Human Resource Development in State-owned Enterprises in Vietnam: The Challenges of Developing Effective Transfer of Technical Training

Submitted by

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DEDICATION

To my Principal Supervisor (Professor Peter J. Dowling), my Cosupervisor (Dr Jennifer Spoor), my parents, teachers, my husband (Hieu Minh Hoang) and daughter (Linh Dieu Hoang).

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STATEMENT OF AUTHORSHIP

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere extracted in whole or in part from a thesis submitted for the award of any other degree or diploma. No other person's work has been used without due acknowledgment in the main text of the thesis. This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution or in the case of theses by publication.

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Human Resource Development in State-owned enterprises in Vietnam: The challenges of developing effective transfer of technical training

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Abstract

Although the literature on transfer of training (TOT) has increased and led to the identification of organizational environmental influences on the TOT, most of the cited research has used samples from the United States. There are very few studies using samples from developing countries. In order to address this concern, a study was conducted in eight different manufacturing Vietnamese State-owned enterprises (SOEs) to acquire a better understanding of a number of both environment and organizational factors that may significantly impact the transfer of technical training (TTT).

A mixed methods research design was adopted through the use of both a case study method and a questionnaire survey to examine several aspects in relation to activities of TTT in these eight selected SOEs. Qualitative data from employer/training director interviews in the selected SOEs were used to identify external factors influencing effective transfer of technical training (ETTT). Additionally, insights gained from questionnaire surveys of 185 employees in these SOEs were used to further identify the organizational factors most strongly associated with ETTT.

The findings of the manager interview data indicated that three key national environment factors (economic, educational and legal) impacted significantly on the process of TTT at the enterprise level. Employee survey data revealed links between organizational factors (e.g., individual characteristics, training design and work environment) and ETTT. Further, the findings from this study are evidence to suggest some major changes for improving the ETTT in Vietnamese SOEs, although more study is needed to clearly specify the contextual boundaries of external and internal environment impacts on TTT at the organizational level.

Chapter 1

Introduction

This chapter provides an introduction to the thesis. The background to the research of the thesis is presented, followed by the research objectives and research questions. The research approach is shown in the next section. The chapter concludes with a description of the structure of the thesis.

1.1. Background to the study

The modern business environment is a highly competitive and global workplace for many organizations (Werner & DeSimone, 2011). Business managers are conducting new and advanced strategies to manage the turbulent environment and ensure success for their enterprise. A general subject of the most popular plans is a focus on human capital, or using the knowledge and skills of employees as a key strategic resource for achieving and maintaining competitive advantage (Weldy, 2009). As businesses move into the global marketplace, the demand to maintain a highly effective and skilled workforce becomes an important element for developing market share (Noe, 2013). Training is the key to learning (Dougherty, 2004) and developing human capital. Employee training is crucial for business organizations to improve both knowledge and skills for their employees (Salas & Cannon-Bowers, 2001). Therefore, organizations need to recognize that their training investment is producing dividends in terms of improved organizational performance such as increased productivity and profit, improved safety statistics and reduced errors (Salas & Cannon-Bowers, 2001).

Much of the debate about the training organizational performance linkage has been focused around the concept of transfer of training (TOT) (Dirani, 2012). According to Baldwin and Ford (1988), TOT is defined as the application of knowledge and skills obtained from the training context to the job, and its maintenance during a certain period of time. There have been a number of causes, but mainly because of the regularly cited failure of training programs in both education and business has not focused on how training is applied to the workplace (Cheng & Ho, 2001). Therefore, it is necessary for research to find ways to improve effective transfer of training.

In the past, research within the framework of the several training theories has been narrow, and efforts have been made to improve models of TOT within training theory (Blume, Ford, Baldwin, & Huang, 2010). Such improvements have provided a motivation for beginning systematic empirical examinations (Yamnill & McLean, 2001). Training research has frequently reminded HRD professionals and trainers of the importance of TOT and also provided many suggestions to enhance effectiveness of TOT (Cheng & Ho, 2001). However current theoretical and conceptual understanding is still somewhat disconnected. Consequently, practical application of TOT in many business organizations is random and at times unfounded (Burke & Hutchins, 2007). Furthermore, although there has been significant interest in the literature about TOT; most of the cited transfer of training research has used samples from developed countries (Velada, Caetano, Michel, Lyons, & Kavanagh, 2007). There are very few studies using samples from developing countries, especially at the organizational level of analysis. Therefore, this study attempted to give an insight into what factors influence TOT for employees at the organizational level within a developing economy. Particularly, the research for this thesis focused on effective TOT as it relates to technical training in SOEs in Vietnam.

Using a mixed methods research approach, this study examines the external and organizational influences on effective transfer of technical training (ETTT) in Vietnam SOEs. Employee data from questionnaire surveys were used to identify the factors most strongly associated with TTT in Vietnamese SOEs. Qualitative data gained from manager interviews were used to identify the external environment factors (economic, educational and legal) that most strongly impacted on TTT in Vietnamese SOEs. Quantitative data from employee surveys was used to further identify the organizational factors most strongly associated with effective TTT. Finally, the findings from this study suggest some major changes for improving the effectiveness of TTT in Vietnamese SOEs.

1.1.1. Context of Vietnamese SOEs

Vietnam is a developing economy in Southeast Asia with over 90.4 million inhabitants in 2014 (Report of General Statistics Office of Vietnam, 2015) and is one of the most

impressive growth stories in the global economy over the last few decades. Following the economic reforms from 1986, Vietnam is on the verge of becoming a low-middle income country. GDP per capita has grown at an annual rate of almost 6% (Ketels, Cung, Anh, & Hanh, 2010). Vietnam is also becoming a leading agricultural exporter. According to the VinaCapital Economic Report (2015), Vietnam's export growth has increased13.7 per cent to reach from US\$132.04 billion in 2013toUS\$150.19 billion in 2014. Inflow of FDI into Vietnam increased significantly from US\$3.2 billion in 1997 to US\$20.3 billion in 2014.

The Government's "Doi Moi" (New-change) policy in 1986 was an economic transition from the Soviet-style centrally planned economy to a "socialism-oriented market economy" that began with an extensive restructuring of the state-owned sector. This reform has allowed the private sector to join the economy and has granted the state-owned sector greater autonomy. It has also facilitated the integration of Vietnam into the region and the world.

After over 25 years of economic reform, the importance of the private sector has been recognized and its contribution to Vietnam's economic growth has been significant. However, the Vietnam Congress still confirms its objective that "the State should hold a central position in the country's economic development" (Hakkala & Kokko, 2007: 4). Vietnam's State-owned enterprises (SOEs) are the core of the state economy and help the national government to regulate macro-economic stability (Nguyen, 2011; Truong & Ha, 1998; Vu, 2012a; Vu, 2012b). SOEs are concentrated in important industries, including petroleum, electrical goods, chemicals, telecommunication, ship building, civil aviation, coal and minerals (Hakkala & Kokko, 2007; Ngo, Wong, & Wong, 2006). SOEs provide essential public products and services to society, national defence and security (Khasawneh, Bates, & Holton, 2006).

Vietnamese SOEs clearly play an important role as the key driving force for development (Tran, 2000). Thus, they have received significant assistance from the national government, such as capital from the government budget, low interest rate loans, lower corporation tax rates, priority in participating in government projects compared to private companies, easy access to state funds and real estate and lower prices for electricity and water.

In addition, under a socialist government, SOEs have to provide social welfare (e.g., pensions, medical care) and employment security for workers, representing significant costs.

Employees have a strong tendency to look for jobs at SOEs because it will ensure their lifetime employment (Tran, 2000). In fact, at the end of 2013, SOEs employed about 5.52 million people, accounting for about 10.2 % of the total labor force (General Statistics Office of Vietnam, 2014).

However, SOEs are increasingly regarded as inefficient (Leung & Riedel, 2010)and have become a major factor in Vietnam's economic stagnation and instability. This has been attributed to such features as a lack of management autonomy and entrepreneurship (SOE managers typically behave as bureaucrats rather than entrepreneurs), lack of self-sufficiency, soft budget constraints and a lack of competition (Hakkala & Kokko, 2007).

Facing highly competitive global markets, Vietnamese employees usually find themselves in a disadvantaged position. The quality of education and training in Vietnam is low and the practical skills and creative ability of graduates remains low (UNIDO, 2011). Many employees continue to receive inadequate on-the-job training (Nguyen & Truong, 2007). While the majority of jobs most needed in the Vietnamese transitional economy are related to technical skills (Report of Ministry of Education and Training, 2007), only 16% of the population of working age has received vocational education and that training is not matched strongly with organizational and practical needs (Vietnam General Statistics Office, 2011). Although limited, research on the training practices of enterprises in Vietnam indicate that SOEs and small and medium enterprises (SMEs) invest less in training and development than foreign-owned enterprises (Friedman, 2004; Nguyen & Truong, 2007).

As a result, vocational skills and the professional competence of Vietnamese labor remains low compared to other labor markets in ASEAN countries. For example, Vietnam was ranked 65th out of 142 countries on competitiveness in 2011; labor productivity in Vietnam was 50.4 times lower than Japan, 7.8 times lower than Malaysia, 1.96 times lower than Thailand and 1.5 times lower than Indonesia (Schwab, Sala-i-Martin, & Greenhill, 2011). This situation is likely to be related to the inefficiency of HRM practices in Vietnamese organizations, especially in SOEs (Collins, Zhu, & Warner, 2012), particularly in technical training and effective TTT activities. Managers in Vietnamese SOEs are currently faced with the significant problem of improving the technical skill levels of their employees.

1.1.2. Transfer of training research

With the widespread impact of globalization on transitioning economies, human resource development (HRD), which includes components of both human development and human capital (Zidan, 2001), has become a key concern in many nations around the world, especially in developing countries. Patterns of 'uneven' economic and social development have been highlighted and more visible disparities in education and skill levels have emerged due to the pressures of globalization. The wealth and competitiveness of a nation is not only dependent on the availability of natural resources, but also on the quality of human resource (Nguyen, Truong, & Buyens, 2011). The movement of skilled employees and technological innovation from developed economies to emerging nations needs coordinated HR input (Yamamoto, 2010). It is argued that human capital attributes such as training, knowledge, experience and skills are a critical resource for success in enterprises (Unger, Rauch, Frese, & Rosenbusch, 2011).

It is clear that training and TOT are critical to facilitate skilled labor development (Lance, Kavanagh, & Brink, 2002; Nguyen et al., 2011) and the retention of skills to assist organizations to remain competitive (Velada et al., 2007). Training in enterprises is valuable, not only for the benefit to the enterprise, but also for more effective service delivery to customers. With continually increasing demands in changes about policies and practice issues, training and development has become a tool for the implementation of change (McMichael, 2011) and investment in training is related to a range of individual and organizational benefits (Dirani, 2012). These policies have been applied effectively in developed nations such as Germany, the US and the UK (Holton, Bates, & Ruona, 2000; Morse, 1991) as well as in emerging countries such as China (Ng & Siu, 2004).

Skill training and development is a method for employees to achieve knowledge and expertise in the workplace (Ford & Weissbein, 1997). This policy is very important for enterprises to obtain a competent and effective labor force. Thus, executive leadership is needed to evaluate the resources spent on training as a way to assess the actual value contributed by training. According to Salas and Cannon-Bowers (2001), enterprises are increasingly concerned that their investment in training can be justified in terms of improved performance, such as increased productivity, enhanced market share and reduced errors. When training is conducted to decrease problems in product quality, performance indicators

that measure the enterprise's performance must also be created. The driving factor for training is based on a perception that an enterprise's performance is enhanced through improved employee performance. The question needs to be asked as to whether training has a significant influence on the improvement of performance. In order to respond to this and determine the usefulness of training, an evaluation in terms of training transfer is crucial for each enterprise (Baldwin & Ford, 1988). Consequently, TOT, as a specific branch of HRD, is increasingly seen as a practice that will assist in improving employee skills and performance (Yamamoto, 2010).

The literature on TOT has increased and several different descriptions of transfer have been given, but the differences between them are slight (Sofo, 2007). In particular, there appears to be general agreement with the theoretical model of Baldwin and Ford (1988) which indicates threeinput organizational factors TOT (trainee characteristics; training design characteristics; and the work environment). However, there are significant gaps in the empirical literature with regard to these factors (Kavanagh, 1998; Velada et al., 2007). For example, most of the cited TOT research has used samples from the United States and Canada(Blume et al., 2010; Velada et al., 2007). There are very few studies that use samples from developing economies such as Vietnam, especially at the enterprise level of analysis. Consistent with these observations, studies addressing various aspects of training and TOT in Vietnamese SOEs appear to be quite sparse.

Moreover, Blume et al. (2010) indicated that the impact of influence factors on TOT will vary depending on whether the training focuses on open (e.g., leadership development) or closed (e.g., computer software) skills. For example, there was a negative relationship between cognitive ability and the transfer of open skills. This contrasts with a positive relationship between cognitive ability and the transfer of closed skills (Blume et al., 2010). However, very few field studies have focused on the transfer of closed skills training. For example, Blume et al. (2010) reviewed 61 field studies that explore the impact of the three factors on TOT, and there were only 15 studies that focused on closed skills training (15 closed, 44 open and 2 not codable). Additionally, of all the different types of skills, technical skills are more crucial and specific in nature. Therefore, studies that focus on technicaltraining may be of higher value to the literature on TOT.

Furthermore, the majority of these studies only examine "what and how" organizational factors impact on the transfer process. Very few studies focus on exploring the impact of

national environment factors on TOT activities at the enterprise level, particularly within developing countries. However, technical-labor development is an urgent requirement for Vietnam to meet its goal of industrialization. Therefore, considering the key external factors generalized from the relevant literature and three organizational influences previously classified by Baldwin and Ford (1988), this research proposes to contribute to the practice of TTT in Vietnamese SOEs by empirically investigating how different national and organizational variables concurrently influence this issue.

This research attempts to fill an existing gap by focusing on the effect of these three factors on effective TTT in SOEs in a developing country such as Vietnam. The findings highlight the importance of both the external environment and organizational factors on effective TTT. Furthermore, a better understanding of both national and organizational influences on effective TTT at the SOE level in a transitional economic contextsuch as Vietnam may contribute appreciably to knowledge in this field and future policy development.

1.2. Definitions

As the title of this thesis implies, 'HRD', 'training', 'transfer of training', 'transfer of technical training' and 'SOE' are critical terms used in this study. *HRD* has been defined "as a set of systematic and planned activities designed by an organization to provide its members with the opportunities to learn necessary skills to meet current and future job demands" (Werner & DeSimone, 2011: 4). HRD carries with it the potential for profits of economic development at the societal level (Zidan, 2001). One of the important causes of economic development is human capital formation. *Human capital* has been defined as the productive investment in humans, such as knowledge and skills, that may be results of education, on the job training and other types of experience (Zidan, 2001). Human capital theory (HCT) is established to estimate income distribution of employees from their investments in human capital (Unger et al., 2011).

Training is the process that "typically involves providing employees the knowledge and skills needed to do a particular task job, though attitude change may also be attempted" (Werner & DeSimone, 2011: 10).

Transfer of training is defined as the degree to which employees apply knowledge, skills, attitudes and behaviours gained in the training context to the job (Holton, et al. 1998). It is a term employed to denote the level of information an employee obtains through diverse forms of training activities to directly improve their job-related performance (Baldwin & Ford 1988). In a definition given by Seyler, Holton, Bates, Burnett, and Carvalho (1998: 4), positive TOT is described as "the effective application of the knowledge, skills and attitudes gained in a training context to the trainee's job".

Transfer of technical training in this study is defined as the effective use of technical knowledge and skills learned in a training context to the employee's job.

As much of the discussion in this research concerns the concepts of individual characteristics, training design, work environment and their impact on TOT, these terms require specification. According to the definition of Baldwin and Ford (1988: 64), the key training design aspects are "the incorporation of learning principles..., the sequencing of training material...and the job relevance of the training content". Individual characteristics include "ability or skill, motivation and personality factors". Work environment characteristics consist of "climatic factors such as supervisory or peer support as well as constraints and opportunities to perform learned behaviors on the job". A detailed explanation of these factors is presented in Chapter 2.

Given the focus of the main research questions (RQs), the term *SOE* needs to be defined. While definitions of SOEs are dependent on the context in which they are employed, this research adopts a statement developed by the Vietnam government that describes an SOE as "an organization where the State holds over 50% of the share capital". SOEs are the core of the state economy and help the Government to regulate macro-economic stability (Report of Vietnam's Government, 2009).

1.3. Research objectives and questions

In addition to some research on TOT as noted in Chapter 2, the TTT in general and in the context of Vietnamese SOEs in particular, has not been adequately investigated. There is very little research available that specifically addresses this phenomenon. There is a clear need for research on effective TTT in SOEs in a transitional economic context.

The principal objectives of this thesis are to investigate and examine the effects of both the national environment and enterprise factors which may impact on the effectiveness of TTT in SOEsin the emerging Vietnamese economy. It seeks to provide a better understanding of technical training activities and the TOT in selected SOEs. Moreover, the major changes that should be implemented to improve the effective TTT process in Vietnamese SOEs are identified in this research.

According to Bryman and Bell (2011), the Research Questions aim to achieve research objectives and assist in setting the operational boundary of the analysis that is expected to minimise the risk of collecting unnecessary data for the study. Accordingly, the following three RQs will be investigated in this research:

RQ1. What are the key external environment influences and constraints (legal, economic and educational) on developing effective transfer of technical training in Vietnamese manufacturing SOEs?

RQ2. What are the key organizational factors that impact on the effective transfer of technical training in Vietnamese manufacturing SOEs?

RQ3. What are the major changes that could improve technical training effectiveness in Vietnamese manufacturing SOEs?

1.4. Research approach

This study uses an exploratory, empirical research approach. A mixed methods research methodology has been adopted through the use of both the case study method and questionnaire surveys to examine several aspects in relation to activities of TTT at eight different manufacturing SOEs in Vietnam. Multiple case studies are undertaken to avoid single-case bias and to gain a better understanding of all relevant aspects. According to Creswell (2014), the diverse sampling approach should be used to enhance the generalization of the study's findings.

Qualitative data from employer/ training director interviews in the selected SOEs were used to identify external factors influencing TTT. Additionally, insights gained from surveys of employees in these SOEs were used to further identify organizational factors most strongly associated with TTT. The use of mixed methods research is explained in Chapter 4. The findings from the analysis of both qualitative and quantitative data in Chapter 5 and 6 provide evidence to suggest some major changes for improving the effectiveness of technical training activities in Vietnamese SOEs.

Every research study has its limitations. The scope of the present study was limited to SOEs in a single developing country, Vietnam. In addition, by its nature, this research does not purport to be comprehensive and is selective. That is, not all areas associated with TTT in Vietnamese SOEs are considered; only selected aspects are taken into account.

Regarding the methodology, several limitations need to be acknowledged. First, because of the significant geographic distance between the investigator and all the enterprises under enquiry, only a small amount of time was spent in each participating organisation and repeated visits were not made. Second, the sample size of both the case studies and the questionnaire surveys was constrained by a relatively small primary population of twelve interviews and 200 questionnaires in eight Vietnamese SOEs. Third, some of the measures used are perceptual in nature, which raises the issue of subjectivity of the responses. However, most of these limitations may be minimised by careful case design and questionnaire development (Creswell, 2014). Furthermore, multiple case studies may assist the analysis of each of the cases and strengthen the validity and reliability of the overall findings (Golden-Biddle & Locke, 2007).

1.5. Organization of the thesis

In Chapter 1, the research is introduced. This chapter sets out the general background, the RQs and the research objectives of the study, as well as outlining the contribution and significance of the study. Key terms such as SOEs and TOTare defined for the purposes of this research. Chapter 2 explores the literature on TOT and focuses on the conceptual development of training and TOT and the organizational factors which impact on the activities of TOT in the workplace. Various theories of TOT are examined in this chapter. Chapter 3 reviews the history of the Vietnamese economy, the nature of Vietnamese SOEs and external environment factors such as the economic, educational and legal conditions which impact on ETTT in Vietnamese SOEs. On the basis of the literature review and other information discussed in Chapters 2 and 3, a conceptual framework and RQs are established

and presented in Chapter 3. A discussion of the research methodology adopted in this study is described in Chapter 4. In particular, a justification for employing qualitative and quantitative approaches, the sample section, the data collection and the data analysis are reported in this chapter.

The findings of the qualitative study are reported in Chapter 5 and the findings of quantitative study are shown in Chapter 6. The empirical evidence collected through face-to-face interviews, questionnaire surveys and the examination of relevant literature is used in the investigation of several issues, as shown in the conceptual framework. In Chapter 5, an examination of external environment influences on ETTT is conducted via the analysis of case study data. The influence of organizational factors is reported in Chapter 6 through the results of the survey research. In Chapter 7, the central RQs are examined by discussing the findings of the qualitative and quantitative analyses.

Finally, an overview of the major themes and a brief summary of the research findings are provided in Chapter 8. Additionally, the implications of the investigation in regard to human resource training and development policy makers, TTT practice and theory development is also canvassed in this chapter. This thesis closes with a statement of the limitations of the study and future research directions.

Chapter 2

Transfer of Training in Organizations: A Review of the Literature

2.1. Introduction

This chapter describes numerous aspects of transfer of training (TOT) to provide a framework for the survey study presented in this thesis. It begins with an explanation of the purpose of training and development as well as the definitions relating to the key issue of transfer of technical training (TTT). Understanding this aspect is crucial to identifying how the activities are conducted and the need for developing TTT at the enterprise level in developing countries such as Vietnam.

Furthermore, this chapter also reviews the literature associated with the main research themes such as individual characteristics, training design and work environment (Burke & Hutchins, 2007; Edwards, 2013) that influence on TOT. On this basis, the scope of the study is limited to examining the significance of the study themes that are recognized as gaps in the relevant TOT literature. Finally, a summary of this chapter is given in Section 2.5.

2.2. The purpose of training and development

In an extremely competitive environment, characterized by market globalization, changing demands and increasing product-market competition, human resources may acquire greater power because other resources of competitive success are less valuable. In order to achieve competitive success, human resources have to be seen as a resource of competitive advantage rather than as merely a cost (Saá-Pérez & Garcia-Falcon, 2002). From the approach of the resource-based view (RBV), human resource and/or human capital, in which the organizational invests create higher performance. Therefore, the RBV of the firm provides a vital view about the relationship between HRM and enterprise success (Kraaijenbrink, Spender, & Groen, 2010). Human resources form a resource of competitive advantage because it is a rare, valuable and inimitable resource. This resource may add value to

enterprise because people are different in their abilities and capacities, as well as their contribution to the enterprise (Kraaijenbrink et al., 2010).

Human capital theory is indicated as an economic theory that addresses the economic development and macro-economic perspective of production. It views human capabilities (including efforts, knowledge and skills) as integral elements of the country capital, along with natural and financial resources (Olaniyan & Okemakinde, 2008). This theory emphasizes how training increases the efficiency and productivity of employees by raising the level of cognitive stock of productive human capability, which is a creation of natural ability and investment in human beings. The provision of formal training is considered to be a productive investment in human capital, which the proponents of the theory have seen as equally or more useful than that of physical capital. Therefore, education and training play a vital and significant role in a national economy, and expenditures of training are found to constitute a form of investment (Boxall, 2013).

Training and HRD are utilized to orient and provide skills and knowledge to both new and unskilled employees, as well as managers. Training and HRD help individuals become more effective in the workplace and in society by preparing employees for a variety of jobs in the company, thus increasing their ability to move into new positions or jobs (Dowling, Festing, & Engle, 2008; Langbert & Mitchell, 2000). Researchers indicate that HRD is needed for effective performance activities, such as training and development, career development and organizational development (Gilley & Gilley, 2003; Werner & DeSimone, 2011). Therefore, HRD activities may be used to ensure that organizational members can successfully resolve the challenges they face.

Training is defined as a planned process to improve attitudes, knowledge and skill behaviour through learning experiences to achieve effective performance in an activity or range of activities (Hooi, 2010). Training has been recognised as a means of developing skills and enhancing labour efficiency and quality of work. It is a tool for improving individual and organizational performance to achieve business results (Werner & DeSimone, 2011). Apart from equipping workers with the necessary skills, "training also integrates employees in the firms through socialization and the immersion of organizational culture" (Hooi, 2010: 320).

Training focuses on enhancing the knowledge and skill of employees that are needed to do a particular duty or job (Werner & DeSimone, 2011) and helps employees adjust to market

changes and competitive advantage. Training may help employees correct limitations in their performance (XI-th Congress of the Communist Party of Vietnam, 2011). For example, a new technology applied in production may require employees to learn new skills to use the equipment. Thus, a basic objective of technical training is the improvement of performance and the resolution of problems. In order for training to be successful, the goals of the training program have to be indicated clearly and realistically. From these goals, the training program's content will be suggested and the training criteria that will be used as a base for assessment of the training's effectiveness will be determined. Thus, training activities need to be designed to bring about improvement in work performance (Stevens & Gist, 1997).

