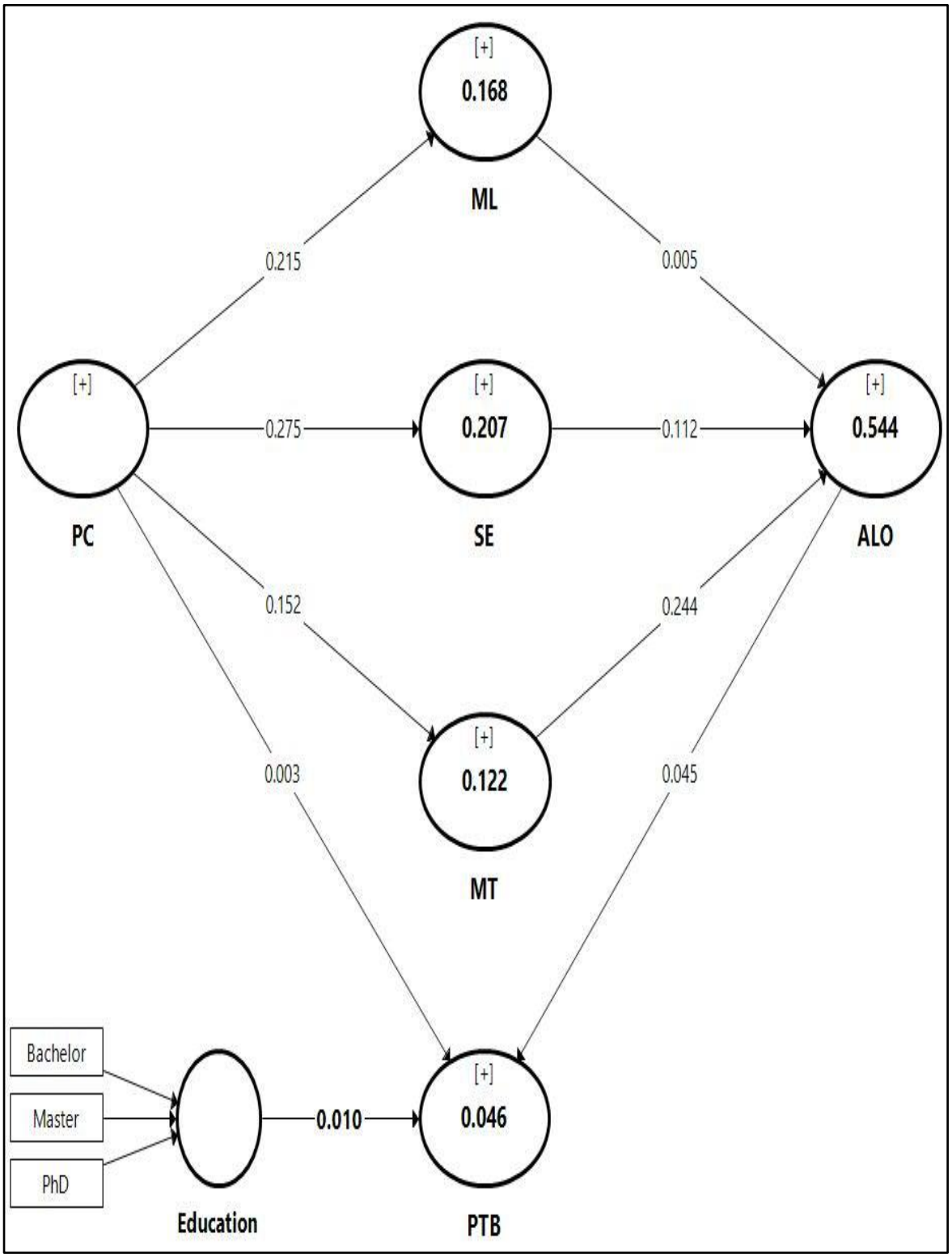
0.005
[+]
[+]
0.207
[+]
0.544
0.275
0.112
PC
SE
ALO
0.152
0.244
[+]
0.122
0.004
0.049
MT
Female
Male
0.000
[+]
0.038
Gender
PTB