According to Noe, Hollenbeck, Gerhart, and Wright (2012) and Grossman and Salas (2011), recently, many organizations have spent a significant amount of money and time on training to develop their employee skills. Effective training may result in fewer errors, higher productivity, improved work quality and increased motivation, culminating in advanced competitiveness (Salas & Stagl, 2009). In contrast, poorly trained labour may result in errors and injuries that could be very costly (Grossman & Salas, 2011). Thus, it is not surprising that training has become a chief concern of managers and business academics. Despite the emphasis on training, many enterprises have reported a failure to effectively develop the skills of their employees, which indicates that the training did not effectively transfer to the job. Workers can receive new knowledge and skills through training packages, but learning alone is insufficient for training to be measured effectively. Training efforts only improve job performance when the newly learned skills are effectively transferred to the workplace (Baldwin & Ford, 1988).

In the next section of this chapter, an overview of the literature review will be given. The different definitions of TOT will be outlined. This will be followed by a discussion of a number of the issues associated with the forms of TOT and finally several influences, such as individual characteristics, training design and work context, on transfer will also be reviewed.

2.3. Transfer of training

The nature of transfer and the context of its occurrence have been the subject of considerable study for over 100 years (Grossman, 2011). According to these authors, this topic has attracted a lot of research attention for both theoretical and practical reasons, "Theoretically, transfer provides an important test-bed for models of training and performance... Practically,

there is also a lot at stake in the outcome of transfer research, in terms of both money and time invested in education" (Barnett & Ceci, 2002: 613).

In Donald Kirkpatrick's (2009) evaluation model, Level 3, behavioural level, measures whether attitudes, knowledge and skills learned during training will be transferred to the job to reflect improvements in behaviour and performance. As Kirkpatrick (2009) highlighted, if learning does not transfer to the workplace, then it could not have any influence to the job and enterprise. However, there are many other elements that may impact the transfer of training. According to Mohamed and Alias (2012), four key conditions for change to occur may be: (1) employees must have a desire to improve, (2) employees must know what and how to do it, (3) employees must work in the right environment, and (4) employees must be rewarded for improving. Clearly, a training program may meet the first two conditions by giving the required knowledge and skills, but the third and fourth conditions depend upon supervisors and workplace experiences. If a manager has been trained about how to do an effective employment recruitment interview, they could not apply the training until the interview is carried out.

Although the literature on TOT has many descriptions and definitions, it is a simple relatively concept (Burke & Hutchins, 2007). A number of the descriptions are somewhat similar, but there are significant differences and emphases that address the extensive explanation of the transfer phenomena. Moreover, it is necessary to investigate what researchers have said about transfer because the descriptions, theories, applications and study endeavors may be related (Saks & Burke-Smalley, 2014).

According to Sofo (2007), training is described as an intended experience planned to lead to change in an employee's attitudes, knowledge and skills. TOT has been defined as the effective and continuous application of the trainee's knowledge and skills gained in training to situations on and off the job (Broad, 2005). TOT has also been described as the development of an employee's performance through a clear skills training process (Burke & Hutchins, 2007). Moreover, Issurin (2013) addressed an organizational aspect in his description of TOT by stating that it is the extent to which the knowledge achieved from training courses is used and maintained on the job to improve productivity and performance.

In a definition by Grossman and Salas (2011), positive TOT is described as the effective application of the attitudes, knowledge and skills achieved in a training context to the learner's job. According to (Ormrod, 2000: 401), "Maximum positive transfer occurs when stimuli and responses in the two situations are similar... Some positive transfer occurs when stimuli are different but responses are similar".

Although the description of TOT by Noe et al. (2012) is restricted to training, the concept of transfer is also implied. The trainee gains knowledge and skills from a training process and then these knowledge and skills are transferred into improved job-related performance (Wen & Lin, 2014). It is the purpose of training to improve performance of trainees. The attitudes, knowledge and skills learned in the training context are applied to increase the performance of the employee in relation to specific tasks or activities (Broad, 2005; McSherry & Taylor, 1994). Thus, TOT may be viewed as the application of learning. The effectiveness of TOT is centred on the trainee's ability to apply skills, which results in improved job-related performance.

Clearly, although several different descriptions of transfer are given in the literature, the differences between them are slight (Sofo, 2007). In fact, there appears to be general agreement with the definition of Baldwin and Ford (1988: 63) that defined transfer of training as "the degree to which trainees effectively apply the knowledge, skills and attitudes gained in the training context to the job". Baldwin and Ford (1988) analysed 63 empirical studies conducted between 1907 and 1987 to identify the main findings associated with the linkage of training inputs and transfer. They proposed a model that addresses three factors of training transfer: (1) training input factors, consisting of trainee characteristics, training design characteristics and work environment characteristics; (2) training outputs, including acquisition of knowledge and skills during training; and (3) conditions of transfer such as the generalization and maintenance of knowledge and skills acquired in training. Three sets of training input factors may impact on learning and retention during training, which directly affect generalization and maintenance of training.

Furthermore, transfer may be further divided into near transfer and far transfer. Near transfer refers to the events in the training that are directly related to and/or highly similar to the tasks and conditions found on the job (Baldwin & Ford, 1988; McDonald, 2001; Merriam & Leahy, 2005). For instance, individuals in a technical training course do some in-class

exercises that directly reflect situations and conditions that occur on the job. These individuals are then more likely to transfer the trained skills from the training context to the job (Saks & Burke-Smalley, 2014). Applying instructional design components associated with near transfer may be more effective than other forms of transfer (Baldwin & Ford, 1988).

Far transfer refers to situations that occur in the training simulations being different to the tasks in the workplace ((Baldwin & Ford, 1988; McDonald, 2001; Merriam & Leahy, 2005; Yamnill & McLean, 2001). This means that the tasks in the training context are different from the transfer situation. Employees may be required to do a higher level of generalization from learned skills to their performance on the job (Sofo, 2007). The concept of far transfer corresponds to the principles underpinning the theory of Goldstein (2002) which premises that transfer is a generalization of specific skills from one situation to another situation. In other words, TOT occurs if the training results move to a future time and context. Near transfer may occur when the same situation as in the training occurs and far transfer may occur at a later stage.

Other forms of transfer have been established as a part of the instructional design of a training program. These forms of transfer and the relevant authors are summarised in Table 2.1. For example, Los Arcos et al. (2014b) distinguished between two types transfer, horizontal and vertical. Horizontal transfer may occur when a skill is transferred from one situation to another at the same level of difficulty. In contrast, vertical transfer may occur when a learned skill influences the achievement of a more complex skill.

Although the conceptual framework of transfer exists in the current literature, it needs further investigation within the level of an organization. The reason for studying transfer is to formulate and understand the process of training and how the training will be transferred in the context of both the individual and the organization (Holton, 2005). Therefore, TOT needs to be comprehensively considered to include the training process and the relevant factors influencing the transfer process. The relevant factors may be the understanding of how training is provided to employees, the contribution of individual factors (including the motivation to transfer and the trainee's abilities) and work conditions specifically related to employee performance (including opportunity to use training, support from supervisors and peers).

Transfer Form	Explanation	Author(s)
General transfer	The trainee acquires certain working methods, knowledge and skills which can be used in tasks other than the original learning task	(Oei & Patterson, 2014)
Specific transfer	The learning task is so specific that no transfer to other tasks can be expected.	(Oei & Patterson, 2014)
Positive transfer	 Extent to which trainees have acquired knowledge, skills and attitudes, which can be applied effectively in work practices. Previously acquired knowledge, skills and attitudes facilitate the learning of new knowledge, skills and attitudes. 	(Grossman and Salas (2011)
Negative transfer	 Extent to which an undesired effect occurs following training. Previously acquired knowledge, skills and attitudes hinder the learning of new knowledge, skills and attitudes. 	(Grossman and Salas (2011)
Horizontal transfer	A skill is transferred from one task to another	(Los Arcos et al., 2014b)
Vertical transfer	Transfer within a certain task with growing expertise	(Los Arcos et al., 2014b)
Far transfer	Transfer when the initial learning task and the subsequent tasks to be learned differ substantially	(Baldwin & Ford, 1988; McDonald, 2001; Merriam & Leahy, 2005; Yamnill & McLean, 2001)
Near transfer	Transfer when the initial learning task and the subsequent tasks to be learned differ only slightly or not at all	(Baldwin & Ford, 1988; McDonald, 2001; Merriam & Leahy, 2005; Yamnill & McLean, 2001).

Table 2.1: Forms of Transfer of training

2.4. The impact of organizational factors on transfer of training

A considerable amount of literature has been published on TOT. These studies provide several theories and conceptual frameworks that have been used to predict the factors that influence TOT. For example, Baldwin and Ford (1988) carried out a wide spread review of the literature, identifying three key influences in the processes of pre-training, during-training and post-training, trainee characteristics, training characteristics and the work environment. Since this time, significant interest has been generated in this area. Three years after Baldwin and Ford (1988) review, Ree and Earles (1991) expanded the theoretical model of TOT to include an emphasis on transfer motivation, which is predicted to be a key component to connect learning with individual performance change.

In Kavanagh (1998)'s research, an advanced understanding of the TOT process was developed with a multi-level multistage process. This study noted that TOT results from several variables at dissimilar levels of analysis, including individual, supervisor and organization, and in different steps of the training process (e.g., pre-training, training and post-training). Following this, the extant large volume of published studies (Alvarez, Salas, & Garofano, 2004; Blume et al., 2010; Burke & Hutchins, 2007; Cheng & Ho, 2001; Holton, 2005; Kozlowski & Salas, 1997; Saks & Belcourt, 2006; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001) examined three key factors that impact TOT, training design, individual characteristics and work environment. The majority of these authors attempted to use a theoretical approach to qualitatively and quantitatively review what was known about TOT from the expanding study base.

In particular, a study by Holton *et al.* (2000) developed a transfer system of factors, namely the Learning Transfer System Inventory (LTSI). The LTSI was administered to 1616 trainees in the USA to find an 11-factor structure amongst the specific scales and a 5-factor structure among the general scales. After this, some cross-cultural studies conducted byChen, Holton, and Bates (2005); Holton et al. (2000); Khasawneh et al. (2006) were undertaken to validate the LTSI to evaluate specific factors on the three determinants that influence the TOT process.

Yamnill and McLean (2001) expanded Holton's transfer model to address three theories of human behaviour that may impact on transfer motivation, expectancy theory, equity theory and goal-setting theory. Expectancy theory is defined as "a momentary belief concerning the

likelihood that a particular act will precede a particular outcome" (Yamnill & McLean, 2001: 197). According to this theory, certain behaviours will lead to desired performance goals or incentive awards. An individual's effort will result in the achievement of desirable results. Equity theory, developed by Adams (1965), considers motivation and job satisfaction as the outcome of a comparison of an employee's perceived results and inputs to the results and inputs of a referent other. Equity theory implies that individuals want to be treated fairly in relation to others. Adams (1965) argued that people could react in any of the following methods when they feel distress from inequity: (1) employees could limit their inputs to a level they believe to be consistent with the results gained; (2) employees could meet with their managers to verbally discuss a better deal - meaning they will try to find a balance between work and payment; (3) the distress of feelings of inequity could cause some workers to quit the enterprise. However, when employees had feelings of inequity, managers still do not know how to communicate with them. Employees of a company seek equity in their job, so they may attend training to achieve equity in relation to pay or other benefits. In this condition, training will occur and will be transferred to the workplace. Goal-setting theory explains how and why these behaviours are facilitated or restrained in both the pretraining and post-training processes. These three theories help HRD professionals to better understand the factors supporting TOT.

The LTSI is a research-based instrument for evaluating a comprehensive set of 16 factors that either facilitate or limit TOT (Velada et al., 2007). The development of the LTSI excluded some vital trainee factors, namely locus of control (e.g. Noe & Schmitt, 1986), cognitive ability and training retention (e.g. Baldwin & Ford, 1988) and environmental variables including a continuous learning climate (e.g. Tracey, Tannenbaum, & Kavanagh, 1995).

A recent study (Blume et al., 2010) presented updated reviews to extend the study of Baldwin and Ford (1988). Blume et al. (2010) conducted a meta-analysis of 89 published empirical studies to examine the relationship between transfer and training interventions (pre-training and post-training), learning outcomes and reactions. In this study, they found that progress had been made to advance an understanding of the influence of training retention, conscientiousness, motivation, supervisor support, peer support and transfer climate on transfer outcomes. However, this study has found that "among the most conspicuous gaps in the transfer literature is a neglect of how the open or closed nature of the skills being trained (i.e., training objectives) affects subsequent transfer" (Blume et al., 2010: 1072). This means that previous research has not focused in depth on the transfer of closed-skills training and opened-skills training. Thus, they further suggested the focus of the research should be shifted from the general question, "Can training transfer?" to a more targeted focus on types of skills trained.

Using a different research method, Velada et al. (2007) proposed another model of TOT using empirical evidence to analyze how different sets of variables simultaneously influence TOT. This research examined the relationship between three types of factors on TOT previously identified by Baldwin and Ford (1988) and Holton (1996). However, the data collected in this study only focused on182 employees (the same source) in a large grocery company in Portugal. Thus, these findings may not generalize to other organizations. It is likely that in other enterprise environments, the factor of supervisor support, which was not supported by their findings, will have a larger influence, as has been shown in many other research studies (Baldwin & Ford, 1988; Cromwell & Kolb, 2004; Lance et al., 2002; Tracey et al., 1995).

Reviewing the literature on TOT, it is argued that transfer outcomes retain low levels (Burke & Hutchins, 2007). The low levels of TOT are challenging HRD professionals who seek to gain better returns on training investments (Brown, McCracken, & Hillier, 2013). As suggested by Bates, Holton, and Hatala (2012), the HRD field should focus on questions of why training works and how outcomes of TOT may be improved. Furthermore, although TOT is a cross-cultural construct (Devos, Dumay, Bonami, Bates, & Holton, 2007), transfer factors have not yet been tested in a transitional economy environment. Most training and development studies have been conducted in the context of private firms in developed countries, but no studies have examined activities of training in SOEs in transitional economics (Warner & Goodall, 2009). In this review, evidence was found that researchers had not implemented the empirical assessment of the effect of the three transfer variables on TTT (a type of closed skills). Consequently, there is still a significant gap in the literature to be addressed in terms of TOT in SOEs, particularly in SOEs in transitional economies.

Using a framework adapted from Baldwin and Ford (1988), the author has summarized three elements of the necessitating environment for TTT in the literature: individual characteristics; training design and organizational environments. This research proposes to contribute to the

theory of TOT by empirically investigating how different variables concurrently influence TTT in SOEs in the transitional economic context of Vietnam. The following section gives a brief summary of the literature on the effects of individual characteristics, training design and work environment on TOT, providing special attention and theoretical explanation to the variables that will be tested in this study.

2.4.1. The impact of individual characteristics on transfer of training

A wide range of individual characteristics considered to impact on TOT have been proposed in the literature (Baldwin & Ford, 1988; Blume et al., 2010; Cheng & Ho, 2001; Ford & Weissbein, 1997). However, empirical explorations of ability, personality and motivational influences on training and transfer effectiveness are quite limited.

Numerous particular studies have, however, supplied additional documents on the connections between learner ability and motivation factors with TOT (see Table 2.2). Devos et al. (2007) noted that trainees with high confidence levels were more motivated to use their training. Employees who had effective career planning and high job involvement would prefer to learn and transfer (Lim and Morris (2006). More generally, employee performance is a function of motivation, ability of employee and opportunity to perform (Boxall & Purcell, 2011). In addition, motivation to transfer and trainee ability have been found to be positively associated with TOT. These factors include job function and job position (Lim & Morris, 2006), performance outcomes expectations (Devos et al., 2007), learner's locus of control (Chang & Ho, 2009; Quinones, Ford, Sego, & Smith, 1995), self-efficacy (Ford, Quinones, Sego, & Sorra, 1992; Gist, Stevens, & Bavetta, 1991; Simosi, 2012), organizational commitment, training attributes, confidence (Seyler et al., 1998) and openness to change (Devos et al., 2007).

It is clear that the trainee not only lies at the centre of the TOT process, their role in affecting the TOT has received a large amount of research attention. Particularly, there is an increasing concern relating to motivational factors and their influence on transferring training and skills to the job (Cheng & Ho, 2001). The assessment of the role of individual-related factors should be a vital component in developing effective TOT (Dirani (2012).

Motivation factors

Motivation to TOT was defined as the employee's effort to apply knowledge and skills learned in the training context to a real work situation (Chiaburu, Van Dam, & Hutchins, 2010). Previous studies have indicated that motivational factors associated with personal desire and the abilities of an employee to learn and transfer are elements that bring about the trainee's effort to effectively transfer (Bates & Holton, 2004; Wang & Wentling, 2001). Accordingly, in the TOT literature, there are several aspects that relate to the motivation to transfer, such as the perceived relevance of training and performance outcome expectancies (Devos et al., 2007). These aspects were examined because it is likely that individuals with inadequate motivation are poor in mastering trained skills and subsequent transfer performance. For example, a study by Chiaburu et al. (2010)was conducted to test three motivational factors associated with transfer by conducting a questionnaire survey with 111 participants in an organization in the Mid-Atlantic region of the United States. Their findings indicated that individuals with higher motivation to transfer were more likely to have training cognitions that may effectively transfer the training into performance improvement than employees with lower motivational factors.
Authors	Sample	Variables	Measurement	Results
(Wen & Lin, 2014)	316 employees from broad industries in Taiwan	Self-efficacy, motivation to learn, motivation to transfer	5-point Likert- type scale	Self-efficacy is associated with motivation and motivation impacted to TOT
Brown et al. (2013)	210 participants from the Canadian public sector	Self-efficacy	5-point Likert- type scale	Self-efficacy impacts on TOT
Dirani (2012)	107 questionnaires and 12 interviews	Trainees' background and experiences	5-point Likert- type scale, Interview	Self-confidence, beliefs & adjustment afterwards related to the motivation to TOT
Simosi (2012)	252 newly hired employees in Greece	Self-efficacy	5- point Likert- type scale	Self-efficacy plays a role in relation to TOT
Chiaburu et al. (2010)	111 participants in an organization in the Mid- Atlantic region of the United States	Trainees' training self-efficacy, learning goal orientation, motivation to transfer	5-point Likert- type scale	Trainees' training self-efficacy, learning goal orientation and motivation to transfer are related to training cognitions
Chang and Ho (2009)	115 university non- English major freshmen	Learner's locus of control, type of instructional control	Multiple choice questions	locus of control & types of instruction control impact on the self-efficacy and performance
Devos et al. (2007)	328 employees in six companies in France	Learner readiness, motivation, expectations, openness to change, self-efficacy	5- point Likert- type scale	Learner readiness, motivation to transfer, performance expectations, & self-efficacy related to TOT
Velada et al. (2007)	182 employees in Portugal	Performance self-efficacy, training retention	5-point Likert- type scale	Performance self-efficacy & training retention related to TOT

Table 2.2: Previous empirical studies examining the influence of individual characteristics on transfer of training

Table 2.2: Continued

Authors	Sample	Variables	Measurement	Results
Lim and Morris (2006)	181 employees in the Korean conglomerate	Job function & position, training needs, learning retention, applicability, applied learning	4- point Likert- type scale	Job function, immediate training needs related to TOT
Bates and Holton (2004)	1,079 individuals in the southern United States	Learner readiness, performance self- efficacy, motivation to transfer, expectations	2-point Likert- type scales	Learner readiness, performance self-efficacy, motivation to transfer and expectations related to TOT
Tracey et al. (2001)	250 managers in the Southern United States	Pre-training self-efficacy, pre- training motivation, declarative knowledge, application knowledge,	5- point Likert- type scale	Pre-training motivation and trainee abilities related to TOT
Seyler et al. (1998)	74 trainees at computer-based training programme of a petrochemical company	Desire to learn, internal work environment, organizational commitment, training attribute, confidence	5- point Likert- type scale	Desire to learn, internal work environment, organizational commitment, training attribute and confidence correlated to motivation to transfer except for internal work environment
Quinones et al. (1995)	118 air force graduates of training program & their supervisors	Learning motivation, locus of control	7- point Likert- type scale	Learning motivation related to TOT
Facteau, Dobbins, Russell, Ladd, and Kudisch (1995)	967 managers/supervisors were Caucasian and African- American	Training motivation, compliance, intrinsic incentives	5- point Likert- type scale	Training motivation related to TOT

Performance outcomes expectancies

Holton's definition indicated that outcome expectancies are "the expectation that the changes in job performance will lead to valued outcomes" (Holton et al., 2000: 345). The perception of an obvious match between training-based increased performance and rewards suggests high outcome expectancies and this situation will imply a strong motivation to TOT (Bates and Holton (2004). This means that, if trainees notice a "connection" between improved performance (resulting from applying their trained skills and knowledge) and rewards (e.g., wage increases, promotions, bonuses, status rewards), this may influence transfer effectiveness (Velada et al. (2007). Rewards may contribute to effective performance when links between rewards and good performance are made (Wen & Lin, 2014). Trainees have a strong belief that the provision of organizational outcomes may be controlled to facilitate the application of trained skills to the workplace (Cheng & Ho, 2001). When employees believe they may benefit from training, these employees will be willing to effectively learn and transfer trained skills to their job. Thus, organizations should clearly link performance with rewards and highlight the value of training.

Additionally, Gegenfurtner, Veermans, Festner, and Gruber (2009) proposed numerous main elements for motivating employees to attend training courses and engage in TOT in the workplace, such as doing the job in a better way, improving professional competence and being useful in solving problems on the job. These scholars identified that the elements, which are associated with motivational factors, may be employed to explain the perceived relevance of training when making decisions about TOT. Xiao (1996) suggested that the outcomes obtained from training, including a wage increase, a bonus, or a promotion for accomplishing tasks in a more efficient way using the learned skills are mostly related to individual motivation to attend a training program at the workplace.

Perceived relevance of training

It is argued that the perceived importance of training impacts not only the motivation to learn but also the motivation to apply the newly acquired skills (Massenberg, Spurk, & Kauffeld, 2015). According to McLean and McLean (2001), training realization is defined as the fulfilment of the trainee's desires through the training gained. In a study relating TOT to a positive training environment, Devos et al. (2007) noted that if a trainee believes new skills cannot be used in the performance of their job, there is no incentive for them to effectively learn those skills. An employee who perceives their training is useful for their actual job performance will devote more time and effort to the training and the application of the new skills than an employee who considers the training to be invalid for improving new skills (Cheng & Ho, 2001). Particularly, individuals who perceived technical training as gaining a way to acquire high-tech job skills were more motivated to learn and obtained a higher level of immediate technical skill transfer.

A study by (Wen & Lin, 2014) examined the effectiveness of training associated with employees' attitudes toward the motivation to learn and transfer. The study surveyed 316 employees from broad industries in Taiwan. The findings indicated there was a relationship between the trainee's approach to career planning and job involvement. For example, if the trainee assumed there was value in the training for their career development, then the probability of behavioural adjustments were higher than for others who did not engage in the same level of career planning. According to (Awais Bhatti, Mohamed Battour, Pandiyan Kaliani Sundram, & Aini Othman, 2013), when an individual believes that the knowledge and skills learned in the training context will result in a high likelihood of a salary increase, a promotion, or elevated feelings of satisfaction and self-worth, then their motivation related to training and transfer will also increase. As there is a relationship between the individual's skill level and a related positive benefit, there may be an increased demand for training to improve performance.

Trainee ability

If motivation is essential for the development of skill levels, it may be debated that an individual's ability to make an effort is an important antecedent for obtaining higher levels of cognition and understanding (Tracey et al., 2001). Ability is viewed as being a supporting aspect for training. Support for the impact of individual ability on the training area has long existed in the literature (Baldwin & Ford, 1988; Grossman & Salas, 2011). According to LePine, Colquitt, and Erez (2000), if effective training is to occur, the trainee must have the cognitive ability to learn. Cognitive ability is considered to be one of the best elements of an

employee's potential related to training, transfer and performance (Burke & Hutchins, 2007; Holton, Bates, Bookter, & Yamkovenko, 2007). Trainees with a higher cognitive ability to retain the learned knowledge, combined with higher levels of confidence, will easily understand complex content and successfully perform the skills acquired through training (Grossman & Salas, 2011).

The aspect of cognitive ability is illustrated by a study by Bates and Holton (2004) that examined job-related workplace literacy skills of 1,079 employees in a state-level transportation department in the southern United States. The purpose of this study was to test whether employee job-related workplace literacy skill level influences the employee's ability to transfer. The findings of this study indicated that employees with low literacy levels had higher expectations of the training received, but they were less able to effectively transfer the new knowledge and skills because of their low literacy ability. Bates and Holton (2004) concluded that cognitive ability of an employee in relation to their job has a direct influence on the training process and their ability to transfer trained skills to the job. Furthermore, according to Velada et al. (2007), psychomotor and cognitive ability may reveal a capacity to understand the content of the training courses. Thus, if employees have a narrow cognitive capability to learn, their understanding of the contents taught in the training context is also limited (Pollock, Chandler, & Sweller, 2002). When ability of an employee matches the requirements of training with job tasks, effective training and transfer may occur (Burke & Hutchins, 2008).

Velada et al. (2007) have also suggested that three dimensions related to training effectiveness should be investigated to describe trainees' cognitive ability, these being understanding the contents learned, identifying appropriate work situations and identifying ways to improve with practice. In addition, two main elements of training effectiveness were also mentioned in relation to cognitive ability, being able to remember the learned key topics (Gegenfurtner et al., 2009) and being able to use the new skills (Tracey et al., 2001).

Similar to cognitive ability, training retention has an impact on trainee performance due to its effect on intentional resource capacity (Chiaburu et al. (2010). The results of training retention are directly related to the generalization and preservation of training content on the job (Baldwin & Ford, 1988). Employees with a higher cognitive ability can be better equipped with knowledge and retain information learned during the training process. It is

argued that "one of the most common and supportable findings in educational research is that transfer is achieved by students with higher general ability scores" (Clark & Voogel, 1985: 120). In a meta-analytic review of the transfer literature, the findings of (Blume et al., 2010) showed that there is a very strong relationship between cognitive ability and the transfer of closed-skills training.

Another important aspect of transfer is the maintenance and application of training to a real work situation (Blume et al., 2010). Employees who learn and retain the skills and knowledge offered in the training programs have a greater opportunity to be able to effectively transfer training to the job (Grossman & Salas, 2011). In addition to skill improvement, these trainees also have more information and knowledge to understand where and how their trained skills can be used to improve performance (Wen & Lin, 2014). The knowledge gained from training has a positive effect on TOT. Therefore, the ability of the trainees to retain the knowledge they have acquired in their training, and to identify appropriate situations to apply their new skills on their job, is an essential element of effective TOT.

The trainee's ability is also represented through performance self-efficacy. Self-efficacy is defined as "an individual's general belief that he is able to change his performance when he wants to" (Holton et al., 2000: 346). (Bandura, 1977) indicated that self-efficacy not only may have direct the choice of activities, but self-efficacy may affect expectations of final success, thus it may influence coping efforts once activities are initiated. Expectations of efficacy determine how much effort individuals need to expend and how long they need to persist in the face of difficulties and aversive experiences.

The influence of self-efficacy on TOT has been broadly studied recently (Elangovan & Karakowsky, 1999; Ford & Weissbein, 1997; Gegenfurtner et al., 2009; Holton et al., 2000; Velada et al., 2007). These studies applied social learning concepts to examine the effect of an individual's belief in their ability to use trained skills on the job (Ford & Weissbein, 1997; Warr & Bunce, 1995). Trainees with a high level of self-efficacy will apply substantial effort to pass targets at difficult levels and master new behavioural commands and levels of higher performance (Noe & Schmitt, 1986; Velada et al., 2007). In contrast, trainees with low self-efficacy will reduce their effort to meet challenging situations (Grossman & Salas, 2011).

For example, based on a meta-analytic review of the relevant literature, Colquitt, LePine, and Noe (2000) found performance self-efficacy to be an important predictor of both training outcomes and learning motivation. Some other researchers following their review also confirmed a positive relationship between performance self-efficacy and TOT, either directly or indirectly, through trainee motivation. A study by Chiaburu and Marinova (2005) found that performance self-efficacy is positively related to pre-training motivation, which, in turn, significantly predicts TOT. Research by Velada et al. (2007) proposed that performance self-efficacy partly contributes to TOT through its effect on motivation. A study by Chiaburu and Lindsay (2008) found similar assumptions after studying the importance of performance self-efficacy has significant implications on the facilitation of effective TOT.

Moreover, research has indicated that the combination of self-efficacy and expectancy theory may impact on the motivation to learn and TOT (Gegenfurtner et al., 2009). This means that it is important for employees to believe that they may learn and master the training material and expect that there will be several benefits from the learning which can be applied to their job. In summary, the extant literature on TOT suggests that trainees must have confidence in their ability to apply competencies and persevere with challenging tasks. When individuals feel confident in their ability to apply their newly acquired skills, the outcomes of TOT are more effective than with those with low perceived self-efficacy.

According to Velada et al. (2007) and Lim and Morris (2006), some attributes of new skill application are also examined to describe trainees' performance self-efficacy influencing TOT. These attributes are being able to apply new skills, being confident to use new skills, using new skills in complex work situations, overcoming obstacles to use the new skills (Velada et al., 2007) and doing well in activities with lots of information remembered (Lim & Morris, 2006).

In conclusion, a summary of the literature review on individual characteristics is given in Table 2.2. It shows that a better understanding of the influence of individual characteristics may help to examine the effectiveness of TOT. In the present research, it is proposed that three key factors, *performance outcomes expectancies, perceived relevance of training and trainee ability* may play an important role in relation to TOT.

2.4.2. The impact of training design on transfer of training

In a review of the literature, Dirani (2012) acknowledged that a number of previous studies had centred on developing training program design. In particular, there have been many issues in relation to training, such as identical elements, stimulus variability, the teaching of general principles and practical conditions. For example, the findings of Gregoire, Propp, and Poertner (1998) showed that when trainees had learned theoretical principles and clear contents, TOT was significantly facilitated. A range of practical conditions during the process of training have also been confirmed as facilitators of TOT, such as over-learning (Machin & Fogarty, 2003), using several different stimuli (Machin & Fogarty, 2003), the sequence of the training and performance coaching (Devos et al., 2007). Following the literature review reported by Baldwin and Ford (1988), many studies were conducted on the design of training programmes as well as the examination of the factors that influence TOT (Cheng & Ho, 2001). Some studies on training design are outlined in Table 2.3.

Transfer design

Previous studies on TOT indicated that several training design factors influence TOT, such as training content and clear objectives (e.g. Baldwin & Ford, 1988; Gregoire et al., 1998), the principles of learning and instructional techniques (e.g. Alvarez et al., 2004); and trainer credibility (Thapa, 2013). Researchers claim that it is essential to begin the process by emphasising the training's relevance to the job and establishing the trainer's credibility, as these elements are directly related to training outcomes and increase the likelihood of transfer. Thapa (2013) states that trainer credibility involves a combination of expertise and trust worthiness. When credibility is established, performance feedback may be applied to raise the levels of self-efficacy and motivation of the trainees. Thus, enterprises should design their training programmes to include these elements. Accordingly, the LTSI of Holton et al. (2000) indicated such a factor, namely transfer design.

Transfer design is defined as "the degree to which (1) training has been designed and delivered to give trainees the ability to transfer learning to the job and (2) training instructions match job requirements" (Holton et al., 2000: 345). This factor is a combination of training design, use and training delivery with the intention of connecting learning and individual performance (Holton et al., 2007; McDonald, 2001). Additionally, training is a

process including several activities in relation to training design (Baldwin & Ford, 1988) that may promote the cognitive aspects of training. This element consists of a number of learning events such as goal setting, over-learning, varied practice, relapse prevention and principle meaningfulness (Machin & Fogarty, 2003). A consideration of the construction of the transfer design is necessary for TOT to occur (Wen & Lin, 2014).

Transfer design includes various sub-elements that combine and directly influence an individual's ability to change their performance. Holton (1996) noted that transfer design may change significantly depending on culture, content and other situational conditions. In order to have effective transfer design, the training needs to link to the job demands. If the effectiveness of TOT is an improvement in trainee performance, then the content and delivery of the training have to match the work requirements as closely as possible (Devos et al., 2007; Holton, 2005; Velada et al., 2007).

The quality of the transfer design may create or reduce significantly the opportunities to transfer (Holton, 2005). It is more likely that employees will transfer the learned content from their training to their work context when the training program is designed and delivered to trainees in a way that maximizes their ability (Velada et al., 2007). As a result, when trainees have previous knowledge, when they have practiced how to use their newly learned skills on the job and when the training instructions are suitable to the job requirements, the effectiveness of transfer should be significantly increased (Chiaburu et al., 2010). Furthermore, the calculation of the effectiveness of TOT requires an insight on several forms of transfer. Forms of TOT are associated with how the training is designed and is correlated to the learner's job requirements (Sofo, 2007).

Authors	Sample	Variables Measurement		Results
(Dirani, 2012)	107 questionnaires and 12 interviews	Trainees' perceptions of training activities, trainees' attitudes toward the training program5-point Likert- type scale & InterviewH		Educational factors related to TOT
(Burke & Hutchins, 2008)	139 training professionals in the southern United States	Trainer characteristics, training design	Online survey	Trainer characteristics & training design related to TOT
(Devos et al., 2007)	328 employees in 6 French companies	Transfer design, content validity, performance coaching	5-point Likert- type scale	Transfer design related to TOT
(Sofo, 2007)	149 Bhutanese	Training content delivery, support	5-point Likert- type scale & Interview	Training content was at least relevant to their job
(Velada et al., 2007)	182 employees in Portugal	Transfer design	5-point Likert- type scale	Transfer training related to TOT
(Lim & Morris, 2006)	181 employees in companies of a Korean conglomerate	Learning satisfaction, job helpfulness of content, quality of content, instructor effectiveness, instructional level	4-point Likert- type scale	Learning satisfaction, job helpfulness of content, quality of content, instructor effectiveness and instructional level related to TOT

Table 2.3: Previous empirical studies examining the influence of training design on transfer of training

Table 2.3 (Continued)

Authors	Sample Variables		Measurement	Results
Gregoire et al. (1998)	210 respondents in African- Americans)	Clear objectives, content, trainer attributes, credibility, feedback	5-point Likert- type scale	Content, trainer attributes, credibility and performance feedback related to TOT
Seyler et al. (1998)	74 trainees at computer training programme of a petrochemical company	Reaction to the learning, environment, reaction to content validity	5-point Likert- type scale	Reaction to the learning environment & reaction to content validity correlated with motivation to TOT
(LePine et al., 2000)	73 students in Chicago	Cognitive ability, conscientiousness, openness to experience	7-point Likert- type scale	Only cognitive ability explained variance in performance
Lim (2000)	10 HRD practitioners in Korea	Training content, use of instructional methods, over- learning	Interview	Training content, use of instructional methods, over-learning influenced TOT
(Machin & Fogarty, 2003)	137 trainees in Queensland, Australia	Over-learning, fidelity, varied practice, principles- meaningfulness, relapse prevention, goal setting, learning during training	7-point Likert- type scale	There has been a focus on training activities that are most beneficial in promoting transfer success

Performance feedback

Several studies, such as Baldwin and Ford (1988); Cheng and Ho (2001); Holton et al. (2000) and (Letmathe, Schweitzer, & Zielinski, 2012), supported the important role of performance feedback on TOT. Performance feedback refers to information provided to the trainee on their performance. The specific feedback could be dependent on the stage of training and the trainee; empirical evidence is lacking(Holton et al., 2000). In a study by Lim and Morris (2006) on the effects of feedback on performance, it was found that negative feedback could increase post-training computer anxiety which, in turn, may prevent trainees from improving their training outcomes. The training assignments (for either advanced or remedial purposes) may provide feedback involving past performance and lead to different motivational levels being combined in the actual training program (Velada et al., 2007). Therefore, performance feedback might impact on trainee's motivation to transfer newly acquired skills to their job (Cheng & Ho, 2001). For example, Velada et al. (2007) found performance feedback helpful. They collected data from employees in a large grocery company, and their research results indicated that performance feedback impacted significantly on TOT.

Lim and Morris (2006) noted that observation with performance feedback was more effective for TOT than trainer coaching. For training implementation, there needs to be an environment of frequent feedback, support and reflection. In a similar manner, Letmathe et al. (2012) indicated that relevant feedback may contribute significantly to the effectiveness of training and thus feedback should be credible, correct and constructive. Training may be facilitated by ensuring trainees know how to find and use relevant feedback about their plan to perform a task (e.g., what trainees did correctly or incorrectly, what may be done instead). According to Lim and Morris (2006), training may be facilitated by putting in analyses of the training content to help the trainees have a better understanding of performance feedback.

In conclusion, Table 2.3 summarise the studies that investigated the influence of training design. On the basis of previous transfer research, it can be seen that transfer design (e.g., goal setting, over learning, using several different stimuli and the sequence of the training) and performance feedback are significant for understanding the influence of training design on transfer. Accordingly, the key determinative elements of training design from these

previous studies in the existing TOT literature, such as transfer design and performance feedback, were employed in the present study.

2.4.3. The impact of the work environment on transfer of training

Although work environment factors have been explored less often than individual characteristics and training design variables (Alvarez et al., 2004; Holton, 1996; Tannenbaum & Yukl, 1992), many studies have suggested that work environmental factors are essential for understanding TOT (e.g. Hawley & Barnard, 2005; Lance et al., 2002; Tracey et al., 1995; Velada et al., 2007). When trainees perceive support from their supervisors and peers in the application of newly developed knowledge and skills, they are more likely to transfer these competencies back to the job (e.g. Colquitt et al., 2000; Edwards, 2013; Tracey et al., 2001). Furthermore, according to a recommendation from (Massenberg et al., 2015), significant relationships created by involved parties (including trainees, trainers and managers) before, during and after training may bring about a positive TOT.

A review of the literature indicated that work environment factors can be classified into two categories: work system-related factors and people-related factors (Cromwell & Kolb, 2004; Gegenfurtner et al., 2009). Work system factors include items related to culture, namely trainees' organization culture, supervisory support and political powers (Dirani, 2012), the link between organizational goals and training goals (Montesino, 2002), organizational commitment (Cheng & Ho, 2001) and opportunity to use training (Devos et al., 2007). Of these system factors, the opportunity to apply trained skills immediately to the job has been increasingly emphasized in several studies (Baldwin & Ford, 1988; Clarke, 2002; Gregoire et al., 1998; Holton et al., 2000; Russ-Eft, 2002). In individual-related factors, several studies have focused on the importance of the support of supervisors and peers in the TOT (Baldwin & Ford, 1988; Cheng & Ho, 2001; Cromwell & Kolb, 2004; Velada et al., 2007).

Author(s)	Sample	Variables	Measurement	Results
(Pham, Segers, & Gijselaers, 2013)	167 trainees from eight MBA programs in Vietnam	supervisory support, job autonomy and preferred support	Likert-type scale	Supervisory support, job autonomy and preferred support were significantly associated with TOT.
Simosi (2012)	252 newly hired employees in Greece	Humanistic, organizational culture, orientations	5-point Likert- type scale	Organizational culture plays a role in relation to TOT
Dirani (2012)	107 questionnaires and 12 interviews	Trainees organization culture (peers and supervisors' support and political powers)	5-point Likert- type scale &Interview	Peers and supervisors' support and political powers related to TOT
Chiaburu et al. (2010)	111 participants in an organization in the Mid-Atlantic region of the United States	Perceived support from the organization (POS), supervisor support	5-point Likert- type scale	POS & Supervisor support were positively related to individual factors that influence performance
Burke and Hutchins (2008)	139 training professionals in the southern United States	Supervisory support, peer support, organization support	Online survey and using quantitative analysis procedures	Supervisory, peer and organization supports associated with TOT
Sofo (2007)	149 Bhutanese	Resource support supervisor /peer support	5-point Likert- type scale Interview	Supervisor and peer supports have s different impact on the transfer process
Velada et al. (2007)	182 employees in Portugal	Supervisor support, performance feedback,	5-point Likert- type scale	Supervisor support was not related to TOT
Devos et al. (2007)	328 employees in 6 companies in France	Supervisor support peer support opportunity to use supervisor sanction	5-point Likert- type scale	Opportunity to use related significantly to TOT

Table 2.4: Previous empirical studies examining the influence of the work environment on transfer of training

Table 2.4 (Continued)

Author(s)	Sample	Variables	Measurement	Results	
Lim and Morris (2006)	181 employees in companies of the Korean conglomerate	Responsiveness to change, educational support, transfer opportunities, feedback from peers and supervisor	4-point Likert- type scale	Responsiveness to change, educational support, transfer opportunities, peer/supervisor feedback related to TOT	
Hawley and Barnard (2005)	21 individuals from the United States	Peer support, supervisor support	Interview	Positive impact of peer support & the negative impact of supervisor support to TOT	
Pidd (2004)	220 students in Adelaide metropolitan training institutions, Australia	Workplace support (co-worker, supervisor, behaviour)	5-point Likert- type scale	Workplace support related to TOT	
Cromwell and Kolb (2004)	63 front-line supervisors from a north-eastern university and their 18 direct supervisors	Organization support, supervisor support, peer support, participation in a peer support network	5-point Likert- type scale	Opportunity to perform, supervisor support and peer support were related to TOT	
Tracey et al. (2001)	250 managers in the United States	Managerial support, reward systems, opportunities to perform	5-point Likert- type scale	Managerial support, reward systems and opportunities to perform related to TOT	
Gregoire et al. (1998)	210 respondents in African- American	Decision, Opportunity to perform, Practice and Rehearsal, Incentives, Supervisor support, Peer support	5-point Likert- type scale	Opportunity to increase supervisor support associated with perceived increase in the impact of training	
Seyler et al. (1998)	74 trainees at computer- based- training programme of a petrochemical company	Supervisor support, peer support, supervisor sanctions, opportunity to use	5-point Likert- type scale	Supervisor/peer supports, supervisor sanctions, opportunity to use correlated significantly to motivation to TOT	

Subsequent to the findings of Baldwin and Ford (1988), several studies found numerous work environment impacts, such as practices, organizational culture and support for TOT (Pham et al., 2013). A summary of this is presented in Table 2.4. It indicates that there are three key influences that emerged as significant factors in relation to TOT, including opportunity to use training, supervisor support and peer support. As a result, in the framework for this study, it is proposed that all these three factors play an important role in relation to TOT.

Opportunity to use training

A definition of opportunity to use training given by(Ford et al., 1992: 512) is "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". Opportunity for using training includes three dimensions: breadth (the number of trained skills applied on the job), activity level (the number of times each learned skill is used on the job) and type of tasks (the complexity or criticality of the learned tasks used on the job) (Baldwin & Ford, 1988).

Devos et al. (2007) note that in order for trainees to obtain confidence to demonstrate a newly acquired skill, they need to have an opportunity not only to perform but also to practice these new skills. The lack of opportunity to perform training on the job has been rated as the biggest impediment to successful TOT (Grossman & Salas, 2011). Opportunity to perform will ensure that when an employee has plenty of opportunity to use the knowledge and skills learned in the training context to their job, a larger amount of the training content may be transferred (Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012). Likewise, positive transfer is improved when trainees are given opportunities to apply new training in their work setting (Burke & Hutchins, 2007; Gaudine & Saks, 2004; Lim & Morris, 2006).

A study by Seyler et al. (1998) that surveyed a sample of 74 trainees in a large petrochemical company to collect data and examine the impact of work environment factors on TOT found that opportunity to perform was related significantly to motivation for TOT. According to the findings of Massenberg et al. (2015), employees' motivation to transfer was a key influencing factor in both short-term (after one month) and long-term (after one year) trained skill transfer.

Lim and Johnson (2002) found that the opportunity to use new skills was rated as the highest support factor for trainees to transfer. When employees have plenty of

opportunities to apply their learned skills to the job, a larger amount of training content may be transferred (Hawley & Barnard, 2005). In order to offer opportunities and to further enhance the outcomes of training transfer, managers should consider adjusting employee workloads to enable employees to practice new learned skills in the workplace (Grossman & Salas, 2011). As Salas et al. (2012) suggested, supervisors may provide a chance to use training by planning activities and assigning new duties that involve the content of training.

Supervisory support

There is contradictory evidence on the relationship between supervisory support and TOT (e.g. Burke & Hutchins, 2008), but the majority of the literature proposes that the support of the supervisor is a vital work environment factor that affects TOT (Cheng & Ho, 2001; Hawley & Barnard, 2005; Tracey et al., 1995). Supervisory support has been described as "the extent to which supervisors-managers support and reinforce the use of training on the job" (Holton et al., 2000: 435). Baldwin, Ford, and Blume (2009) highlighted active participation in supervisory support, meaning supervisors not only are required to state the importance of training, but also should actively participate in training (such as setting learning goals and giving positive feedback. In addition, earlier studies have confirmed a significant relationship between supervisory support and transfer of training (Gilpin-Jackson & Bushe, 2007; Saks & Belcourt, 2006).

When trainees receive support from their supervisors for the application of newly developed skills, they are more likely to transfer these skills back to the job (Colquitt et al., 2000; Tracey et al., 2001). Moreover, adequate practice, along with supervisory guidance, will develop effectiveness of TOT and positively impact the transfer process (Blume et al., 2010). For example, in a study by Pham et al. (2013) to explore the experiences of trainees from eight MBA programs in Vietnam, they found that supervisor support directly impacts the chance to perform trained skills. When an individual does not have a concern toward the training, he/she may be unlikely to see the value of the training in relation to their job (Dirani, 2012). Supervisors who support training may positively impact a trainee's confidence and ability to learn new knowledge and skills, and to transfer these trained skills to the job (Tracey et al., 2001). According to Salas and Stagl (2009), if employees recognize supportive supervisors, they believe that training will be useful to help employees to perform effectively their job and be rewarded, suggesting a positive connection between supervisor support and transfer of training. Blume et al.

(2010) stated supervisor support emerged as one of the strongest predictors of training transfer.

The results of the study by Dirani (2012) showed that, amongst a range of predicted factors for transfer, supervisor support reported the strongest relationship to skills transfer from a programme of management training. As outlined by Blume et al. (2010), there is significant evidence to show that TOT may be enhanced by the support of supervisors. The role of supervisor attitudes toward TOT and the influence of this on employees was detailed by Salas and Stagl (2009). The findings of a study conducted by Xiao (1996) in electronic companies in Shenzhen, China concluded supervisor support and interaction among employees were the most important factors on TOT. Chiaburu et al. (2010), in examining the impact of social support in the workplace and TOT, indicated that supervisor support was positively related to motivation for the TOT.

A few studies have suggested that supervisors have only limited effects on TOT. For example, Velada et al. (2007), studied employees in a large grocery store in Portugal to examine the impact of supervisor support on TOT and found that supervisor support was not significantly related to TOT. Devos et al. (2007) also reported similar results. However, the majority of research indicates that positive supervisor support improved effective TOT at the workplace (Baldwin & Ford, 1988; Burke & Hutchins, 2008; Cromwell & Kolb, 2004; Dirani, 2012; McSherry & Taylor, 1994; Quinones et al., 1995; Seyler et al., 1998).

Peer support

Holton (1996) defines support of peers in the transfer environment as the extent to which peers support the application of learning on the job. This support could involve setting learning goals, giving positive feedback or offering assistance. Both supervisory and peer support have been examined by several studies as factors that facilitate TOT (Baldwin & Ford, 1988; Blume et al., 2010; Facteau et al., 1995; Hawley & Barnard, 2005; Holton et al., 2000). Research results reported by Holton, Bates, Seyler, and Carvalho (1997) indicate that the support of peers was one of five most important factors in relation to TOT. This factor was also an important predictor in the performance of more complex skills (Cromwell & Kolb, 2004).

After the findings of Baldwin and Ford (1988) on the relationship between peer support and TOT, peer support has received significant attention in the literature (see Table 2.4). Some researchers believe that peers may be one of the most important factors in the process of TOT. For example, Facteau et al. (1995) examined the impact of four forms of support (top management, peers, supervisors and subordinates) and task constraints in the work environment on pre-training motivation and TOT. These researchers found that all four supports were significantly related to pre-training motivation. While supervisor support was negatively related to perceived transfer, the support of peers and subordinates was positively and significantly related. Furthermore, in a study by (Hawley & Barnard, 2005), interviews were conducted with 21 individuals in several industries in the United States to examine how peer and supervisory support are related to TOT. One finding that emerged from the evaluation activities was that the support of peers facilitated TOT over time. Participants in this study reported the important roles that peer support played in their ability to effectively complete the training.

2.5. Chapter summary

The relevant literature surveyed in this chapter has provided an outline on TOT, including definitions and models of transfer. Additionally, this literature also reported that TOT is principally impacted by underlying dimensions of individual characteristics, training design and work environment, but limited study has been devoted to this area.

This study aims to investigate the multiple dimensions of organizational factors which may impact significantly on effective transfer of technical training (ETTT). There are eight dimensions of organizational environment that are important in examining the effectiveness of TTT: performance outcome expectancies, perceived relevance of training, trainee ability, transfer design, performance feedback, opportunity to use training, supervisory support and peer support. It is necessary to shed some light on a greater understanding of what elements impact ETTT of employees in Vietnamese SOEs.

This chapter detailed three important areas in the literature relating to this study. Firstly, it discussed the purpose of training and development. Training is an important element of the organizational business process. The cost related to employee training and the desired performance results are important for the success of many organizations. Secondly, the transfer literature stressed the importance of TOT and moving beyond the recent conception of the transfer process. Finally, this chapter also gave a detailed review of previous studies on the impact of three major elements, namely trainee characteristics, training design and the work environment on TOT.