Appendix L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ML
0.215
0.005
[+]
PC
0.275
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0.207
SE
0.112
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0.544
ALO
0.152
0.244
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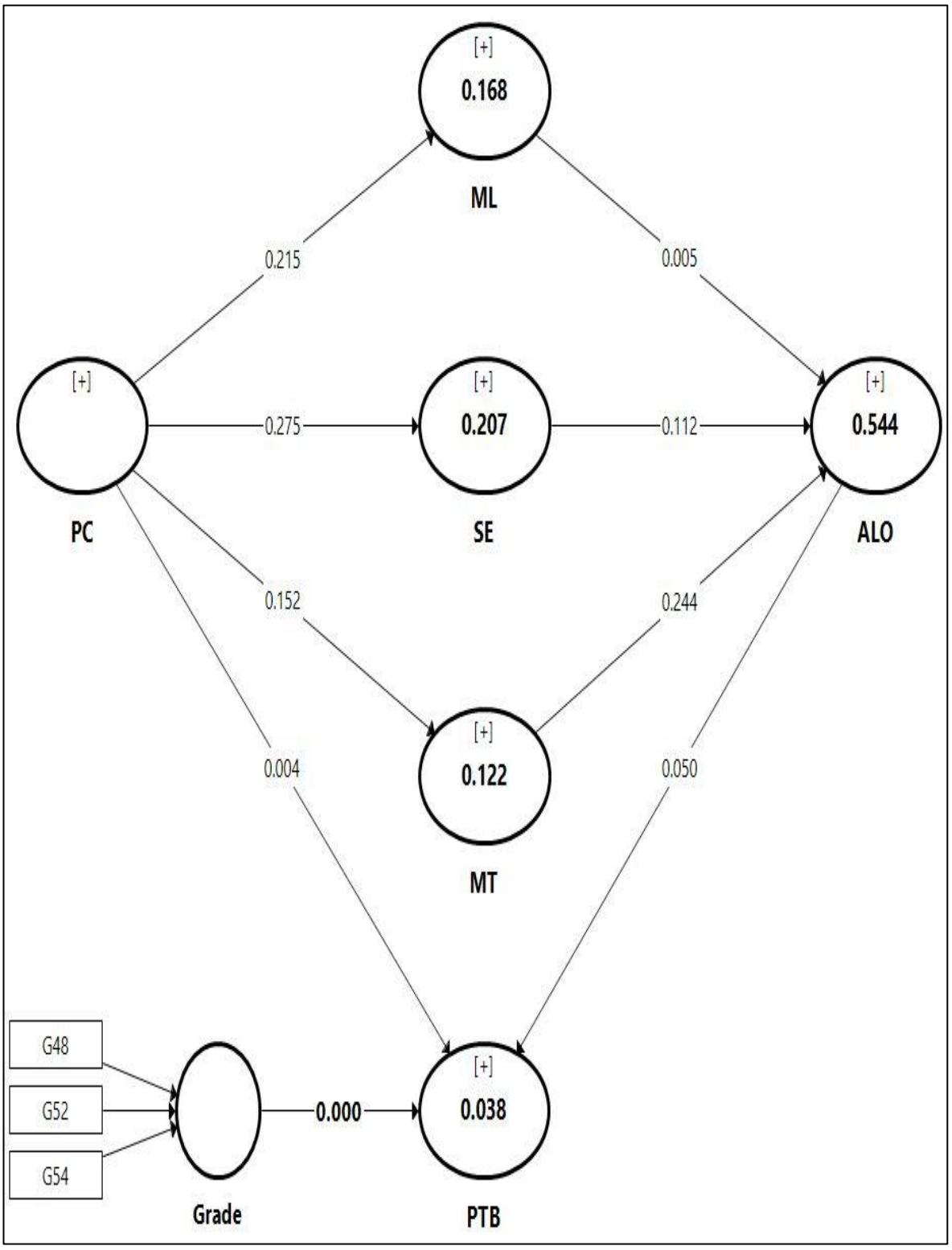
0.045
Bachelor
Master
PhD
Education
0.010
[+]
0.046
PTB

Appendix M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ML
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0.005
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ALO
0.152
0.244
[+]
0.122
MT
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0.050
G48
G52
G54
Grade
0.000
[+]
0.038
PTB

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