Reading from Table 2.1, 2.2 and 2.3 that listed period studies on TOT, it is clear that many studies used very small sample sizes (under 150 observations) for collecting data. These small sizes may lead to the low validity of the research (Neuman, 2011). In addition, factors influencing TOT on the job have been investigated in a wide range of developed countries, but the Vietnamese environment is specifically under-researched. Some of the above mentioned factors may impact significantly on TOT in companies in developed nations, but further research is needed to determine if these factors will be relevant to the Vietnamese context and SOEs in particular. The next chapter discusses the Vietnamese context and its influence on training transfer.

Chapter 3

Vietnam's Context and Its Impact on Transfer of Training in SOEs: An Overview

3.1. Introduction

Following Chapter 2, which introduced TOT and its implementation in the context of Vietnamese SOEs, Chapter 3 reviews and highlights Vietnam's contextual environment in the existing relevant literature.

This chapter addresses the way in which three external environment factors influence effective transfer of technical training (ETTT) in SOEs. First, the chapter reviews the Vietnamese economy, which gives an insight into the matter of the research context at hand. This is followed by a discussion of the influence of three economic environmental aspects, namely SOE reform, open access to the Vietnamese market and the development of the export market. The chapter then outlines the features of Vietnam's national education system and the three factors influencing TTT at the enterprise-level, namely the quality of technical institutional training, the quality of technical teaching staff and the quality of technical student training. The chapter then covers the impact of factors relating to the legal and regulatory environment, including training and technological policies. A conceptual framework for this study is proposed, followed by a summary of the chapter.

It is argued that aspects of an organization's performance are impacted by its structure and conditions that are external to the enterprise. Describing the relationship between environment and organizational business, Khan, Qureshi, and Zaheer (2012) indicate that no enterprise exists entirely separately from its environment. According to these authors, a productive firm necessarily forms part of a complex educational-sociological-economic whole" and thus all activities of an enterprise are significantly impacted by the nature of the total environment.

The business environment of an economy provides all enterprises operating therein with communal rules that they must comply with. For HR training and development, environmental factors may be treated as variables. As a result, understanding the influence of each dimension of the natural environment is critical in the TOT of enterprises. The national environmental factors may be reduced to three basic areas: legal,

economic and educational. Using this categorisation, these three dimensions are overviewed in terms of how they impact the process of TOT in Vietnamese SOEs.

3.2. The Vietnamese economy in transition

Vietnam's history has been connected closely with a long-term struggle against foreign domination beginning with a thousand years of Chinese influence that ended in 939 CE. After that, it was dominated by French colonialism from 1847. During World War II, the Japanese dislodged the French and occupied Vietnam, but accepted a collaborationist in the colonial French administration to continue to run Vietnam during the occupation (Makino & Tsang, 2011). The French colonial presence ended with the Geneva Conference of 1954. Revolutionary forces led by Ho Chi Minh seized power in the North of Vietnam, while the South continued to be dominated by the United States. This situation was resolved and the country became independent in 1975 under the leadership of the Vietnamese Communist Party.

Supported by the Soviet Union, the North and South of Vietnam were unified as the Socialist Republic of Vietnam. Vietnam became a member of the Council for Mutual Economic Assistance in 1978, which strengthened its political and economic ties with other socialist countries. The Soviets did not rule Vietnam, but supplied the modern-day political foundations of Vietnam. For example, the Third Constitution of Vietnam, which was promulgated in 1980, was based on that of the Soviet Union (Makino & Tsang, 2011). Throughout the 1980s, most of Vietnam's trade was conducted with the Soviet Union and other Comecon nations. However, from 1975 to 1986, under the centrally planned economy, dominated by large SOEs, an inefficient agricultural base and small family businesses, life quality was poor and economic growth remained weak (Truong & Ha, 1998).

Since 1986, there have been many positive changes that have stimulated the economic and social development of Vietnam. The national government has implemented an economic "new change" policy from a centrally planned economy to a "socialist-oriented market economy". Throughout this transition, the Vietnamese government intended to attract foreign investment and bring in up-to-date technology to provide a foundation to gain its goal of building a "socialist state" with an industrialised and modernised economy (Collins et al., 2012). This policy has given Vietnam the opportunity to join the worldwide community after a long period of seclusion. This economic reformation has brought about some key changes in government policy such as SOE reform, open access to the Vietnamese market and the development of export markets. In particular, it has led to changes in firm-level management practices regarding labour and HR to increase competitive advantage (Collins, 2005). SOEs have been given greater autonomy and employment contract systems have been introduced (Collins et al., 2012).

3.2.1. Reform of SOEs

Under the centrally planned system, Vietnamese SOEs were seen as the only legitimate economic form (Zhu, Collins, Webber, & Benson, 2008). The SOE management mechanism was largely affected by the subsidy system and the role of managers in SOEs was biased toward administration (Pham, 2011a). Their key job was to take orders and resources from the national government and assign the resources to produce what was defined in the plan (Nguyen, 2003b). This meant that SOE production goals were allocated and all their products had to be given to the government for distribution (Truong & Ha, 1998). Thus, there was no motivation for managers to apply business management methods, namely marketing and HR management, to improve enterprise performance (Pham, 2011a). As a result, managers in this system were not encouraged "to be more responsible and open-minded as actually practiced in a market economy" (Pham, 2011a: 80). The value of an enterprise was only measured by tangible assets. Intangible assets (including innovative capability and reputation), which may create future value, were ignored because managers believed they brought no value to the enterprise and this was not measured in anyway. Moreover, environmental uncertainties were not taken into account in this system. This hindered the enterprise's ability to deal with the occurrence of uncertainties over time (Nguyen, 2003b).

In addition, during this period, the wage levels in Vietnamese SOEs were centrally controlled to capture profits for the national budget (Nguyen, 2014). An employee's salary depended significantly on their "labour" input to the organization. According to Lam (2014), seniority and loyalty were usually the two most vital elements to be applied as the standard for payment to employees. Present or future value-making capability was not seen to be essential (Nguyen, 2003b). Performance-based payment was bureaucratically applied throughout employee's amount of working hours without consideration of productivity. Most SOEs used standard wage tables rather than

performance-based tables. Clearly, employees had no incentive to perform their work well (Pham, 2011a).

The control processes in most Vietnamese SOEs were linked with bureaucracy, which Kamoche (2001) defined as "traditional administration". Employees had to observe all bureaucratic procedures and rules of the enterprise. They could not adjust their work practices to meet the need for efficiency. Employees were completely dependent on their enterprise and supervisor. This was in accordance with traditional Vietnamese culture that upholds high power distance and strong collectivism. As a result, most SOEs generally had a bureaucratic, static and internally-focused culture.

In order to maximise revenue, the government has reformed SOEs through a series of policies. Firstly, the reforms resulted in increased autonomy and imposed a hard budget constraint on SOEs. Several criteria measures were introduced to restrict the creation of new SOEs and encourage mergers and acquisitions. One of the most important solutions has been to reform SOEs through a process of equitization - "the officially preferred term for privatization" (Truong & Ha, 1998: 90). After equitization, the type of equitized enterprises depended on the rate of the share capital. Enterprises where the state held more than 50% of the share capital remained SOEs, enterprises where the state held less than 50% became other type of firms. The aim of this solution was not only to enhance independence and effectiveness in SOEs, but also to attract investment from private firms into SOE activities (Pham, 2011a).

The Vietnamese Government introduced a pilot program of equitization in 1992, but its implementation was slower than anticipated. Originally, 19 SOEs were selected for the pilot equitization program, but by 1998, only 14 enterprises had completed the process of equitization. There were many reasons for this, such as a lack of clear guidelines on the implementation process by the responsible organizations; the reluctance of top management ministries to divest themselves of important revenue sources; the enterprise's fear of losing privileges associated with being a SOE and employees' concerns about benefits and job security. Although this pilot program was implemented slowly, its initial results had a clear impact. For example, a study of the performance of these 14 enterprises showed that their output and wages increased. On average, their operating capital increased by 45%, profit by 56.9%, employee income by 30-50% and more than 1,000 jobs were generated (Chen et al., 2005).

Due to the effectiveness of the pilot equitization program, this process has been strongly promoted since the 2000s. According to a Report of Vietnam's Government (2009), by

the end of 2005, there were 1,847 SOEs that the state holds100% of the share capital and 2,857 SOEs had been arranged into different forms including equitized SOEs, merging enterprises and even the disbandment of enterprises. In order to continue increasing the effectiveness of SOEs, from 2006 to 2010, the national government of Vietnam hastened the rate of the progress of equitization, as well as narrowing the criteria for enterprises that needed to be equitized, concentrating mainly on large scale SOEs and state-owned financial companies. As a result, the number of SOEs reduced significantly from 4,084 in 2005 to 3,283 by the end of 2010 (Tran, 2011). The remaining SOEs included 1777 SOEs were at the central level that belonged to the management of the functional ministries with 1,301,800 employees, and 1506 SOEs were at the local central level and belonged to the management of cities with 386,900 employees (see Table3.1).

 Table 3.1: Number of SOEs and structure of employees in SOEs (2005-2010)

2005		2007		2009		2010	
firms	employees	firms	employees	firms	employees	firms	employees
4,084	2,037,700	3,494	1,763,100	3,364	1,735,500	3,283	1,688,700

Source: Summary from report of the General Statistics Office of Vietnamese Government 2011

It is clear that the present national policy has changed from a reliance on SOEs and agricultural activities to promoting all enterprise types with a more diverse economy (Hakkala & Kokko, 2007). The regulatory and incentive framework has gradually improved with a more flexible management control system that has allowed the SOEs to make profits and achieve their goals. The Vietnamese SOEs "were given greater autonomy, a new union charter was drawn up and a Labour Code was implemented" (Collins et al., 2012: 605). The state-owned sector of the Vietnamese economy was developed in the reform period and contributed to the economic growth rate. However, since 1996, growth has slowed and the inefficient state-owned sector has become an impediment to sustainable economic growth in Vietnam (Hill, 2000).

3.2.2. Open access to Vietnamese market

After the reform period, with the purpose of attracting foreign investors into the Vietnamese market, many changes in Vietnam were implemented, including state

decentralization, budgetary and tax reform, increasing autonomy for SOEs and the acceptance of private sector development (Nguyen et al., 2011). These reforms have contributed to Vietnam's rapid economic development and Vietnam has emerged as one of the fastest growing economies in South East Asia (Collins et al., 2012). In addition, the United States trade embargo against Vietnam was lifted in 1994, which has brought in business and cooperation opportunities between American and Vietnamese organizations and companies. Additionally, significant milestones such as membership of the Asian Free Trade Area (AFTA), the conclusion of the US-Vietnam Bilateral Trade Agreement and joining the Asia-Pacific Economic Cooperation (APEC) and the World Trade Organization (WTO) in 2007, have created new opportunities for Vietnam.

It is likely that open access to the Vietnamese market has created opportunities for development and institutional reforms, creating a favourable environment for investment and business and increasing competitiveness and opportunity for using imported technologies. According toWestphal (2002), the movement of technological knowledge from abroad into a developing country may be conducted through informal modes, including machinery imports and valuable technical assistance. Advanced equipment providers may provide technical assistance to ensure that goods will meet their own strict specifications.

Moreover, international business may be an environment in which to create adaptability to challenges and integration, especially the ability to maintain and improve the competitiveness of a country in the international market. According to authors such as Fahy et al. (2000); Meyer and Nguyen (2005), SOEs in transition economies often see a joint venture with a foreign partner as a chance to strengthen their market position. As a result, SOEs need to improve. In fact, the stock of foreign direct investment (FDI) as a proportion of GDP increased from zero in the 1980s to over 75% in 2010 (Makino & Tsang, 2011).

In 2008, FDI into Vietnam was focused on capital-intensive sectors, such as construction, industry and services, with the average investment being USD 52.0 million per project. This signified much stronger capital flows than in previous years (Makino & Tsang, 2011). After the 2007-2008 exponential growth, the FDI inflows into Vietnam reduced by approximately 2 billion USD in 2009. This was mainly caused by the global financial crisis of 2008. In 2010 - 2011, the stocks of Vietnamese FDI continued to fluctuate and did not experience the same growth pattern as the 2007-2008 period (Van & Sudhipongpracha, 2015). By 2011, around US\$198 billion of total registered capital was

from more than 13,600 FDI projects in the Vietnamese market. Although the Vietnamese economy was also affected by the global financial crisis of 2008, it experienced only a 0.8% decrease in economic growth (Leung, 2015). With an average GDP growth rate of 6.6 % between 2001 and 2011, Vietnam has become Southeast Asia's best-performing economy.

However, one of the biggest challenges for Vietnamese enterprises is the lack of skilled labour to control modern technologies and services (Bartram, Stanton, & Thomas, 2009). UNIDO (2011) emphasizes that the spreading impact of foreign investment in Vietnam depends on the gap between domestic enterprises and foreign investment enterprises (FIEs) in terms of scale, skills and capital intensity. Therefore, the negative impact of a skills gap on overall labour productivity means that in the short-term, the country should encourage FDI with labour-intensive technologies in order to use the current cheap labour force. In the long run, Vietnam should focus on narrowing the gaps in technology and employee skills between FIEs and local enterprises, especially SOEs.

According toBasant and Fikkert (1996), establishing technological capability and employee skills depends basically on the investments of enterprises in their own HRD and skills training, particularly through training in the workplace. They also indicate that employee training not only creates new knowledge and skills, but also develops the enterprise's ability to exploit existing knowledge and skills. As a result, in order to successfully apply imported high technology, it is necessary for Vietnamese enterprises to conduct effective training on the transfer of skills for their employees.

In addition to promoting foreign investment in business, Vietnam has encouraged the expansion of international cooperation in education and training with many high-quality institutes and universities around the world, as well as research and training projects based on loans or financial aid from foreign organizations in the technical training of employees (Collins, 2005). Moreover, international organizations with strong experience and qualifications in the educational area have been supported to establish training campuses in Vietnam in virtue of joint-venture ownership with local partners or wholly-owned foreign capital. It is expected that educational cooperation will bring about better training quality that may provide high skilled labour to be able to meet needs of enterprises.

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3.2.3. Development of the Vietnamese export market

It is claimed that an internal-looking system could make low-quality goods for a local market, while an external-oriented industry needed to be competitive in terms of cost and quality with the most able manufacturers in the world (Nguyen & Truong, 2007). However, for Vietnam, in the past, "the turn outward in Vietnam involved more than just a rejection of the Soviet-style autarkic policies" (UNIDO, 2011: 66). Marketing skills, which are a critical part of any manufactured export plan, were not applied to the export of goods.

It is believed that WTO accession has dramatically changed the structure of the Vietnamese export market. According to the 2011 survey results of the General Statistic Office of Vietnam, Vietnamese exports to the US market increased significantly from US\$1.0 billion in 2001 to US\$10.6 billion in 2010. Currently, the EU is the largest market, next is the ASEAN region, Japan and China. For example, Vietnamese SOE exports are strongly directed to the EU and ASEAN region, with 32.1% and 22.8% of exports respectively; private domestic enterprise exports are primarily concentrated on the EU market (29.6%), followed by the US at 15.3% (UNIDO, 2011). Although the range of export goods and markets has been expanded, manufacturing production has still remained low added-value (which widens the trade deficit) and heavily focused on specific export markets.

According to Malesky, Hung, Anh, and Napier (1998), there is a significant positive relationship between an enterprise's export market involvement and its future productivity. Export market participation is fundamentally associated with enterprise level variation in productivity (Aw, Roberts, & Winston, 2007). Through export activities, the contribution and the competitiveness of the enterprise need to be developed to improve the economy's labour productivity. A study by Westphal (2002) implemented in the East Asian economies indicates that a main reason for their success is an effective adaptation of new technology gained from foreign purchasers of their exports. This means that through product exports, the technical change process of export enterprises may be addressed. Several researchers investigating the improvement of technology in developing countries also emphasise the critical role of enterprise-level investments in research and development and employee training in order to conform to newly-gained technology from abroad (Basant & Fikkert, 1996; Liu & Buck, 2007). Hence, in order to adapt and manage these technical changes, it is necessary to improve on-the-job training (Aw et al., 2007).

Aw et al. (2007) also argued that exporters who invested in employee training have significantly higher future productivity than enterprises that only export. Expenditure on

skill training in the workplace facilitates an enterprise's ability to benefit from contact with the export market. For example, training may also provide employees with the skills needed to conduct export market-oriented tasks, including the development of an export marketing strategy and the ability to interpret information about export markets (Cadogan, Paul, Salminen, Puumalainen, & Sundqvist, 2001). Consequently, it is important to concentrate on the influence of the export activity on labour productivity to find out the larger economic benefits of export performance.

In addition to the improvement of economic policies, the Vietnamese government has recognized education as a top national priority because highly skilled labour is considered to be one of the important foundations of social development and accelerators of sustainable economic growth (Nguyen & Truong, 2007). Thus, many policies have been implemented to support the development of education and more effectively meet the demands of a market-oriented economy. As a result of the continued efforts in educational development, the Human Development Index ranking of Vietnam in the report of the United Nations Development Programme (UNDP) has improved from 128th (out of 177) in 2005 to 109th (out of 187) in 2011 (UNDP, 2011). However, in facing highly competitive global markets, many Vietnamese employees have found themselves in a disadvantaged position. The quality of education is very low and the practical skills and creative ability of graduates are limited. In particular, many workers in Vietnamese SOEs still lack adequate on-the-job training. The following sections discuss some educational factors that may impact on effective TTT in Vietnamese SOEs.

3.3. The Vietnamese educational environment

3.3.1. Vietnam's national education system

Under Confucianism and Chinese colonisation, education was necessary for admission into the ruling class of the Vietnamese feudalist dynasties (Le, 2011). A key factor in the colonial impact was that of language, particularly the writing and the development of abstract intellectual Vietnamese. Although, *Chu Nom* (a Vietnamese style of Chinese characters) was introduced in the 13th century, the elite mandarin ate still continued to favour the traditional Chinese writing. The complication of the characters system added to the persistence of elitist education and restricted the possibilities of common functional literacy (Huong & Fry, 2004).

Under the French colonial government, a French-Vietnamese education system was built by a French missionary named Alexandre de Rhodes to replace the Confucian education system in 1917. It is stated that this system permitted Vietnamese people to access written texts and that the dominant language of instruction at the higher education level was French (Huong & Fry, 2004). However, the primary function of this new system was to train staff for the colonial civil service and other white-collar jobs. As a result, with this education system, "95% of Vietnamese people were illiterate" (Ministry of Education and Training of Vietnam, 1995).

Since gaining national independence in 1945, Vietnam underwent three educational reforms. The first reform was from 1945 to 1955. A national education system was established including pre-school programmes, primary and secondary schools (basic education) and a college and university network. The second reform was undertaken between 1956 and 1978. With the Reunification process, primary and secondary schools were brought under the control of the Ministry of Education and Training, whilst colleges and universities were brought under the management of the Ministry of Higher Education. Primary and secondary education in Vietnam is free to all children. The third reform was from 1979 to 1986 to make education more relevant to social and economic needs. The reforms started to focus on a combination of theory teaching and practical training, especially emphasizing skill training for employees.

Since 1986, the education system has continued to be structured in three levels, preschool, vocational and professional schools and higher education. "General" education was extended from 10 to 12 years. The first 9 years, corresponding to primary and junior high schools, constituted the compulsory level, the last 3 years, the secondary level. Graduates of secondary schools were considered to be ready for employment requiring skilled labor. They were also eligible to apply to colleges or advanced vocational schools.

Vocational schools at the secondary and college levels served to train technicians and skilled workers for mid-level cadre positions for a key group of officers to establish and develop an organization in the economic, educational, medical, technical and cultural fields. Senior cadres in these fields, as well as members of the upper bureaucracy, usually had graduated from universities. It is clear that students preferred the specialized middle schools to vocational schools for two main reasons. The former provided an opportunity to have a high-status occupation while the latter gave students a hope of becoming a member of the upper bureaucracy in the future.

The Government organized all vocational training activities, from setting targets and investing resources to distributing and utilizing trained manpower. The characteristics of

the socialism-oriented market economy have had a profound effect on the development of vocational training, expressed in the following basic features: (1) vocational training providing enough skilled workers for the labour market; (2) diversifying forms of vocational institution ownership; and (3) ensuring social equality in access to vocational training through governmental policies on investment, enrolment, tuition fees, scholarships, social allowance and paying particular attention to disadvantaged groups, such as ethnic minorities and those in poverty.

In addition to the reform of education, Vietnam took part in international cooperation programs in the fields of education and technical training, principally with the Soviet Union. The Soviet Union had many programs supporting Vietnamese education and training. For example, Russian and Vietnamese linguists combined to compile textbooks for Vietnamese "general education" schools; a similar project in Russian was also used in Vietnamese colleges; the Russians also assisted the Vietnamese in publishing scientific and technical dictionaries. Many Vietnamese specialists and skilled employees were trained with the education assistance programs of the Soviet Union to improve their skill levels. Moreover, according to Warner (2013), Vietnamese enterprises (including both state-owned and private enterprises) have started to design and conduct many training courses for their employees. Training programmes begin with the very basics of business training in their curriculum. Overseas employers provide broad-based training for their employees as a foundation and further training is provided afterwards.

Nevertheless, these reforms considered education as merely cultural and ideological instruments and investment in education was only regarded as a form of "social welfare" (Nguyen, 2009), such that policies and activities were intended to meet the most essential needs of citizens. The concept of skills training and development had no status in education goals (Pham, 2002). The college system of Vietnam was not diverse or flexible. Students spent too much time gaining diplomas and insufficient time "in practical, creative activities". Consequently, a shortage of skilled labour at all levels has been a constraint. According to (Warner, 2013), Vietnam requires about 15,000 skilled employees each year, in fields including information technology, management, tourism, and finance to cope with demand. However, with the present training capacity, the country could only satisfy 40-60% of labour needs. With increasing FDI to Vietnam, recruitment of skilled labour for management and technical positions has become increasingly challenging (Warner, 2013).

After two decades of education and training system reform processes, Vietnam has established a national education system which is relatively complete, consistent and diversified at all levels from preschool to postgraduate, with a number of education-training forms and approaches (see Figure 3.1). The school network is increasingly expanding in all provinces and cities nationwide. From a system with only public schools and mainly formal types of education, the current education system now has non-public schools, non-formal types of education, open schools, distance education and several forms of cooperation with foreign educational institutions (Nguyen, 2009). The outcomes of Vietnam's efforts during the past decade have received international recognition for achieving the highest literacy level and the best access to basic education of all the low-income nations (Kokko & Tingvall, 2007).



Figure 3.1: Vietnam's national education system

(Source: the Law on Education promulgated in 2005)

3.3.2. Quality of institutional training

The Vietnamese recently government decided that it was necessary to promote vocational training to address the development needs of society, establishing mechanisms and policies to facilitate a close link between enterprises and training institutions (Tracey et al., 2001). Vietnam's *Socio - Economic Development Strategy by 2020* indicated that "HR development is one of the three strategic breakthrough solutions, in which vocational training quality is regarded as a critical element of socio-economic development" (XI-th Congress of the Communist Party of Vietnam, 2011: 24). In addition, in April 2012, the Vietnamese Prime Minister approved Vietnam's Vocational Training Development Strategy for the period 2011-2020. This strategy detailed specific objectives that Vietnam will attempt to achieve, such as increasing the rate of vocationally trained labour from 25% in 2010 to 40% by 2015 and 55% by 2020 (Vietnam Government Officice, 2012).

It is argued that there have been developing links between industries and vocational training centres. Suitable conditions have encouraged international cooperation and private contribution in vocational training and have improved the quality of the vocational curricula (Duong, 2011). By the end of 2010, Vietnam had 414 universities and colleges (excluding universities in military and security areas) with 77,542 lecturers (including 12.7%having doctor's degree and 38.9% having master's degree)and over 1500 vocational schools with 33,000 teachers (Duong, 2011).

However, generally, the quality of existing engineering, technical and management training institutions is low and it often fails to meet world educational standards or the actual demands of the enterprises. Some researchers, such as Tran and Nguyen (2000) and Nguyen and Truong (2007) note that the majority of graduates are seriously restricted in practical skills and the ability to adapt to a work situation. They may understand the theory, but their ability to apply theory to the work situation is limited. One of the key reasons leading to the low quality of institutional teaching is a shortage of qualified teaching staff, facilities, equipment, materials and practical training programmes (Hargreaves, Montero, Chau, Sibli, & Thanh, 2001; Nguyen et al., 2011). In fact, it was indicated that vocational education "is not yet sufficiently developed; it has too few skilled teachers and lacks up-to-date equipment" (Tran & Nguyen, 2000: 236).

According to (Kieu & Chau, 2000), the content of education and training programmes is overloaded and deficient. While many parts of the curriculum have been too heavy in theory, the programme has failed to comprise some essential subjects such as providing adequate knowledge and skills on scientific and technological advances. School equipment for teaching and practice has been seriously lacking and was slowly updated according to actual requirements of improving technical skills training. Consequently, education and training has not matched with requirements of practice and organizational demands. Up to 80% of graduates need to be retrained by employers to match specific job requirements (Nguyen et al., 2011).

While the quality of institutional training has been low and is not an effective provider for the labour market (Nguyen & Truong, 2007), the workplace may be expected to be the key source of skill training and improvement in Vietnam (Vo & Hannif, 2012). Vietnamese enterprises have begun to allocate a larger portion of their budget on employee training and development. For example, according to Nguyen et al. (2011), Vietnamese SOEs provided training for 96% of incumbent employees and 62% of new employees to improve their skills. Consequently, many enterprises have actively built cooperative relations with education institutions as a means of addressing the shortage of technical skills. When the training quality of education institutions is limited, an actual requirement for employee training in the workplace is created.

3.3.3. Quality of student technical training

Despite the large number of vocational training institutes, including over 300 vocational schools, 810 job service centres, about 130 colleges and high schools and thousands of private vocational training classes in enterprises and traditional handicrafts villages (Duong, 2011), vocational trained labour is of low quality. As practical training is not built into the curricula, over 80% of graduate students have to be retrained by employers to meet job requirements(Hargreaves et al., 2001).

Although the rate of trained people in Vietnam is high, highly skilled labour in Vietnam is scarce. According to the Vietnam General Statistics Office (2011), 80% of the Vietnamese population graduated from primary school, but 84% of rural labour have not been apprenticed. A recent World Bank study stated that Vietnamese HR quality only reached 3.79 points on a scale of 10 and ranked 11 out of the 12 ASEAN countries reviewed (Vu, 2012b). The shortage of skilled labour in firms with opportunities for employment and growth has a negative impact on organizational performance and endangers the growth strategies of companies. Thus, in order to improve the skill levels of employees in enterprises, the need for training in the workplace should be prioritized.

While vocational skilled labour is an urgent demand at the enterprise-level, the proportion of students enrolling in vocational institutions or professional secondary schools is low

and is only increasing slowly(GOS, 2008). Many youths perceive that vocational education has much less prestige compared to university education in a traditional culture where investment in education is still considered as the most effective way every parent can help the future of their children (Nguyen & Truong, 2007). Accordingly, numerous potential students do not follow a vocational education in favour of a university degree, although the unemployment rate amongst university graduates is extremely high (Nguyen et al., 2011). This has resulted in a lack of technical skilled workers in the Vietnamese labour market to supply the actual needs of enterprises.

3.3.4. Quality of technical teaching staff

There were no institutions in which to train vocational teachers in Vietnam prior to 1970. Before 1970, vocational schools employed some technical experts as vocational teachers (Hamano, 2008). In order to become a teacher, these technical personnel were shortlyterm trained pedagogical skills which were selected from several subjects including Psychology and Pedagogy Didactics from Pedagogical Schools. The vocational teaching persons were not pre-service trained to become teachers. Their pedagogical competency was restricted, so the vocational teachers relied on their own experience and self-study to teach students. According to (Hamano, 2008), in the 1970s, because of an urgent need for trained teachers, three vocational teacher training schools were established in North Vietnam to train secondary level vocational teachers, who mainly taught practical subjects in technical training schools. Students from upper secondary education grade 10 were recruited to train for three years and to be granted a vocational teacher training degree that is equal to the secondary level.

In the 1980s, the training of vocational teaching staff was given special attention by the national government. However, recruiting technical personnel from upper secondary education to train as vocational teachers (similar to the experience of the former East Germany at that time) was not realizable (Hargreaves et al., 2001). Thus, the vocational teacher training schools changed to train vocational teachers at an advanced level. Students who had graduated from upper secondary education were selected to train for five years with two stages, that is, training technical workers at level 3 of 7 in two and a half years and then continuing training for another two and a half years in a teacher training course. After completing the course and passing the exams, they were awarded a Diploma of Vocational Teacher Training. Since 1990, the duration of this course was shortened to four years and then in 1995, it was shortened again to three and a half years.

The current vocational teacher training institutions are as follows: (1) four universities of technical education, Hung Yen University of Technical Education, Nam Dinh University of Technical Education, Ho Chi Minh City University of Technical Education and Vinh University of Technical Education; (2) one College of Technical Education at Vinh Long; and (3) technical pedagogical faculties in several colleges and universities including Hanoi University of Technology, Hue Teacher Training University, Thai Nguyen Industrial Technique University, Da Nang Technical University, Hanoi Agricultural University and Ho Chi Minh City Agriculture - Forest University. These pedagogical faculties have a duty to train technical teachers for professional secondary schools and vocational training schools (Ulimwengu & Badiane, 2010). Although the number of vocational teacher training institutions has increased and teaching curricula and equipment has been improved to promote training capacity, the quality of vocational teachers still remain slow for several reasons.

Firstly, the network of technical vocational teacher training institutions is still poor because the teacher training institutions are training with only about 40 trade types, approximately 9% in total of 380 trade types in the list of occupation training. While the numbers of graduated students is increasing, there is still a lack of specific vocational graduates who are able to teach specific technical skills according to the actual job requirements of industry. As a result, according to Duong (2011), many institutional teachers were needed to cover a range of subjects, including foreign languages and technical subjects.

Secondly, the further training of pedagogical competency has been restricted in quality. Teachers' teaching ability and knowledge is low and far from needs is required for development (Dudzik, 2010). According to Hamano (2008), teacher training in Vietnam was traditionally impacted by French intellectualism-oriented education that taught a series of systematised knowledge parts in committing to memory/copy being reflected in the foundation of education. Teacher training placed a main focus on the knowledge of the subjects (Peeraer & Van Petegem, 2012), but little consideration was spent on teaching methods. In addition, Duong and Morgan (2001) argue that teachers of vocational subjects have to be well experienced in both practical skills and theory. Before becoming good technical trainers, vocational teacher graduates have to be experienced in a technical working environment. However, this can be avoided in the process of technical teacher training in Vietnam. As a result, the number of vocational training teachers has significantly increased, reaching 33,000 teachers in 2010 (four times
compared to 2001), but only about 46 % of these teachers are able to integrate teaching in both vocational theory and practice (Duong, 2011).

Finally, vocational teachers were less competent in maintaining and developing their technical knowledge and skills (Hamano, 2008). It is claimed that it is very important for technical teachers to learn new training content and techniques in order to develop from a conventional type of teaching. Teacher training has to be upgraded to allow them to learn the new training techniques in line with the new curriculum and teaching equipment (Hamano, 2008). However, many technical teachers do not keep up with technological advancements while in service. Therefore, their teaching quality is unable to improve to prepare skilled labour in line with the expectations of enterprises.

It is argued that although most Vietnamese enterprises identify the important role of skill training for successful performance, they still face difficulties in funding these activities (Nguyen et al., 2011). At the same time, as discussed above, the quality of technical institution training and the quality of technical training staff in general is inadequate which may explain the low quality of technical graduates. This quality often fails to meet the labour demands of enterprises. The majority of technical graduates are seriously restricted in practical skills. Consequently, in order to bridge this gap, Vietnamese enterprises, including both SOEs and private enterprises, have spent a large amount of their budget on employee training in the workplace (Nguyen & Truong, 2007).

3.4. Legal and regulatory system

There is no doubt that it is necessary to continuously assist vocational training mechanisms and skill formation to meet the fast-changing labour needs of industry, especially in advanced industrial segments. Skill formation mechanisms need to be implemented by institutions and enterprises as a part of a general policy framework which includes education, industry and the promotion of investment.

3.4.1. Training policies

In facing highly competitive global markets, Vietnamese employees have found themselves in a disadvantaged position. The practical skills and creative ability of graduates are restricted and many employees still have inadequate on-the-job training. Therefore, in the hope of improving the skills of employees and graduates, the Vietnamese government has given further attention to improving employees' skills through vocational colleges and training programs and supporting the development of enterprises by providing more training on new technologies (UNIDO, 2011).

The national government has put forward several policies to encourage the national institutes and enterprises to train and improve the quality of graduates, technicians, professionals and workers. For example, the Vietnamese Labour Law 1992 focused on the vital role of on-the-job training and required that "an employer shall establish a job training system, set aside funds for job training and use them according to the regulations of the State, so as to be able to train its employees systematically in the light of its circumstances" (Vo & Hannif, 2012: 87). This law provided the opportunity to include employee training into the business strategies of enterprises. Furthermore, according to the new Education Law, a tax exemption related to training and other fiscal incentives were offered to encourage companies to invest in training activities (CIEM, 2006) such as the payment of tax credits with the money being spent instead of buying training equipment and related items. Training scholarships and vouchers are available to students who would like to undertake a particular course and the funding is given directly to particular students rather than the institution (UNIDO, 1999). As a result, the dual training system in both enterprises and schools has been quite successful because theory and basic skills may be more efficiently learned in institutions while practical and advanced technical skills are better developed in the workplace.

In addition, in the hope of improving the quality of teachers who play a vital role in the training and development of students, workers and future teachers, the Vietnamese government has introduced two large HR training programmes. Through these programmes, the government provides funds for scientific and technical staff working in academic universities and vocational institutions to learn and study abroad. For example, in 2000, the Vietnamese Government decided to sponsor some projects to train scientific and technical staff overseas with a state budget of US\$200 million (for 2000-2014). The aims of this project are to send about 5,800 science and technology experts to study abroad to seek PhD or Master degrees to meet the country's need for modernization and industrialization. The project focuses on upgrading the training of college teachers and university lecturers due to a severe shortage of qualified teachers. According to The Report of Ministry of Education and Training (2014), after 14 years completing this project, there were 12.000 Vietnamese teachers who were sponsored by this project to study post-graduation in oversea (including 2000 students of PhD course and 10.000 students of master course). In 2011, another project was launched to provide about US \$600 million to send 23,000 lecturers to advanced universities in the world to study at a doctoral level. Training fields are based on the needs of HRD for national socio-economic development with priority given to the fields of engineering, technology, natural sciences, social sciences and humanities.

In order to improve the skills of workers and graduates, the national government has also launched a HRD programme that invested a total of US\$20.7 million in good student training between 2004 - 2011 (Nguyen & Truong, 2007). The aim of the programme was to encourage top graduates from courses in management, law or economics to enrol in postgraduate courses. After finishing these courses, the students will enter the workforce to serve as middle managers. Another programme was also introduced from 2004 - 2008 to improve HR skills in small and medium-sized enterprises through special training courses. The project provided basic business skills for start-up business owners and the knowledge that companies need to expand in Vietnam and abroad.

In addition to sending out selected persons to developed nations for learning and research, the national government also has special policies to encourage foreign investors to provide higher education and vocational training programmes through establishing foreign-owned education institutions or through cooperation with Vietnamese institutions. These educational programmes include master courses (e.g., Business Administration, Public Administration and Information Technology) and undergraduate degrees. Foreign institutions that are more closely related to the Vietnamese education market are promoted to improve training programmes for technicians, scientists, experts and managers in natural sciences, technology, economics, environment and culture (Nguyen & Truong, 2007).

Given the support policies of training and development, training in the workplace has been structured to resolve the situation of low skilled labour in enterprises. However, responsibilities in training may sometimes be minimised by enterprises because of ineffective legal enforcement. Legal regulations that enforced training constraints upon enterprises did not impose a base training budget level or establish appropriate inspecting and monitoring mechanisms to ensure implementation of the law (Vo & Hannif, 2012). Consequently, the level of investment in employee training is still based significantly on each enterprise's willingness to cooperate. Additionally, state training scholarships are directed to staff in the state official system rather than workers at the enterprise level. Not surprisingly, the effectiveness of training activities and TOT at the enterprise level has not been successful.

3.4.2. Technological improvement policies

According to Mitchell (1999), policies to encourage technological improvement play an important role in the economic development strategies of developing countries. Advances in technology are responsible for economic development through enhancements in capital and labour productivity. In particular, technology policies may have a significant impact on improving technologies of enterprises that lead to a need for technical training and effective TTT from classrooms to the workplace. Thus, Athukorala and Tran (2008) suggested that the Vietnamese government should implement procedures to assist enterprises to renew their equipment and technology to compete with both FIEs in the domestic market and foreign enterprises in the international market.

In order to stimulate enterprises using high technology, many Vietnamese government incentive policies including credit, taxation, training and business facilitation that are related to the adoption of more advanced technology in enterprises have been promulgated. For example, in 1999, the national government passed Decree No. 119/1999/ND-CP on policies and financial mechanisms to encourage investment in business and scientific and technological activities. Giving some special treatment on import/export taxes in exchange for technology and equipment, the state may support up to 30% of the funding for the scientific research in enterprises and 70% of the value of transfer results from technology research to production. In 2005, the Prime Minister's Decision No. 214 approved the technology market development project. The aims of this project were to encourage and support business investment in technological innovation, contributing to a significant increase in the quantity and quality of traded technology and to strive for an average growth value of traded technology reaching to 10% per year in the period from 2006 to 2010. In 2008,a law on the adoption of advanced technology was issued to encourage and promote high-tech activities (Vu & Hoang, 2010).

Although the current legal framework associated with technological development has received significant attention, the policies related to technological innovation activities are inadequate. The implementation of some technological policies were delayed or cancelled. The policies associated with mobilizing capital for technological improvement investment in enterprises were limited and have not created a clear aware change of the activities of technological investment in enterprises. The investment assistance from the State for technological improvement at the organizational level through buying imported equipment and technology is low. Budget capital granted for technological improvement in SOEs is insufficient to meet demands of advanced technology and increased efficiency

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in production. Thus, many enterprises could not have advanced technology for production.

According to Vu and Hoang (2010), Vietnam's enterprises have invested in technology improvement, but their advanced technology use is still very limited. The majority of enterprises expected the state to fund the capital for needs of technology improvement. There are very few enterprises investing capital in technology improvement themselves. Consequently, many Vietnamese enterprises are still using out-of-date 1908s technology from the last century. While the proportion of advanced technology use of ASEAN countries is high (30% in Thailand, 51% in Malaysia and 73% in Singapore)the percentage in Vietnam is low at only 2% (Vu & Hoang, 2010).

It is suggested by Westphal (2002) that industrial technological improvement is not a process that may be encouraged quickly and easily through investment in imported technology or equipment. It requires investments of enterprises in their own technological capability. Technological capability refers to the knowledge, skills and experience that enterprises need to use to efficiently import technology. This is because technology is tacit and its underlying principles are not usually obviously assumed. To gain mastery of a new technology requires skills, effort and investment by the receiving enterprise.

In conclusion, technology policies promote investing in people through training to develop skilled employees. A technological change at the enterprise level is assumed as a continuous process to create new technical skills and knowledge (Mitchell, 1999).

3.4.3. Foreign investment policies

Research shows that FDI activities significantly impacted on aspects of economic development at both macro and micro levels. FDI induced more rapid economic growth by increasing investment and improving HR in Vietnam (Freeman, 2002; Nguyen, 2003a). Its impacts were evident in manufacturing enterprises in the movement of employees and competition pressures. In addition, FDI not only creates profits for foreign investors, it is also an important capital source which carries technology transfer and advanced skills for local companies (Nguyen & Truong, 2007).

According to Pathak, Laplume, and Xavier-Oliveira (2012), FDI may be an efficient way of moving a package of technology, capital, brand names and skills into the home country. One of the main elements influencing decisions on skill training is the labour market in which enterprises operate and the skills available in that market (Nguyen et al.,

2011). If foreign investors recognize the shortage of skill levels in the labour market for their purposes and production, training is vital tool to deal with this problem. As a result, advanced skills may be provided to Vietnamese employees from the training activities of foreign investors.

By being aware of the importance of FDI, the Vietnamese government promulgated some significant policies to attract FDI. The first law in FDI of Vietnam was introduced in 1987 to provide the basic legal framework for foreign investment activities in the country. This law specified three modes of foreign investment, joint-venture, business cooperation contracts and fully foreign-owned ventures. After this, the law was amended and supplemented in 1990, 1992, 1996 and 2000 (Meyer & Nguyen, 2005). These changes created a more open and attractive condition to draw foreign investors into the most key industries in Vietnam (export-oriented processing and manufacturing)and key economic zones. However, at the initial stage, foreign investors were not permitted to buy equity in privatized SOEs. In 2003, a new law was enacted to allow foreign investors already operating in Vietnam to buy up to 30% of equity in Vietnamese enterprises, including privatized SOEs in 2005 (Sjoholm, 2006). Moreover, over fifty multilateral and bilateral agreements associated with FDI were also accepted to protect and encourage foreign investors invest in the existing incomplete market mechanism in Vietnam (Tran, 2009).

In 2005, a new Investment Law was passed to replace the Foreign Investment Law and the Domestic Investment Promotion Law. Key features of this law included treating domestic and foreign investors equally regarding institutional and legal procedures for endorsement and monitoring and the motivation offered (Athukorala & Tran, 2008). It has been a freedom of investors to find the particular mode of business entry (joint venture or full ownership). Moreover, under the WTO accession commitments of Vietnam, all legal entities and individuals were allowed to buy shares in Vietnamese SOEs or form joint stock enterprises with Vietnamese SOEs, with no limitations on equity share.

There is no doubt that the adjustments have liberalized the original law and foreign investors have increasingly given special treatment from the Vietnamese authorities (Jenkins, 2006). As a result, Vietnam has attracted considerable FDI inflows in recent years, mainly focusing on export-oriented industries (such as food processing, garments and gathering activities in electronics and electrical industries). For example, annual gross FDI inflows to Vietnam surged from an annual average of 780 million in 1990-94 to over

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US\$ 1billion in 1995 (Meyer & Nguyen, 2005). As a negative influence of the Asian financial crisis in 1997 - 1998, the FDI inflows significant decreased to US\$1.2 billion in 2002. Since then, the FDI attractiveness of Vietnam has been a remarkable recovery, reaching US\$ 5.8 billion in 2005 and increasing to US\$11billion in 2010 and US\$20.3 billion in 2014. As a result, the FDI has significantly contributed to Vietnam's economic growth (Makino & Tsang, 2011). For instance, FDI stock as a ratio of GDP in Vietnam increased from zero by the mid -1980s to over 75% in 2001 (Jenkins, 2006).

However, some restrictions of the Investment Law still remain compared to more open policy regimes in Southeast Asian countries. For example, foreign investors are permitted to acquire a maximum 30% of total shares in a local company in Vietnam. Joint ventures or business cooperation contracts are only allowed in air transportation, airport construction, forestry, industrial explosive production, tourism and culture (Athukorala & Tran, 2008).

In conclusion, nearly the 30 years of the transformation process, although the outcomes of the economic reforms have been very promising, Vietnam still has some considerable problems. The formation and application of new legislation, including regulations governing the operations of SOEs, remain a major source of uncertainty. The subsystems (the educational and training system, the financial system, the firm system, the HRM system) are always under pressure of adjustment and innovation. The weakness and destabilisation of each constitutive element makes the business system incoherent, breakable and weak(Vo & Hannif, 2012). In addition to external conditions, organizational factors also significantly impact on the enterprise's TOT (see Chapter 2). Thus, the next section will propose a conceptual framework that will be used to interpret the findings of this study in Chapters 5 and 6.

3.5. Implementations of transfer of training in Vietnamese SOEs

3.5.1. The role of technical training in Vietnamese SOEs

According to Unger et al. (2011), human capital attributes (such as training, experience, knowledge and skills) have been argued to be a important resource for success in enterprises. This capital plays an even greater role in the future because of the constantly rising knowledge-intensive activities in most job conditions (Sclafani, 2008). Individuals will try to maximize their economic profits given their human capital. Therefore, highly

trained individuals could not choose to become managers as entrepreneurship very well lead to reduced returns compared to other employment chances (Unger et al., 2011).

According to Sclafani (2008) the uniqueness of a worker's capabilities and skills is a significant requirement for achieving competitive advantage. Those holding the resource based view argue that sources are valuable when they facilitate an enterprise to perform strategies that improve exploit market opportunities and effectiveness. Consequently, the value of human capital is essentially dependent upon its potential to contribute to the core competence or competitive advantage of the enterprise.

It is argued that transitional economies rely heavily on human labour to maximize their effectiveness and meet their organizational goals (King-Kauanui, Do, & Ashley-Cotleur, 2006), so HR training becomes utilitarian in the organization strategy to keep up with economic and technological changes (Zidan, 2001). HR training and development programs have to be linked to the strategic business development goals of the enterprise (Brinkerhoff & Apking, 2001; Gilley & Gilley, 2003; Pham, 2009). Labour needs to be reviewed as a source to be trained and developed for the purpose of enhancing the productivity of enterprises (Zidan, 2001).

Some researchers who conducted studies on training and development activities in different types of enterprise in Vietnam indicate a positive and significant relationship between training investment and enterprise performance (Geib, 1999; King-Kauanui et al., 2006). Although most Vietnamese enterprises have awoken to the link between employee training and business success, they are often disadvantaged by the shortage of necessary financial resources to conduct adequate training initiatives (Nguyen & Truong, 2007). Consequently, employees are left with little choice but to look for self-development through vocational training institutions, but these institutions often fail to meet the specific demands of labour market. According to Friedman (2004), this matter is much more marked in SOEs.

It seems that HRD did not receive intensive concern from Vietnamese SOE's managers in the past because they based their government allocations of labour to fulfil their staffing needs (Nguyen, 2011). Vietnamese SOEs view training as an expense which will influence their profit levels, so financial investment in training and development was limited (King-Kauanui et al., 2006) and only 62% of the respondents have a little budget for training (Nguyen, 2011). The result of this is a mismatch of skill with enterprise demand. In fact, about 25-40% of Vietnam's 168,000 public servants, many of them working in SOEs, meet some "standard requirements" (Ngo, 2008). Thus, the average labour productivity of Vietnamese employees remains low, that is, only about 50% compared to that of Philippines and Indonesia (Nguyen, 2003a).

In recent years, training and HRD has begun to receive more attention in Vietnamese organizations (Kamoche, 2001), but "SOEs have fairly conservative policies with traditional welfare paternalism rather than formal HRM practice" (Collins et al., 2012: 609). A study of Hakkala and Kokko (2007) indicate that SOEs undertook training to provide skilled labour in the same activity field and HRD is considered a means to provide employees with some kind of compensation. But local enterprises including SOEs used less international standards of HRM policies than multinational corporations (MNCs) and joint venture (JVs) (Dowling et al., 2008). The training activity stopped at the level of spontaneous training and the lack of professionalism, or if having formal training, the individual needs still plays an important role (Ngo, 2008). Consequently, quality vocational training has not met the skill needs of the labour market, such as industrial working style or ability of working group. Only 34% of enterprises satisfied the quality of vocational training (Schwab et al., 2011).

According to Connolly, General Director of Adecco Vietnam, Chairwoman of the HR and Training Committee of the European Chamber of Commerce in Vietnam, over 65% of Vietnamese employees, including employees in SOEs, have no technical skills (Pham, 2011b). Most of them come from agricultural or rural areas with working habits of the small farm model such as arbitrary time, lack of technical skills, promoting individual initiative and sharing experience (Report of Ministry of Education and Training, 2007).

Therefore, technical training and TTT has become utilitarian in the enterprise strategy to keep up with technological and economic changes (King-Kauanui et al., 2006). The most effective avenue for enhancing performance and staying competitive in SOEs is developing the technical skills of employees (Nguyen & Bryant, 2004).

3.5.2. Technical skill levels of employees

According to Cung Tran, Deputy Director Research Institute Central Economic Management (CIEM), many SOEs are ineffective business so the SOE is the pillar of economic competition, but it has not attained international competitiveness (Thao, 2012). In fact, many SOEs are active in fields that have a larger presence in multinational enterprises (MNEs) in these as petroleum, bank, chemicals, airline and agriculture (Hakkala & Kokko, 2007; Ngo et al., 2006). The competitive advantages of these MNCs

are often related to productivity and technology (Bekkevold, Inge, Brubakken, Larssonand, & Sigvaldsen, 2003). Thus, they often lost market share, which may have led to a diminished ability to exploit economies of scale (Bekkevold et al., 2003). Moreover, SOEs did not seem to be strongly affected by the presence of the foreign firms and there were stronger signs of productivity obtainment in private firms (Hakkala & Kokko, 2007).

A recent analysis based on official statistics indicated that in 2006-2010, the SOE sector accounted for 45% of total investment, generating only 28% of GDP, while private enterprises only accounted for 28% investment, generating 46% of GDP; similarly, the contribution of the SOE sector to GDP growth has fallen rapidly from 33% in 2001-2005 to just 19% during 2006-2010, Vietnam's entry period (Vu, 2012a). According to Phan (2015), the FDI of Vietnam at November 2014 was USD 17.33 billion and this investing number just accounted for 83.3% of FDI at the same period in 2013. The reason leading to this weakness may be because SOEs still exist as regulated and planned operations by the government and lack the sense of initiative which has been familiar in many years offering from economic planning while they have to compete with both domestic enterprises and foreign companies (Ngo, 2008).

In a survey on the global competitiveness of the World Economic Forum (WEF) in 2008, respondents cited the matter of employee skills as one of the weaknesses of the Vietnamese economy (Phung & Do, 2009). Developing the training process is quite important, as Vietnamese SOEs are likely hiring many employees who have a shortage of necessary technical skills (Truong & Ha, 1998). In fact, in an article analysing the quality of employees in SOEs, Vu (2012b) indicated that difficult problems highlighted in post-equitized enterprises have forced them to implement such as arranging, retraining even cutting down of employees. These were done because of many unskilled employees to adapt with new working environment. The main cause leading to the above consequences is as employees' income in former working environment ware ensured by government without from productivity (Nguyen, 2011). This leads to attach little value to SOEs' training and HRD in the past. As a result, the adaptability of SOEs and their employees has been reduced, even annulled to new working condition as market economy. Thus, it is asked that, if large SOEs would continue to be equitized in future, how many employees belong to "downsizing" group and how many enterprises are broken up? (Vu, 2012b)

It is indicated that increasing productivity in using high-technology rapidly added needs for developing technical skilled employees to maintain a relationship between human capital strength and productivity achievement (Schuller & Field, 1998; UNIDO, 2011). In order to gain improved labour productivity, there is a strong need for incessant support to vocational training and transfer of trained skills mechanisms to the job as a response to the fast-changing labour market needs in industry, especially in the medium to high-tech industrial segment and higher wage bracket.

The technical skill development process, through vocational training, is by description, a gradual progression which concerns a wide range of national institutions (both state and privately owned) and obtains payments over the long term (UNIDO, 2011). Nevertheless, the skilled labour needs of industry and enterprises are primarily immediate. They may not be able to 'wait' for the final result of skill development policies occurring in the future. Therefore, it is more important that skill training mechanisms are set in place or realized by national institutions at once as part of a general policy framework including education, investment promotion and industry. Moreover, the impetus to skills upgrading and the effective transfer of trained skills to the workplace may also come from enterprises' training policies. These activities should continue to be aided through targeted support (e.g., quality of training resources, providing opportunity to use training) and dedicated motivation (e.g., improved rewards).

From reviews on TOT and the need for improved ETTT on Vietnamese SOEs that was discussed in Chapter 2 and 3, a conceptual framework and RQs are established and presented in the following section.

3.6. Conceptual framework and research questions

3.6.1. Conceptual framework

It is argued that a conceptual framework is created to describe the key things to be studied such as the main factors, construct and the supposed relationship amongst them (Bryman & Bell, 2011). Building a conceptual framework is necessary because at the early stage of the study, it assists to identify what will be examined. Furthermore, it supports the identification of aspects that are associated with the research, likely relations amongst variables and the nature of data to be collected.

From the review of the literature in Chapter 2 and Chapter 3, I have developed a conceptual framework that has been based on the extant literature and other available information to identify two key influential groups on TTT activities. First, the literature review presented in this chapter examined several contextual concepts as part of

developing a clear insight into external environments related to influences on TTT at the enterprise level. Within the overview of the literature, three main factors, economic environment, educational system characteristics and regulation conditions have been indicated as motivations to promote enterprises developing their activities of TTT.

External environments have been found to affect HR training and development practice (including HR training) (Thelen, 2004; Tregaskis, 1997). However, few studies including (Tung & Havlovic, 2006; Zupan & Kaše, 2005) have addressed the impact of transitional economic conditions (e.g., in Poland, Czech Republic and Slovenia) on HRD practice. The changing environment (e.g., in members of the former Soviet Union) and conjointly other factors, has promoted enterprises redefining through restructuring. "Strategic restructuring aims at capturing more deliberate, strategic investments in the development of firms' advantages, including changes in the composition of the labour force and investment in fixed capital as well as "soft" capital, such as research and development, marketing and training" (Domadenik, Prašnikar, & Svejnar, 2008: 727). The investments in human capital/or resource based view should be completed to increase entrepreneurial success (Unger et al., 2011). "Transition has also brought major changes to the labour market" (Zupan & Kaše, 2005: 887). However, the influence of the transition context in some developing economies such as Vietnam on an enterprise's training in general and TOT in particular has not yet been explored in the literature.

Second, as discussed in the previous chapter, the TOTis caused by numerous internal factors in different steps of the training process (e.g., pre-training, training and post-training) and at different levels of analysis, including individual, supervisor and organization (Kavanagh, 1998). The researchers have examined three key organizational factors influencing TOT, training design, individual characteristics and work environment (Baldwin & Ford, 1988; Holton, 2005).

Although the literature on TOT has increased and led to the identification of three influence factors on TOT (trainee characteristics, training design and work environment), there are significant gaps in the empirical literature. Moreover, most of the cited TOT research has used samples from the United States (Velada et al., 2007). There are very few studies using samples from developing countries, especially at the organizational level of analysis. Collected data in empirical studies has only been focused from a kind of sample such as employees (Velada et al., 2007) or managers (Hawley & Barnard, 2005) and from one organization (Velada et al., 2007). Thus, the findings in these studies may not be generalizable to other organizations. Finally, Blume et al. (2010) indicate that the

factors have a different degree of influence depending whether the training transfer is concerned with open (leadership development) or closed (computer software) skills. Thus, the focus of research should be shifted from the general question, "Can training transfer?" to a more targeted focus on types of skills trained. Future research on TOT "should begin to investigate influence factors on a deeper level" (Grossman & Salas, 2011: 105). Consequently, the above analysis shows a significant gap in the literature.

Furthermore, training activities (including TOT) have been studied in private and multinational companies, whereas they have not been investigated properly in the SOE context (Ng & Siu, 2004).Particularly in the Vietnamese environment, SOEs play a vital role in economic development (Nguyen, 2011; Truong & Ha, 1998), but they are faced with a dilemma, including a shortage of skilled labour, the limitation of training and TOT on the job. Thus, the question here is what major changes will be done to improve ETTT in Vietnamese SOEs.

This study will try to narrow the identified gaps in the literature. This means that the study also seeks to examine the relationships amongst these concepts and ETTT; i.e., how do the factors influence TTT and what changes should be made to improve this activity. Figure 3.3 further explains how the theoretical foundations are examined and integrated to resolve the above gaps.



Figure 3.2: Conceptual framework of external and organizational impacts on transfer of technical training in Vietnamese SOEs

3.6.2. Research questions

This study examines the challenges of developing ETTT on Vietnamese SOEs. Employer data from the interviews will be used to identify some external factors influencing TTT, as well as solutions for improving its effectiveness. In addition, insights gained from statistical surveys of a sample of employees will be used to further identify the organizational factors most strongly associated with the TTT in Vietnamese SOEs.

To achieve the research objectives, the following three RQs will be resolved in this research.

1. What are the key external environment influences and constraints (legal, economic and educational) on developing effective transfer of technical training in Vietnamese manufacturing SOEs?

2. What are the key organizational factors that impact on the effective transfer of technical training in Vietnamese manufacturing SOEs?

3. What are the major changes that could improve the technical training effectiveness in Vietnamese manufacturing SOEs?

3.7. Chapter summary

The literature reviewed in part one of this chapter provided an overview of Vietnam's context, with particular attention to three external environments, the economic environment, educational characteristics and legal conditions. These factors were described to develop the idea that they are likely to be of significant importance in promoting Vietnamese SOEs to conduct ETTT. While the considerable extent of policy reforms to increase economic liberalisation and to relax bureaucratic control in SOEs are created, a number of inhibitive aspects still exist as an anxiety for SOEs in developing ETTT. Vietnam, one of the low-income nations in the world, has been encountering an educational system with a low quality of institutional training and teaching staff. The situation of low technically skilled graduates and the difficulty of looking for qualified vocational trainers remain the main concerns for enterprises. Although the legal and regulatory environment has been reformed to encourage activities of training and development, there are few effective solutions to increase inward TTT at the workplace. Finally, a contextual framework and RQs were discussed, and these will be used to interpret the results of the current study. Chapter 4 will discuss the research design and methodology that were employed in this research.

Chapter 4 Research Methodology

4.1. Introduction

In the previous chapters, an integrated theoretical framework of the relevant literature review on the SOEs and effective transfer of technical training (ETTT) was given. Based on the depth and extensiveness of the literature review, three research questions (RQs) were addressed. In order to offer a clear investigation of the research paradigm, the current chapter outlines the research design and methodology.

This chapter explains the appropriate research design and methodology to respond to the three RQs. In the first section of the chapter, an overview of the research purpose and questions is given. Then, a justification of the research approach is presented in section 4.2. The theories, conceptualisations and the investigation are also detailed in this part. Section 4.3 presents a discussion of the qualitative approach. This part will focus on the overview of the rationale for the case study method, a description of case selection, data collection techniques and data analysis methods. Section 4.4 will discuss the quantitative method used in examining RQ2. Hypothesis development and the questionnaire-based survey method will be discussed in detail. The pilot test, sampling frame and main survey are also presented in this section. Finally, the ethical issues involved in the study and the conclusion of the chapter are addressed in Sections4.5 and 4.6.

4.2. The research approach of this thesis

The overall aim of this research is to investigate and analyse some key factors that impact ETTT activities in SOEs in the emerging Vietnamese economy. Moreover, the major changes that should be made to improve the TTT process are identified. To address these issues, it is necessary to employ a mixed methods research approach, which is defined as "those approaches to research in which the researcher decides to blend or combine both quantitative and qualitative methods" (Creswell, 2014: 364). Mixed methods research is a distinct third methodological movement in behavioral and social sciences. According to Creswell (2014), this approach has three main features: (1) the researcher will collect both quantitative and qualitative data; (2) these two sets of data will be analyzed; (3) the

researcher will mix the two datasets in a meaningful approach and build an overall explanation.

Employing the mixed methods design gives researchers insights into their RQs. A mixed methods approach may be suited to research with multiple, inter-related objectives (Creswell, 2014). A mixed methods study is most appropriate if the objectives reflect very distinct requirements, in discovering and measuring distinct aspects of the research topic. Qualitative methods look to gain more meaningful information about participants' ideas and feelings, whereas the findings of quantitative research are useful in offering an examination of the significant relationships amongst the predicted factors and a dependent variable by statistically testing a proposed conceptual framework (Neuman, 2011). From the above arguments, the strength of using both qualitative and quantitative methods will give researchers a clear way to better understand specific social matters.

Although several types of mixed methods research have been found in the literature with different names and features, these classifications have more similarities than differences. As a result, six main mixed-method strategies have been suggested by Creswell (2014), namely concurrent triangulation, sequential exploratory, sequential explanatory, sequential transformative, concurrent transformative and concurrent embedded design.

This research will adopt a concurrent embedded design with two phases. As noted by Creswell (2014), the concurrent embedded design involves one data collection stage, during which both qualitative and quantitative data are gathered simultaneously. This strategy can mean that "the secondary method addressed a different question than the primary method" (Creswell, 2014: 215). Therefore, it is likely that the concurrent embedded design of the mixed methods approach is appropriate to be employed in this thesis.

Particularly, data collection from the qualitative method will be used to investigate external environmental influences on TTT (addressing RQ1) and to identify the major changes for improving ETTT (addressing RQ3). Additionally, data gathered from the quantitative method is used for addressing RQ2, which examines the relationships between organizational factors and the effectiveness of TTT in Vietnamese SOEs (see Chapter 5). After identifying the significant influences on ETTT, these results are used to develop suggestions for some organizational changes to improve the effectiveness of this activity.

4.3. Study 1 - Qualitative research methods

Study 1 used a case study design under an interpretive approach. According to several researchers (Creswell, 2013; Patton, 2002; Yin, 2014; Zikmund, Babin, Carr, & Griffin, 2012), qualitative research has been classified into four approaches: phenomenology, ethnography, grounded theory and case study. A phenomenological approach mostly classifies phenomena while the emphasis in ethnography is on studying an entire culture. Grounded theory analysis is conducted to discover a core category grounded in the data with levels of abstraction. The case study method is generally understood as a "bounded system" that drives through comprehensive description and examination (Creswell, 2014; Eisenhardt, 1995; Yin, 2014). The term "bounded system" is affirmed as a unit that is enclosed by boundaries(Yin, 2014) and a "case study must always have boundaries"(Stake, 1995: 5).

This study employed a collective case study to examine the TTT phenomenon at the enterprise level. Insights from a group of managers of eight Vietnam SOEs who were conducting TTT for their employees were collected and combined for the examination. This is an instrumental research that was extended to numerous cases. The case study method was used as a qualitative research strategy for collecting data to examine the following RQs.

RQ1. What are the key external environment influences and constraints (legal, economic and educational) on developing technical training in Vietnamese manufacturing SOEs?

RQ2. What are the major changes that could improve technical training effectiveness in Vietnamese manufacturing SOEs?

4.3.1. Rationale for the case study method

The case study method has been chosen for qualitative data collection in this study, because case studies are about actual situations and individuals, and most of the data collection happens in actual locations (Willis, 2007). In addition, this method should be a worthy approach if the researcher has classifiable cases through boundaries and searches to offer an in-depth, detailed understanding of the cases (Creswell, 2013). Also, according to researchers such as Lee (1999) and Creswell (2013), case studies may be gathered and interpreted at a particular place and time, in specific environments.

The case study method has been recognized as a methodology, a strategy of inquiry, or a form of design in qualitative method (Creswell, 2014; Lee, 1999; Strauss & Corbin, 2007;

Yin, 2014; Zikmund et al., 2012). Several researchers including Merriam (2014), Yin (2012) and Eisenhardt (1995), argue that the case study method is a research strategy that mainly focuses on understanding the dynamics in single sites. For example, it may be employed to complete numerous aims, such as testing a theory (Yin, 2012), providing a description (Merriam, 2014), or building a theory (Eisenhardt, 1995). According to Merriam (2014), the final product of the case study method is a rich explanation of the examined phenomenon. The key techniques applied in case study research are observation, interview and document analysis (Creswell, 2014; Yin, 2014).

Scholars of case study research indicate its several advantages. For example, Creswell (2014), Yin (2014) and Zikmund et al. (2012) note that the case study method gives a significant wealth of information that is not often provided by other approaches. According to Zikmund et al. (2012: 116), the primary advantage of the case study method "is that an entire organization or entity can be investigated in depth and with meticulous attention to detail". Merriam (2014) provides a description of the important strength of the case study approach as a tool to explore complex social elements that are associated with several potential factors in considering the phenomenon. It is described as an inductive analytical strategy, the primary application of data collection and the final rich description. Thus, the strength of the case study approach is that the findings indicate special features that are the key information to examining the situation. This study aims to investigate the technical training experiences of Vietnamese SOEs' managers, in particular, to investigate the external environmental influences on TTT activities and identify the major changes for improving ETTT in Vietnamese SOEs. As a result, deep and specific information is very necessary in analysing data.

Furthermore, according to Creswell (2014), a multiple-case study may be employed to make generalisations for other cases. Although a collective/multiple-case study may be assumed for a lesser amount of intrinsic interest in one specific area, numerous cases are selected to more deeply explain a phenomenon or general population. Moreover, multiple cases may be conducted to avoid possible single-case bias and to collect a greater understanding on the relevant subjects. This approach allows data sources from numerous cases to be investigated in an iterative process, which helps to constantly compare and seek a close fit between a theory and the case data. According to Eisenhardt (1995: 74), a close fit is considered as a vital prerequisite for worthy theory building because "... it takes advantage of the new insights possible from the data and yields an empirically valid theory". As a result, for the particular focus of this qualitative study, a multiple case

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studies method is employed as a methodology based on data collected over direct interviews with several individuals (managers) of some Vietnamese SOEs.

In conclusion, through applying the case study method, this present study is conducted to expose the external environmental influences on activities of TTT and the major changes for developing ETTT in Vietnamese SOEs.

4.3.2. Selection and description of cases

Selection of cases

Although Yin (2014) argued that there is no particular number of case studies which should be used in this type of research, Perry (1998) has suggested that several case studies should be examined by researchers. Numerous cases allow cross-case investigation to be used for better theory building. Eisenhardt (1995) recommends between four and ten cases. Relating to this study, Vietnamese SOEs have been selected as key components in all of the case studies because they are the core of the state economy in Vietnam. Moreover, the researcher's familiarity with Vietnamese culture and job environment has facilitated selection. As noted byBrewster, Tregaskis, Hegewisch, and Mayne (1996: 587), "each researcher also brings a particular degree of cultural knowledge and expertise to the task" regarding her or his own society or some societies that are familiar to them. This cultural knowledge may help the researcher to more easily access an understanding of these societies".

Cases were chosen from different industries rather than focusing on a specific industry for several reasons. Firstly, it is possible that selecting cases from different industries will reinforce the degree of generalizability from the available source (As-Saber, Dowling, & Liesch, 1998). It is stated by Bryman and Bell (2011)that the approach of diverse sampling could be employed to develop any generalisations from the study results. Moreover, the real participants are expected to represent the greater pool of possible respondents. Thus, in order to achieve this, the data needs to be collected from across the entire pool (Yin, 2014).Using a list identified by the training management office of the Vietnamese Government (the General Department of Vocational Training, Ministry of Labor, Invalids and Social Affairs of Vietnam), eight Vietnamese SOEs that often conduct technical training for their employees were selected for this study.

It was expected that eight cases from several different industries that had conducted TTT may provide useful data for this research. The criteria for selecting an enterprise as a case

study were the types of products/services offered by the enterprise, the number of employees, the amount of time offered to employees in the most recent employee technical training program, the date the enterprise was established and the total costs of the technical training programs run in 2012.

The description of cases

A brief description of the cases that were used during the course of the study process is presented as following. The outlines were taken on the basic of the SOEs' status as at September, 2013 when the in-depth interviews were completed.

Case Study One: SOE 1

*SOE*1 is located in Hanoi, the capital of Vietnam. This is a manufacturing SOE established in 1961in transport engineering, building hydropower plants, infrastructure and civil and industrial works and providing a consulting service in construction and producing construction materials including cement and steel. The total cost (VND) of technical training programs is approximately VND 1.5 billion a year. The enterprise has a technical training institute and employs about 2,800 people.

Case Study Two: SOE 2

SOE 2 is located in Hanoi. It is a manufacturing SOE producing industrial constructing products. The enterprise was established in 1982 and the total cost of the technical training programs that were run in 2012 was approximately VND 8 billion. This enterprise has 26 subsidiaries and 2 technical training colleges. The enterprise employs 3,200 people.

Case Study Three: SOE 3

SOE 3 is located in Hanoi. The enterprise was established in 1960 and is a manufacturing SOE involved in the construction of industrial plants, producing equipment and steel structures. It has 20 subsidiaries, 2 technical training colleges and a welding technology institute. The total cost of the technical training programs run is approximately VND 10 billion a year and the enterprise employs 20,000 people.

Case Study Four: SOE 4

SOE 4 is located in Hanoi. This is a manufacturing SOE producing engine and agricultural machinery. It also manufactures automobiles and auto and motorcycle components. The enterprise was established in 1990. The total cost of the technical

training programs run in 2012 is approximately VND 1 billion. It has 22 subsidiaries and employs over 7,000 employees.

Case Study Five: SOE 5

SOE 5 is located in Hanoi. This is a manufacturing SOE producing fine art; importing and exporting gold, silver and precious stones. The enterprise was established in 1991. The total cost of the technical training programs is approximately VND 200 million a year. SOE 5 employs about 400 employees.

Case Study Six: SOE 6

SOE 6 is located in Ho Chi Minh City. It is a power service provider for the Ho Chi Minh City region. This enterprise was established in 1995. This corporation has 15subsidiaries and a technical training centre. The total cost of the technical training programs run in 2012 was approximately VND 8 billion. It employs 7400 people.

Case Study Seven: SOE 7

SOE 7 is located in Ho Chi Minh City. It is a petroleum service provider for the Ho Chi Minh City region. This enterprise was established in 1975. The total cost of the technical training programs run in 2012 was approximately VND 900 million. It employs 1620 people.

Case Study Eight: SOE 8

SOE 8 is located in Ho Chi Minh City. It is a manufacturing SOE supplying industrial projects, road systems and irrigation systems. This enterprise was established in 2000. The total cost of the technical training programs run in 2012 was approximately VND 900 million. The enterprise has 15 subsidiaries and employs about 1620 people.

Sampling strategy

It is recognised that sampling selection is very important for collecting data in both qualitative and quantitative methods (Bryman & Bell, 2011; Neuman, 2011; Zikmund et al., 2012). These scholars specifically indicate that in order to select the most appropriate sampling design, the researcher has to identify some sampling criteria, such as accuracy requirements, knowledge availability, resource available and time limitations (Zikmund et al., 2012). Given the enterprise's effectiveness of TTT, the researcher assumed that managers such as the senior manager and the training director in each of these eight Vietnamese SOEs were likely to be knowledgeable and informative about external

environment influences on ETTT in their enterprise. Thus, a total of twelve interviewees, these being eight managers in eight selected SOEs and four training directors in four selected SOEs with training centres were chosen for the in-depth interviews in this study.

Based on the particular context of Vietnam SOEs, sampling would be an appropriate choice when data is gathered from Vietnamese SOEs' managers. As these managers are senior supervisors in SOEs, they have deep experience at the organizational level and an advanced understanding of the relationships between the external environment (economic, educational and legal) and the enterprise's performance, including TTT. Therefore, their experiences in TTT in both the external and internal environment of the SOE were valuable sources from which to gather data for this research. It is believed that the choice of purposeful sampling was appropriate for this study.

From the above discussions, the planned sampling criteria in this qualitative study comprised both male and female, a range of number of years working and involvement in training. Also, all interviewees were volunteers who were willing to become a part of the study. Although this study did not try to create a sample selection with exact predetermined characteristics, the demographics of the interviewees are a reasonable match to the criteria established by the researcher. This means that the participants included both male and female managers and training directors (see Appendix 6).

4.3.3. Developing the case study protocol

During the research process for Study 1, a case study protocol was developed as a method for increasing the quality, reliability and control of the case study research (Yin, 2014). The activities that are included in the case study protocol are explained in the following section.

Case study procedures: Major case study procedures include accessing case study interviewees or organizations, finding and using general information sources, and creating a clear plan of the activities of the data collection (Yin, 2014). During the course of this study, all these field procedures were followed. Firstly, eight Vietnamese SOE cases were identified for the study in this thesis. After that, through these SOEs, senior managers and training directors were contacted. Initial contact was made with potential managers of these SOEs via telephone to explain the aims of the study and invite them to participate. The interviews were held and initial data were collected from the end of July to August, 2013. While the interview questions focused on factors that emerged from the literature review, there was scope for respondents to identify critical content and issues.

Interview questions: Yin (2014) indicates that it is essential that interview questions reflect the actual investigation. For Study 1, most of the interview questions were structured as open-ended questions to increase the scope for discussion from the respondents. These questions were based on the knowledge gathered from the literature review. Moreover, advice was gathered from the research supervisors of this thesis who have great experience in conducting research programs on HR management. The comments received from the supervisors were helpful for selecting appropriate questions that garnered valuable information relating to the key RQs. Also, the Principal supervisor of this thesis edited the wording of the interview questions. This gave insight into establishing the content validity for the current research. The set of interview questions for this qualitative study is discussed in detail in the next section.

4.3.4. Preparing the interview questions

The literature review has given a conceptual framework and assisted in the construction of the current research methodology. The conceptual framework has been an important guide in establishing the key interview questions and themes. This is an advised strategy in constructing semi-structured interviews (Merriam, 2014; Silverman, 2013).

In order to control the direction and content of the interviews and to gather data to address the above-mentioned RQs, interview questions were formulated to conduct semistructured interviews that involve an in-depth examination of the topics in the present thesis (see Appendix 3). The major advantage of semi-structured interviews is that "the data are somewhat more systematic and comprehensive than in the informal conversational interview, while the tone of the interview still remains fairly conversational and informal" (Minichiello, Aroni, & Hays, 2008: 52). A series of interview questions is essential to maintain an effective research procedure (Yin, 2012).

An outline of the issues was covered in the interview questions, but the interviewee was free to provide unrestricted responses. This was based on the RQs and the aspects for investigation that were identified in the literature review (Chapter 3). The set of interview questions was planned so as not to restrict the flow of the interviews, and were a valuable guide to make sure that the outstanding themes of the study were incorporated. The interview questions for the managers in Vietnamese SOEs sought responses on the two major issues such as external environment influences and effectiveness of TTT in the enterprise. The questions pertaining to the three sections of the set of interview questions are discussed the next section.

Section One: Enterprise background

The questions in this first section of the interview gathered general information about the participants and their enterprises. Investigating demographic characteristics adds another aspect to the research by identifying potential trends and differences of opinion between managers of diverse enterprises. The following data were sought: the main products/services of the enterprise, the date the enterprise was established, the training profile of the enterprise and the working relationship of the participants.

The introductory section was designed to familiarise the interviewees with the theme before more significant and detailed aspects were discussed. The discussion in this section was friendly, assisting the interviewees to relax and information was often gained without prompting. These data were solicited to better understand the role of the participants and the context of the enterprises under study.

Section Two: Environment factors influencing transfer of technical training

The questions in this section of the interview were designed to gain information on the external environmental influences on ETTT in Vietnamese SOEs. The following questions were asked in this second section relating to identifying the impact of three key conditions, namely economic, educational and legal on TTT. For the research aim of each of these three aspects, two interview questions were asked in order to determine the main influence of each of these conditions. The first question allowed the interviewees to comment openly on the core influential factors of the key aspects on ETTT. Responses to this question raise the issue of influential factors on TTT. This question asked interviewees to discuss, without the application of prompts, what influenced ETTT.

While general information relating to each external environment influence was collected in the first interview question, the second question provided the respondents with a list of potentially influential factors that had emerged from the literature review in Chapter 3so they could focus on whether these factors had an impact on ETTT. This means that the following the questions asked in this section, the list of prompts would be provided to interviewees (see Appendix 3). Giving these key influences to interviewees is an effective method of filtering and prioritising the main influential factors from interviewees. According to Creswell (2014), this is in accordance with the in-depth comprehensive interviewing protocol.

The last question in this section also sought to investigate the most important organizational influences on TTT. Responses to this question may pertain to any of the organizational factors highlighted in Sections 4.3, 4.4 and 4.5. This interview question

was designed as an addressed question to support information for answering RQ2 that is significantly determined through using a quantitative approach (Section 4.4). The questions contained in Section 2 of the question set were related directly to RQ1 (determining external environmental influences on ETTT).

Section Three: transfer of technical training in your firm

The questions in this section sought to investigate activities that relate to ETTT, including the key drivers of technical training, technical trainers in the firm, the kind of internal technical training, the kind of technical assistance, how the effectiveness of a training program is evaluated, the role of ETTT on the market competitiveness of the firm in terms of price, quality and innovation of the products and services, and the contribution of the firm to developing more ETTT. The last question of this section requested feedback on specific government support that would assist the firm to more effectively transfer technical training. Collectively, the questions included in this section of the interview question set have been designed to achieve the third research aim of determining the major changes for improving ETTT in Vietnamese SOEs.

In conclusion, the set of interview questions was designed to facilitate an effective conversation between the researcher and interviewees to obtain the most relevant comments and ultimately, to inform the findings of the study (Yin, 2012). A mixture of open-ended questions was used to capture both decisive and definitive responses. Additionally, open-ended questions may allow participants to significantly elaborate on certain themes (Creswell, 2013; Yin, 2012). The above discussion has summarised the preparation of the interview questions and how the interview questions relate to the aims of the study as well as the literature review. The ordering of the interview questions helped to create greater thoughtfulness and flow before interviewees answered the questions. The following section details the language used for the interviews, the interview process, the data production process and the trustworthiness of the process of data collection.

4.3.5. Data collection

Interview process

Qualitative data was mostly collected by the researcher through in-depth interviews. For each of the eight SOEs, one or two managers, either the senior manager and/or the training director, were chosen to participate in the interview. The face-to-face interviews were conducted with all respondents. The author visited Vietnam twice and data for the study were collected. During the researcher's first field-work trip to Vietnam in early 2012, unstructured interviews with a few Vietnamese SOE managers were conducted as a pilot study for the consequent research (Neuman, 2011). Preliminary information was gathered and access methods were indicated at that time. These two steps are necessary for the case study procedure (Yin, 2012). During this pilot period, the researcher's principal supervisor discussed the research with her and supervised the collection of this evidence.

The initial evidence that was collected at this stage assisted in forming the conceptual framework that ultimately guided the identification of the RQ and plans. In the next phase, which occurred in the middle of 2013, the author returned to Vietnam and collected data from eight Vietnamese SOEs through face-to-face interviews. In this stage, semi-structured interview questions were employed (see Appendix 3).

The researcher identified several potential interviewees who were managers in these eight SOEs and contacted them via telephone to explain the aims of the study and to invite them to participate. After receiving agreement from the selected respondents, the researcher contacted the participants in advance to confirm the venue and the procedure for the interview.

At the beginning of the interviews, the participants were given an information sheet with a brief outline of the project's research objectives. Moreover, an explanation of the interview questions was provided to eliminate any ambiguity and confusion. Interviewees were asked to give their ideas on behalf of their enterprises, rather than giving their own personal opinions, during the interviews. This was emphasised by the interviewer in her introductory explanation with each of the participants.

Twelve interviews were conducted through face-to-face interview. Responses to openended questions were sought. Most of the interviews were recorded on audio tapes to be used to confirm the notes, which proved useful for the responses to the open-ended questions (Bryman & Bell, 2011). However, three participants did not like their personal information and the content of interviews being audio-taped, so hand-written notes on the information relating to the interview questions were taken by the researcher. The interviews were conducted in the participants' native language of Vietnamese and the duration of each interview averaged 35 - 45 minutes. The material was immediately transcribed following the interview in order to preserve the detail from the exchange and to conduct data analysis. Additionally, where information was deficient in particular situations or topics, follow-up connections were made by emailing each participant a copy of their interview transcript and asking them to check that their opinions were correctly represented and to ask them whether they wanted to add any further information. This was done to obtain an enhanced understanding of the implications relating to external environment influences on ETTT in Vietnamese SOEs.

Even though the number of interviews was not high, the research strength was not significantly reduced because the participants who took part in the investigation were familiar with the theme. As Patton (2002) states, the validity, insights and meaningfulness created from the qualitative method are more relevant to information wealth than sample size.

From the instigation of the research over several phases, namely the literature review, the formation of the RQs, the identification and choice of the research methodology, data collection and analysis and the conclusion in the clarification and discussion, a strict observance to order was kept. This process is called the chain of evidence (Yin, 2014) and increases the degree of construct validity.

In conclusion, for the eight Vietnamese SOEs selected, twelve in-depth interviews were conducted with eight senior managers and four training directors. Four SOEs had technical training institutes, thus in these SOEs both a senior manager and also a training director who had great experience in managing and conducting activities of TTT, were interviewed. Another four interviews were conducted with managers in the four remaining SOEs. As a result, in total, twelve participants were invited and were interviewed by the author. Collected data provided a better understanding of the implications of the development of TTT on the job.

4.3.5.3. Data production process

As previously mentioned, the content of the interviews were audio-taped and immediately transcribed following the interview. However, the researcher gave prominence to the importance of the translation of respondents' words from the Vietnamese language to the English language. This was not an easy task as several words have different meanings when they are translated from one language to another (Strauss & Corbin, 2007). In fact, it was quite difficult to translate the reams of interview transcripts and select the appropriate English words. Thus, in order to obtain exact and clear data for the coding and analysis, a Vietnamese lecturer teaching at an Australian university audited all original translations.

It is argued that analysis quality may significantly depend on the background of the investigator, the method used and their discipline (Strauss & Corbin, 2007). The researcher's knowledge of HR training and development in Vietnam developed over the years as a staff member of a national economic centre and a specialist with HRM was useful for analysing the data from this study. Additionally, all interviews were transcribed in entirety and translated to English for analysis purposes. Qualitative research data is inherently rich in material and possibility. The analysis may range from a superficial explanation to theoretical clarifications. Thus, the goal of the study should guide the analysis method. The study used the experiences of managers in eight different manufacturing SOEs to provide insights into the influential factors affecting ETTT in Vietnam.

After collecting the data, the researcher used a combination of emerging and predetermined codes for the data coding. The predetermined codes and core categories were based on the conceptual framework that was identified from the literature (see Chapter 3). This was progressed to see in what way these key categories may be related. This process will be described in more detail in Section 4.3.6.

According to Creswell (2014), one of the strengths of high quality qualitative research is validity. "It is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or readers of an account" (Creswell, 2014: 191). In order to check the accuracy of the findings, this author identified several validity strategies, such as using member checking and using an external auditor. The establishment of trustworthiness in the data production process that influences and informs the study is discussed in the next sections.

Trustworthiness

Creswell and Miller (2000) indicated that trustworthiness may be an appropriate measure of the strength of the qualitative inquiry. It is a measure of how well the investigator convinces readers of the accuracy of the results of the study. In the qualitative research literature, the use of some basic techniques are recommended to establish the trustworthiness of the research, such as member checking and an external auditor (Creswell, 2014). These strategies should enhance the ability of the researcher to assess the accuracy of the findings. The following is a discussion on two of these strategies and their relevance to this study.

Member checking

Creswell (2014) describes member checking as giving the participants the final report or themes for them to check in terms of accuracy. In addition, this technique may be employed to expand the data sources and comprehensive understandings (Creswell & Miller, 2000). Thus, member checking is considered the most effective way of creating credibility.

Relating to my qualitative study, as discussed in Section 4.3.5.2, each raw interview transcript was sent to the respective interviewee by email to invite corrections and comments. Of the 12 participants, 11 responded to confirm that their interview transcript was correct and they had no further comments. Only one interviewee suggested a change in relation to improving ETTT, which was significant RQ3 (see Chapter 1).

External auditor

In order to increase the accuracy of the research findings, another way to establish the trustworthiness of the findings was to appoint an external auditor. In order to improve the dependability of this research (both the qualitative study and the quantitative study), independent experts (such as my supervisors) and external experts (including a Vietnamese HRD professional and a Vietnamese lecturer teaching in an Australian university) were invited to undertake an external audit. These auditors were required to examine both the process and the product of the study.

Before the interview process started, guidance was sought from my thesis supervisors who have great experience in implementing research programs on HRD and management. This was done in an effort to enhance the quality of the interviews. Matters relating to the interview questions, the data collection methods and the methods of data analysis were discussed with my supervisors. Their comments were very useful for selecting appropriate interview questions to collect valuable data associated with the key RQs. Thus, their suggestions significantly assisted in the development of both the interview questions as part of the qualitative approach and the survey questionnaires as part of the quantitative approach.

Moreover, the English wording of the questions was edited by my principal supervisor who is a native English speaker. This significantly improved the interview questions and the survey questionnaire. This also means that the trustworthiness of the current research was established. Furthermore, because the Vietnamese language was used for the interviews (as discussed in Section 4.3.5.3), the set of English interview questions was translated into Vietnamese to collect data in Vietnam. Then, these Vietnamese translations (both the interview questions and the survey questionnaire) were edited by two Vietnamese experts who have great experience in implementing programs on employee development and training. This helped the participants to avoid confusion in terms of understanding the questions and helped them to provide information that specifically related to the aims of the study. After obtaining the interview data, the transcripts were translated into English. Additionally, my original translations were audited by a Vietnamese academic teaching at an Australian university to ensure accuracy for coding and analysis.

Briefly, the process of gaining feedback from the external experts during the data collection process (preparing interview questions and the survey questionnaire, producing data, coding data) and the data analysis was quite useful in establishing the trustworthiness of the current study. Thus, this ensured that the processes and data I used were reliable. Finally, the data that was stored in my computer and coded using the NVivo software was also employed in the creation of an audit trail for confirmation (Creswell, 2013). The process of data coding by NVivo software is presented in detail in the next section.

4.3.6. Data analysis

It is suggested that interpretation or analysis is a process of generating, verifying and developing conceptions from the primary piece of data (Creswell, 2014). Creswell also suggests several steps that are involved in qualitative analysis, including preparing the data, reading all data, coding the data and generating a description of individuals as well as themes for analysis, interrelating themes or descriptions and interpreting the meaning of themes.

In relation to coding the data, some qualitative researchers prefer to hand code the qualitative transcripts to organize and sort the data because computer software programs need time to learn how to use them effectively. However, many other researchers have recognised the advantages of using qualitative computing software packages to assist in the coding of information, such as saving a good deal of time (Creswell, 2014; Neuman, 2011). Moreover, using a computer software programme is an effective way for storing and locating data (Creswell, 2014). The researcher may quickly locate all text segments

which are coded the same and identify whether the ideas of the participants are similar or different (Creswell, 2014).

After weighing up the advantages and disadvantages of using a computer software programme for coding the qualitative data, the researcher decided that it would be more effective to analyse the collected data using a software package. Thus, once the interviews were transcribed (by the primary researcher), the researcher used NVivo 10 for the data analysis because it allowed for high flexibility in data codes (Bazeley & Jackson, 2013).

When the 12 interviews were imported in NVivo, they were scrutinised for common themes relating to the external influences on ETTT. Thematic analysis followed the stages of Braun and Clarke (2008),namely developing familiarity with the data, creating preliminary codes, seeking themes, describing themes and reporting themes. Thus, discrete sections of excerpts were coded into initial categories (viz., nodes) as they were identified. Texts ranged from a sentence to some paragraphs, depending on how long the matter was argued by the interviewee. If excerpts were associated with more than one issue, they were coded into multiple categories. The majority of categories were based on the literature review as essential concepts, whereas others emerged from the actual areas encompassed in the interviewees' answers. After this, the analysis focused on organising the categories in larger thematic arrangements. Identified over numerous passes through the interview data, themes related individual categories to broader concepts. For example, the theme of 'economic environment influence' included several categories: joining into WTO, SOE reform, open access to the Vietnamese market and the development of the export market.

In summary, the research aims of the qualitative study are related to investigating the opinions of SOE managers with respect to external environment influences and key changes for developing ETTT. These research aims directly match the gaps in current TOT research in relation to sound qualitative study practice. In doing this, it is important to seek three key outcomes, a greater understanding of external environment impacts, the major changes needed for improving ETTT and how these elements and priorities differ between managers.

For Study 2, which focuses on identifying the organizational impacts on ETTT in Vietnamese SOEs, a quantitative method of inquiry was utilized. This methodology is discussed in the next section.

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4.4. Study 2 - Quantitative research methods

4.4.1. Justification of quantitative approach

Neuman (2011) suggested that quantitative studies are regularly assumed to be suitable for investigating relationships between several independent variables and a dependent variable in the context of social study and that the quantitative approach is the most appropriate to see the large picture on a particular social topic. It is recommended as a useful way for better understanding what a selected number of participants think about a provided theme. Thus, as mentioned in Chapter 4, Study 2 examines the influence of organizational factors (obtained from studies in developed countries) on ETTT in Vietnamese SOEs. This is the reason the researcher was encouraged to employ a quantitative approach for this study. This quantitative research technique allows the researcher to test the experiences of the participants through a comprehensive outline of the past literature. To support the use of a quantitative method in this study, further advantages of this method are explained.

It is argued that there are many advantages of using a quantitative technique when examining social issues at both the theoretical and practical level (Creswell, 2014; Neuman, 2011; Zikmund et al., 2012). These major benefits are as follows: (1) survey questionnaires are simple to administer; (2) the data collected should be reliable because the fixed-response alternatives are provided to reduce the changeability in the results that can be different to the interviews; (3) the coding and analysis of raw data is of moderate complexity. Therefore, researchers may employ this approach to test statistical data and gain a greater understanding by carefully investigating a number of proposed variables.

In order to design an effective survey, quantitative researchers have to consider two key points, presenting clear questions and creating good questionnaires. This requires scholars to extensively examine the relevant literature before establishing hypotheses (Neuman, 2011). As the literature review noted in Chapter 4, choosing a quantitative survey was preferred as an appropriate quantitative method to investigate the proposed relationships in Study 2 (see Figure 3.1).

When designing the survey questionnaire, the relevant TOT literature was critically examined to answer clearly RQ2. As a result, the questionnaire survey method was employed to examine the proposed organizational influences on ETTT in Vietnamese SOEs. The next sections specify some concerns relating to the questionnaire-based survey method, such as questionnaire development and the expert opinions that were used in the quantitative study in this thesis.

4.4.2. Development of hypotheses

Based on the literature discussed in Chapter 2, the conceptual framework was developed, as shown in Figure 3.3. This offered a useful foundation for developing a number of research hypotheses to achieve the main aim of Study 2 that is, to examine the relationships between the three key organizational factors and the effectiveness of TOT. These hypotheses will be tested empirically to answer RQ2, as detailed in Chapter 3.

Previous TOT research has confirmed the importance of individual characteristics as a key concept to be examined, as these have a direct impact on the effectiveness of TOT (Baldwin & Ford, 1988; Holton et al., 2000). The relationships between performance outcome expectations, perceived relevance of training and the trainee's ability in relation to the effectiveness of TOT have been established for employees trained in the workplace in developed countries. However, it is not clear whether these relationships hold true for employees trained in developing countries, such as Vietnam. The present research seeks to validate and extend the findings that motivation factors to learn and transfer, as well as the ability of employees in Vietnamese SOEs may impact on their ETTT by investigating the following hypotheses:

- H1. There is a significant relationship between individual characteristics and effective transfer of technical training (ETTT) in Vietnamese SOEs.
 - H1a. Outcome expectation has a positive and significant influence on ETTT.
 - H1b. Perceived relevance of training has a positive and significant influence on ETTT.
 - H1c. Trainee ability has a positive and significant influence on ETTT.

The relationship between training design and TOT has been investigated in the previous studies (Holton et al., 2000; Velada et al., 2007) for a number of reasons as mentioned in Chapter 2. However, it is necessary to gain a more detailed explanation of the influence of transfer design and feedback on technical skill development for employees at the organizational level in developing countries. Thus, the current research proposes that there is a significant relationship between training design and TTT at the SOE level in Vietnam:

H2. There is a significant relationship between training design and ETTT in Vietnamese SOEs.

H2a. Transfer design has a positive and significant influence on ETTT.H2b. Performance feedback has a positive and significant influence on ETTT.

The definition and construct of work environment influences was also discussed in Chapter 2. It was argued that there are three related factors of the work environment that may impact on effective TOT. These three factors were derived in part from the analytical models developed by researchers such as Baldwin and Ford (1988) and Holton et al. (2000). This classification provides a foundation for examining the key elements of the work environment that may impact the effectiveness of TOT. These three factors are (1) opportunity to use training; (2) supervisor support and (3) peer support. This research seeks to validate and extend the findings that the above three factors may impact on ETTT in Vietnamese SOEs by investigating the following hypotheses:

H3. There is a relationship between work environment and ETTT in Vietnamese SOEs.

H3a: Opportunity to use training has a positive and significant influence on ETTT.
H3b: Supervisory support has a positive and significant influence on ETTT.
H3c: Peer support has a positive and significant influence on ETTT.

4.4.3. Questionnaire-based survey method

According to Neuman (2011), the questionnaire method is useful for conducting quantitative research. This technique gives researchers a chance to examine the opinions of a large sample of the target population on a specific issue (Bryman & Bell, 2011; Zikmund et al., 2012). Several previous studies have identified that the survey technique using a self-completed questionnaire is considered the most useful and beneficial method for collecting quantitative data (Bryman & Bell, 2011; Neuman, 2011; Zikmund et al., 2012). Although it may be not easy to contact a large number of participants to gather data, this method is believed to be the most effective way for statistical data analysis.

The issues raised above lay the foundation for developing research strategies, including techniques of data collection and data analysis. In order to address the research aims in Study 2, the questionnaire survey method was employed as the key data collection technique. This means that a self-administered questionnaire was given to employees who had attended technical training programs in the workplace in Vietnamese SOEs. These respondents were asked to evaluate to what extent organizational factors influence the effectiveness of TTT on the job. Before distributing the self-administered questionnaire to the participants, a summary of the research proposal was presented by the author.

In conclusion, a self-administered questionnaire survey technique was selected for collecting data in the case of the quantitative study. This method allows an examination of

the relationships between the independent factors and dependent variable within the proposed conceptual framework. Thus, the development of a useful survey questionnaire that is strongly related to the main research aims should provide researchers with both reliable and valid measures. For this current study, the development of the self-administered questionnaire is discussed in the following section.

Questionnaire development

The purpose of this section is to investigate the most significant relationships amongst the proposed constructs in the conceptual framework (Study 2). Given the significance of the development of the survey questionnaire, some scholars have recognized that response rates and validity depend significantly on the quality of the questionnaire design (Neuman, 2011; Zikmund et al., 2012). Thus, it is imperative to create clear survey questions, to ensure the questionnaire is presented effectively, to conduct carefully designed pilot testing and to administer the questionnaire appropriately.

As previously discussed, the quality of the survey questionnaire relates to the wording of the questions, the categorising, scaling and coding of the questions and the form of the questionnaire itself (Sekaran & Bougie, 2009). The wording of the questionnaire should be as simple and as clear as possible so that the participants are able to complete it without difficulty. Also, the length of the survey questionnaire should usually not exceed twelve pages (Frazer & Lawley, 2000).

Fowler (2014) suggested that in order to identify the basic characteristics of the key constructs, a questionnaire should be developed through the scale development procedures. As argued by Neuman (2011), Likert-type scales are often employed as a study tool if a researcher wants a deeper understanding as to how people practice or experience something. Applying Likert scales may help scholars in the conceptualization of a specific study idea. Moreover, Likert-type scales are often used to ask individuals to indicate whether they agree or disagree with a statement. Thus, this technique requires a minimum of two choices, "disagree" and "agree". Nevertheless, according to Neuman (2011), if only two categories are used, this forces differences into only two choices and may lead to a crude measure. Thus, a five-point Likert-type style was used to measure each concept associated with the conceptual framework (Study 2). The respondents were asked to makea choice in relation to each structured question ranging from 1 "stronglydisagree" to 5 "strongly agree" that best defines their beliefs regarding the training they have received.
In order to ensure that the key research issues proposed in Study 2 are suitably addressed, a self-administered questionnaire was designed (see Appendix 4), comprising three sections. The first section of the survey instrument asks for individual participant information such asage, gender, technical skill level, educational attainment, work experience and recent technical training courses attended.

The second section aimed to collect data on the factors influencing ETTT, including motivation to learn and transfer skills, training effectiveness, application of new skills, design of training, performance feedback, opportunity to use training, supervisory support and support of peers. The statements employed in the second section were adapted from the previous relevant literature. This section was designed to determine the extent to which each construct influenced their TTT.

The final section was designed to gather important information on the effectiveness of TTT of employees in Vietnamese SOEs. These items were adapted from past studies. The section facilitated a better understanding of the evaluation of Vietnamese SOE employees on their performance after conducting TTT on the job.

In conclusion, several statements from relevant scales in the literature were used in the context of TTT. In order to identify whether these scales were appropriate to examine the corresponding factors of the research framework, the reliability and validity of the developed measures were systematically tested. Significant effort was put into the development of the self-administered questionnaire and the quality of this survey questionnaire was also confirmed through the responses to a pilot test before the main survey was conducted. The items from the self-administered questionnaire are discussed in the following sections.

Measuring individual characteristics

Several aspects of individual characteristics, such as perceived relevance of training, training effectiveness and the application of new skills influencing TOT on the job were discussed in Chapter 2. Most past studies explored the influence of individual characteristics on TOT(Baldwin & Ford, 1988; Blume et al., 2010; Cheng & Ho, 2001; Gegenfurtner et al., 2009; Holton et al., 2000; Seyler et al., 1998; Tracey et al., 2001; Velada et al., 2007; Xiao, 1996). Thus, implications for the measurement of influences of individual characteristics have been adapted from the previous literature on TTT on the job.

Motivation to learn and transfer skills: It is noted that this dimension was identified as a construct linking two key categories, namely perceived relevance of training and outcomes from training. This dimension includes ten items to investigate participants' motivation to attend training courses and engage in TOT in the workplace, such as being able to do their job better, improving their professional competence and being useful in solving problems on the job. These items may be employed to explain the perceived relevance of training when making decisions about engaging in activities of training transfer. Furthermore, the outcomes obtained from training, including wage increases, bonuses and receiving a promotion for accomplishing tasks in a more efficient way using the learned skills are mostly related to individual motivations for attending a program of TTT on the job.

Training effectiveness: This dimension includes five items that ask participants to describe their cognitive ability. Five items related to training effectiveness describe trainees' cognitive ability, identifying appropriate working situations, identifying ways to improve with practice, remembering the learned key topics and being able to use the new skills.

Application of new skills: The dimension includes six items. For example, some attributes of new skill application are examined to describe the trainees' performance self-efficacy influencing TOT. These items are: being able to apply new skills, being confident to use new skills, using new skills in complex work situations, overcoming obstacles to use the new skills, doing well in activities with lots of information remembered and accomplishing the job better by using the new skills. Accordingly, the determinative elements of individual characteristics were utilised from these previous studies in the existing TOT literature. As a result, a total of twenty-one items derived from the literature review were used to examine individual characteristics influencing ETTT (see Table 4.1).

Table 4.1: Items used to measure the influence of individual characteristics ontransfer of training

	Description of item	Supporting literature		
	Motivation to learn and transfer skills			
1	The training will help me do my current job better.	(Gegenfurtner et al., 2009)		
2	I believe the training will help me to improve my professional competence.	(Gegenfurtner et al., 2009)		
3	I am looking forward to using my new training on the job.	(Gegenfurtner et al., 2009)		
4	I feel committed to apply what I have learned to my job.	(Gegenfurtner et al., 2009)		
5	The new skills will be useful in solving problems on my job.	(Gegenfurtner et al., 2009)		
6	I will look for opportunities to use the new skills.	(Gegenfurtner et al., 2009)		
7	I received a wage increase because I accomplished tasks more effectively using the new skills.	(Xiao, 1996)		
8	My supervisor has praised me for using my new skills.	(Xiao, 1996)		
9	I have received a bonus because of improved performance by using new skills.	(Xiao, 1996)		
10	I have received a promotion for accomplishing tasks in a more efficient way.	(Gegenfurtner et al., 2009; Xiao, 1996)		
	Training effectiveness			
11	I still remember the topics discussed in my training course.	(Gegenfurtner et al., 2009)		
12	I easily understood the content learned in the training course.	(Velada et al., 2007)		
13	I can identify appropriate situations for the application of new skills.	(Velada et al., 2007)		
14	I can identify ways to improve with practice and frequency of use.	(Velada et al., 2007)		
15	I am able to use my new skills in my work.	(Tracey et al., 2001)		
	Application of new skills			
16	I am able to apply the skills acquired from my on-the-job training.	(Velada et al., 2007)		
17	I am confident in my ability to use my new skills in my work.	(Velada et al., 2007)		
18	I have used my new skills even in complex work situations.	(Velada et al., 2007)		
19	I have overcome obstacles to use my new skills on the job.	(Velada et al., 2007)		
20	I do well in activities where I must remember lots of information.	(Lim & Morris, 2006)		
21	I can accomplish my job better by using my new skills.	(Lim & Morris, 2006)		

A multi-item scale was used to obtain an overall estimation of the individual characteristics of employees which have an influence on TTT in Vietnamese SOEs by rating the key elements of motivation to learn and transfer skills, training effectiveness and application of new skills. The twenty-one items were tested to explore the participants' level of agreement on each dimension associated with the target participants' TTT.

Measuring training design characteristics

One of the key objectives of Study 2 is to investigate the training design characteristics that influence TTT from the viewpoint of Vietnamese SOE employees. As mentioned earlier in Chapter 4, the past literature on TOT on training design characteristics has been generally categorised into two major items, design of training and performance feedback. Following this, a series of measurement items was selected to calculate the influence of training design characteristics based on a comprehensive literature review (Facteau et al., 1995; Tracey et al., 2001; Velada et al., 2007; Xiao, 1996).

In this study, a set of factors was identified to evaluate these two major dimensions in the TOT sector. These measures were created to assess the perception of training design characteristics through drawing upon studies associated with TOT. The significance of training design characteristics has been proposed in relation to influences on employees' effectiveness of TTT in Vietnamese SOEs.

Velada et al. (2007) suggested that two items related to design of training and three items associated with performance feedback should be investigated to describe the influence of training design characteristics on TOT (see Table 4.2). Moreover, four other items of design of training were also mentioned for training design characteristics: the training is relevant to my job (Xiao, 1996), activities and exercises used by trainer (Tracey et al., 2001) and satisfaction of the participants with the quality of the training content and the quality of trainers (Facteau et al., 1995). Finally, one item relating to performance feedback proposed by Saks and Belcourt (2006), namely being required to submit a post-training report after training, was also used to measure the training design characteristics influencing TTT.

Table 4.2: Items for measuring the influence of training design on transfer oftraining

	Description of item	Supporting literature		
	Design of training			
1	My training is relevant to my job.	(Xiao, 1996)		
2	The trainers gave me confidence to use my training.	(Velada et al., 2007)		
3	The trainers used activities and exercises that helped me to apply my learning to my job.	(Tracey et al., 2001)		
4	Additional sessions were offered to improve the effectiveness of the training.	(Velada et al., 2007)		
5	I am satisfied with the quality of the training content in my most recent training course.	(Facteau et al., 1995)		
6	I was satisfied with the quality of the trainers in my most recent training course.	(Facteau et al., 1995)		
	Performance feedback			
7	During my training, people shared tips that helped me to improve my job performance.	(Velada et al., 2007)		
8	After training, I am encouraged to participate in conversations with people about how to improve their job performance.	(Velada et al., 2007)		
9	I was required to submit a post-training report after attending the training program to evaluate my learning.	(Saks & Belcourt, 2006)		
10	I have received positive feedback regarding myperformance after training.	(Velada et al., 2007)		

In summary, in order to measure the influence of training design characteristics on TTT in Vietnamese SOEs, ten items were selected from previous training design studies in the context of TOT activities.

Measuring work environment characteristics

As mentioned previously in Chapter 4, the concept of work environment characteristics has been proposed as a separate measure of the three basic dimensions: opportunity to use training, supervisory support and support of peers. In reviewing 89 past empirical studies relating to TOT, Blume et al. (2010) found that most predictor variables which investigated the work environment had stronger relationships to TOT. However, these studies often used a sample from a developed country to collect data. Therefore, for the purpose of data collection using a sample from a developing country such as Vietnam in

this study, fifteen measurement items were adapted from a broad review of relevant TOT literature, including research by Holton et al. (2000), Xiao (1996), Gregoire et al. (1998) and Facteau et al. (1995) (see Table 4.3).

Table 4.3: Items for measuring the influence of work environment on transfer of
training

	Description of item	Supporting literature	
	Opportunity to use training		
1	My job requires me to use new skills.	(Xiao, 1996)	
2	Appropriate equipment is available so that I can apply my new skills on the job.	(Holton et al., 2000)	
3	My managers give meadequate time to practice my new skills on the job.	(Holton et al., 2000)	
4	Since the training, I have used the new skills on the job frequently.	(Xiao, 1996)	
	Supervisory support		
5	I am allowed enough time off work to attend training.	(Gregoire et al., 1998)	
6	My supervisor asks me what I gained from the training I attend.	(Gregoire et al., 1998)	
7	My supervisor discusses ways to apply my trained skills to my job.	(Xiao, 1996)	
8	My supervisor has provided assistance to resolve problems in applying my training.	(Xiao, 1996)	
9	My supervisor has helped me set goals for using my new skills on the job.	(Velada et al., 2007)	
10	I was provided with the support (time, money, other resources) needed to consolidate my new skills.	(Xiao, 1996)	
11	My supervisor often checks with me to see how my efforts to use my new skills are going.	(Gregoire et al., 1998)	
	Support of Peers		
12	My peers have helped me to apply my new skills.	(Xiao, 1996)	
13	I have talked to members of my training class group to share ideas about using new skills on the job.	(Xiao, 1996)	
14	I have worked with other people to share ideas on using new skills on the job.	(Xiao, 1996)	
15	My peers have shared with me the benefits of applying new skills on the job.	(Facteau et al., 1995)	

The concepts were measured using15 selected statements. Respondents indicated their views regarding these items to evaluate the three major constructs of work environment characteristics that influence TTT in SOEs.

Measuring the effectiveness of transfer of technical training

Given the significant importance of effective TOT in HRD that may result in an organization's competitive success, it is noted that enterprises have spent a large amount of money and time on training because they believe that training will improve employee performance and the enterprise's productivity (McLean & McLean, 2001; Velada et al., 2007). Furthermore, Baldwin and Ford (1988) indicate that training efforts may bring about positive change in work performance when all training experiences are effectively transferred from the learning environment to the job. As a result, for the purposes of data collection to measure the effectiveness of TTT in Vietnamese SOEs, three measurement items were adapted from a broad review of relevant TOT literature.

Velada et al. (2007) suggest that one item associated with the measurement of training effectiveness transfer is whether there is an effective incorporation of new skills in the daily tasks. Moreover, two other suggestions, that job performance improved after training and work was done faster after training, are also useful elements for predicting the effectiveness of the TOT process (Xiao, 1996). In this study, measurements referring to the effectiveness of TTT of Vietnamese employees were derived from these previous researchers. Therefore, three items used for the dimensions of ETTT were adapted from Velada et al. (2007) and Xiao (1996) (see Table 4.4). The participants' responses determined their level of agreement or disagreement with each of the three statements in Table 4.4.

	Description of item	Supporting literature	
	Effectiveness of training transfer		
1	I have effectively incorporated my new skills into my daily tasks.	(Velada et al., 2007)	
2	My job performance has improved because of my new skills.	(Xiao, 1996)	
3	I am now able to work faster because of my training.	(Xiao, 1996)	

 Table 4.4: Items for measuring the effectiveness of transfer of training

Finally, in the last question of the questionnaire, participants were asked if they wanted to give any additional feedback before being thanked for their participation in this study. This question gives the participants an informal chance to provide more information.

4.4.4. Data collection process

Pilot test

It is argued that the main objective of the survey instrument is to investigate a subject by testing questions using a logical method (Bryman & Bell, 2011; Zikmund et al., 2012). In order to ensure that the various questions were relevant to the study, the questionnaire was checked carefully before the main survey was conducted. This also ensures that the collected data are useful for examining the key RQs. Thus, according to Burns (2000), pre-testing a questionnaire in social research may expose unclear survey questions on the dimensions.

Moreover, Bryman and Bell (2011) indicated that the response rate and the validity and reliability of the survey data is not only significantly decided by the quality of a questionnaire design, but also depends on the survey administration. As a result, in order to increase the effectiveness of the data collection, it is necessary to conduct a pilot test to ensure the questionnaire contains the following key points: the form and purpose of the survey questionnaire is clearly explained, the individual questions have been carefully designed, the survey has been carefully administered.

According to Bryman and Bell (2011), a sample size of 20-50 cases is viewed as sufficient to find the negative points related to a questionnaire. Accordingly, a pilot test was implemented with a sample size of 30 employees who were trained at the Vietnamese SOE, Hanoi Construction Corporation. The purpose of the pilot test was to identify any misunderstandings or problems related to the survey questionnaire. This pre-testing was conducted in July 2013.

After conducting the pilot survey no problems were found with the wording or the clarity of the questions that may result in participant misunderstandings. In addition, the reliability and validity of the survey questionnaire were tested and were considered appropriate (the details were presented in table 6.2). As a result, the survey questionnaire was deemed to be appropriate for collecting the data in the main survey.

Main survey

The key objective of this section is to clarify the issues related to sampling structure, sample size and the implementation of the main survey in the present study. In particular, a clear explanation of the sampling frame of the target population of the Vietnamese SOE employees who were trained in the workplace is given in this section. In order to demonstrate the proposed conceptual framework concerning RQ2, it is necessary to choose a good quality sample for data collection.

Sampling frame

The sampling frame for this quantitative study was employees in the eight selected Vietnamese SOEs (see 4.3.2.2). All employees had received training from their enterprise within the past two years. This target population was accepted as being appropriate for achieving the main study goals by testing the predicted relationships in the conceptual framework. There were several reasons for choosing this sample as the target study population, including low cost and limited time.

According to Bryman and Bell (2011), a convenience sample is the most common technique for conducting academic research. They also suggest that there are several advantages of using this type of sample, such as the cost and time effectiveness of collecting data from a large survey population. However, if the target population is small, the use of a convenience sample could result in low validity of the study. It is therefore important to select an appropriate number of participants in a convenience sample.

Survey process

Deciding on the sample size and dealing with non response bias is very important in a quantitative design (Morse, 1991; Neuman, 2011). Sample size may influence the examination of significant differences, interactions or relationships (Neuman, 2011). A range of guidelines have been recommended for defining the sample size that is required to have a constant solution when conducting factor analysis.Cohen, Cohen, West, and Aiken (2013) suggested a guideline for deciding the sample size when collecting data for multiple regression analysis. Although some researchers recommended if possible (Bryman & Bell, 2011; Hair, Anderson, Tatham, & Black, 2010; Tabachnick & Fidel, 2013). Therefore, in relation to this study, a sample size of over 180is considered suitable.

The sample for the main survey was drawn from eight Vietnamese SOEs in Hanoi and Ho Chi Minh City. All respondents who had been trained on the job were approached at their enterprises between August and September 2013. In order to achieve an appropriate sample size of greater than 100, 200 respondents were selected to participate in this survey, with 185 questionnaire forms being completed and returned (a response rate of 92.5%).

The data collection process was commenced by distributing the self-administered questionnaires to the target participants. The researcher provided a brief introduction on the main purpose of this study, noting that participation was voluntary. In addition, in order to decrease the incidence of missing data in the returned survey questionnaires, the researcher quickly explained the sections in this questionnaire to ensure all questions were answered correctly and that there was no confusion in completing the questionnaire.

4.4.5. Data Analysis

The Statistical Package for the Social Sciences (SPSS - version 21) was used to analyse the data. Various statistical analyses were used to examine RQ2, which is one of the three key themes of this research. The data analysis includes four phases: reliability testing, descriptive statistics, exploratory factor analysis and multiple regression analysis. These statistical techniques are detailed in Chapter 6.

4. 5. Ethical considerations

Ethical research policies are strictly enforced by La Trobe University to protect participants from any economic, social, legal or physical harm caused by the research being conducted. As the two studies in this project involve humans, the present research strictly followed all mandatory procedures that are required by the University Human Ethics Committee. This research received the approval of the Ethics Committee prior to conducting the field research. (See Appendix 1-Letter of Ethics Approval).

The involvement of the participants in this research was voluntary. Willing participation was invited and the personal information of the researcher was circulated. In addition, information on consent is a major principle of research involving human participants. This consent was gained from both the case study organizations and the individual participants prior to the commencement of this project (see Appendix 5- Consent Form).

Privacy is an important matter to participants. Confidentiality was guaranteed to all participants who were assured that their identity would not be revealed.

4.6. Chapter summary

Chapter 4 details the research methodology that was deployed in both Study 1 - qualitative study and Study 2 - quantitative study. This chapter explained why two methods, the qualitative technique (using the case study method) and the quantitative technique (using a survey questionnaire) were adopted in this research. A justification of the research approaches was also outlined.

For Study 1, the rationale for the case study method and the case study protocol was developed to provide guidelines for the researcher to conduct this study. Then, a discussion on the preparation of the interview questions was presented in this section. The data collection techniques and the data analysis procedures were detailed. Issues regarding trustworthiness were also addressed in the qualitative study.

For Study 2, the design of the survey questionnaire was detailed in relation to the quantitative data collection. The techniques for data collection for both the pilot test and the main survey were presented and discussed. Issues associated with the exploration of the validity and reliability of the scales in the self-administered questionnaire, which was tested to confirm an acceptable level of statistical analysis, were also given. The sampling frame and the main survey were also described in detail. Details on information relating to the quantitative data analysis procedure were discussed including coding, data cleaning, missing data and statistical analytical techniques. Finally, ethical research considerations were also addressed in this chapter.

The next chapter describes the results for Study 1 based on the data collected from the twelve managers in the eight selected Vietnamese SOEs. Following this, an exploration of the external environment factors influencing ETTT is examined.

Chapter 5

Qualitative Results: The Impact of the External Environment on Transfer of Technical training

5.1. Introduction

The current chapter is the first of two results chapters. This chapter begins with a discussion of the primary analysis to identify the demographic characteristics of respondents to enhance the objectivity and validity of the responses. The data interpretation including the coded names of respondents and the selected SOEs and the study result layout and presentation are discussed in the following sections.

This chapter then details the findings related to research question 1 (RQ1) (see Chapter 1). This RQ was examined using six questions in section two of the manager interview questions (see Appendix 3) to explore the influence of the economic environment, educational characteristics and the legal and regulatory environment on transfer of technical training (TTT). Additionally, relevant responses to some of the interview questions in section three of the manager interview questions are also included to illustrate the findings. Hence, the three subsequent sections discuss the three main themes and encompassing categories. Some categories were developed from the interview data while the rest were developed from the literature and the conceptual framework (see Chapter 3). The examination of each of these three factors starts with a discussion on the unprompted responses of the interviewees before presenting the findings of the prompted responses. Finally, a summary section concludes this chapter.

5.2. Demographic characteristics of respondents

5.2.1. Code names

As discussed in Chapter 4, a total of twelve managers and training directors of 8 SOEs were interviewed in this study. The data from this sample was collected from the end of July 2014 to August 2014. In order to ensure the anonymity and confidentiality of the interviewees, participants were referred to with code names when the results were recorded. The eight selected SOEs were coded from E1 to E8. These eight enterprises are in the manufacturing sector and have been operating for more than 10 years. In terms of the number of employees, seven enterprises are defined as larger enterprises as they

employ more than 500 employees (National Assembly Socialist Republic of Vietnam, 2005). Only E5 was identified as a small-to-medium enterprise. The description of each enterprise is based on the interviews with the managers of the enterprises and the training directors. The findings indicate that all SOEs had conducted an employee technical training program in 2012. Enterprise managers had primary responsibility for employee training in each enterprise. Only the training activity of E3 was managed by a training director. The total cost of the technical training programs in each of the eight selected enterprises run in 2012 varied significantly. For example, while E5 spent VND 8 billion for technical training in 2012, E3 spent only VND 500 (see Appendix 8).

In addition, each participant was allocated a numeral as a means of identification in this study. Eight managers of eight enterprises were coded from 1 to 8 respectively. Four training directors of four of the SOEs were coded from 9 to 12. A gender label (M for male or F for female) further classified the interviewees. Thus, if respondent 1M was referred to in the discussion of the findings, this indicates that this participant was the first (male manager) of 12 managers participating in this study. The only females in this study are 9F and 12F. The number of years the participants have spent working in their enterprise was between 9 to 30 years. In terms of their role in the enterprise, all eight managers are responsible for the general management of all business activities of their enterprises including training activities. The training directors are responsible the training activities in their enterprises (see Appendix 6).



The demographic analysis shows that of the 12 total respondents, 10 were male (83%) and 7 were managers (58%). Additionally, no one with less than five years of work

experience participated in this study (see Appendix 6). In fact, all of the managers and training directors in this study had at least 9 years of work experience. The distribution of work experience years is shown in Figure 5.1. Therefore, it is likely that their experience in employee training activities is relevant for this study.

5.2.2. Overview of Themes

Table 7.2 presents the themes raised by the individual participants as described in the literature. There appears to be a fairly close match between external influence themes discussed by the participants and those described in the literature. Another theme, however, was raised spontaneously in the interviews, namely Vietnam joining the WTO.

 Table 5.1: Comparison of themes discussed by the interviewees with those described in the literature

	Theme	Interviews	Literature
1	Joining WTO	Yes	No
2	Reform of SOEs	Extended	Yes
3	Open access to the Vietnamese market	Yes	Yes
4	Development of export markets	Extended	Yes
5	Quality of institutional training	Yes	Yes
6	Quality of teaching staff	Extended	Yes
7	Quality of student technical training	Yes	Yes
8	Training policies	Extended	Yes
9	Technological policies	Yes	Yes
10	Foreign investment policies	Yes	Yes

5.2.3. Layout of the study results

To determine objectivity in the study findings, the raw data are shown as evidence of theoretical arguments and concepts addressed in the literature review (Silverman, 2011). Participant demographics and enterprise information have been drawn from the study results to enhance the validity and context of the responses. The tables in the two following sections show the main themes (both the prompted themes and the emerging themes from the interviews) and signify the frequency of responses. Furthermore, the results in the three following sections outline feedback on influential factors that improve

effective transfer of technical training (ETTT) in relation to the key themes suggested in response to the interview questions. Italics marks were used to represent quotes that highlight the interviewee's responses (Golden-Biddle & Locke, 2007).

5.3 Impact of economic characteristics on transfer of technical training

Following the discussion on the demographic characteristics of both the interviewees and their enterprises, participants were asked some open-ended questions in relation to the impact of the Vietnamese economic environment on ETTT.

This was initially explored with an open-ended question that solicited responses from managers and training directors as to what economic characteristics influenced their TTT in their enterprises. This was discussed again later in the interview, but with the use of a list of prompts that were collected from the literature (See Appendix 3). Responding to an open-ended question "How does the external economic environment impact on the TTT in your firm", the majority of the interviewees reported that Vietnam joining the WTO was the most influential factors on their TTT. Interestingly, the additional responses as well as the opinions of the remaining participants related to the three prompted themes for discussion in the next question.



Figure 5.1: Economic environment factors impacting on TTT

In response to these prompted themes, the majority of participants indicated that all these factors significantly impact their ETTT. However, four managers and training directors in three selected SOEs (33% of responses) did not mention "growth in export markets for firm's products" because their products were not exported abroad. From these responses, four main factors associated with economic environment influences on TTT were indicated in this study. Three key factors that had been found in the literature and were raised in the interview questions for discussion were confirmed by the participants, namelyreform of SOEs, open access to the Vietnamese market and development of the export market. One unprompted factor, namely "Vietnam joining the WTO" emerged spontaneously from the participants. Table 5.2 shows the four economic environment factors that impacted on TTT in Vietnamese SOEs and the number of responses relating to these factors. The following sections describe how these four factors influence TTT in SOEs.

5.3.1. Vietnam joining the WTO

In the context of TTT in Vietnamese SOEs, the findings from the interview data indicate the possibility that Vietnam joining the WTO was the most common unprompted economic factor mentioned. This was confirmed from the explanations and comments of eleven interviewees (92% of total 12) regarding their opinion on the influence of economic factors on their TTT activity (see Figure 5.2). The responses of the participants are presented throughout the following pages.

Generally, respondents assumed that the spread of globalization and Vietnam joining the WTO would make the business environment better and help enterprises to improve their productivity and attract foreign investment. Vietnam's entry into the WTO requires significant changes to establish a modern enterprise system with high quality in terms of both labour and equipment for the trade of goods following WTO requirements. The changes require major developments in SOEs with a strong emphasis on an improvement in the technical skill levels of employees. The participants noted that an improvement in HR training and a transfer of technical skill training must be implemented if the SOEs wish to remain competitive in a changing global market. Additionally, Vietnam's entry into the WTO was an important step in helping Vietnam move towards a market economy and international integration. This is motivation for enterprises to develop technical training and TTT for their employees. Explaining this, the participants indicated that since Vietnam had joined the WTO, enterprises had the opportunity to access the high

technology products of all the WTO members and service markets on lower tariffs. Furthermore, the managers recognized that it is a chance for Vietnamese enterprises to understand the needs of the global market to adapt to changing performance. This may strongly encourage innovation at the enterprise level to enhance the effectiveness of performance that will lead to high quality products. As one manager reported:

"It is an opportunity to connect with the global market and understand the needs of the customer, as we will know what we have to improve including the machine and technical skill levels of employees to create suitable products to meet the demands of the foreign market" (3M).

According to the respondents, after Vietnam entered the WTO, their enterprise had many opportunities to collaborate on foreign projects that may bring benefits such as the opportunity to use modern technology and increased prices for their goods. However, when Vietnam first joined the WTO in 2007, their enterprises had some initial difficulties. Many SOEs did not have foreign customers because their employees did not have the necessary technical skills, including the ability to operate various types of machinery necessary to make various products for foreign customers. This is illustrated by the experience of one of the managers (4M):

"In the early period (2007 - 2009), when Vietnam had just entered the WTO, we were invited to provide products for foreign customers. However, after investigating our capability, no foreign investment projects could be given to us because the technical skill level of our employees is insufficient to operate the high technologies that would be used to implement these projects".

Moreover, the respondents reported that in delivering on its commitment to the ASEAN free trade area, the Vietnamese government had established some rules to reduce tariffs, remove trade barriers and deregulate import controls. These incentives are important to encourage foreign investors to enter the Vietnamese market. Thus, it is more difficult for SOEs in the competition for capital, as technology and skill-intensive industries may be dominated by foreign products and foreign-invested companies. According to the participants, the national government has currently forced budget constraints on many enterprises by significantly reducing subsidies and liberalising prices. Thus, their products have to compete strongly on both quality and price with products of foreign-invested companies and imported products.

From these difficult experiences managers of Vietnamese SOEs understand that if their SOE was to remain competitive in a changing global market and receive greater value

from foreign trade, they needed to significantly improve their capability to adapt to the requirements of the global economy. The SOE's capability has to be transformed to establish a modern enterprise system with a quality standard for the trade of goods, following WTO requirements. In order to help the enterprises become confident to integrate, they have to change to meet higher technical standards for industrial manufacturing with a strong emphasis on improvement in both technology and the technical skill levels of employees. A participant stated:

"Now we are trying to develop activities of training and TTT to improve the skill level of our employees and hope in the near future our employees' technical skill levels can meet the needs of foreign investors". (12F)

Additionally, some respondents mentioned that competition in the labor market became more intense after Vietnam joined the WTO. They reported that many foreign companies participating in Vietnam's labor market, while working conditions in Vietnamese SOEs, with their old technologies and low salaries are low compared to other companies. There has also been a loss of higher skilled employees from SOEs to domestic and foreign companies. This finding supports a suggestion of (Nguyen et al., 2011).

Many participants confirmed that they are facing a situation where many staff are leaving due to the competitive labor market. After developing advanced technical skills, many trained employees in SOEs find that they now have the opportunity to meet the higher requirements from other enterprises that offer better benefits. For example, discussing his concerns about this competition, one manager said:

"After receiving technical skills training from our enterprise, some skilled employees moved to international companies because they were drawn by higher wages..., we still lack skilled employees and the training cost of the enterprise is limited..., we do not want our trained employees to leave the enterprise". (2M)

Similarly, a female training director (9F) recognized that "Our enterprise lost about 20% of technically skilled employees... because these employees sought the higher wages offered by other companies". Those SOEs lacking technically skilled labor need to develop solutions to attract and retain highly skilled employees in their enterprise. In order to do this, some SOEs have tried to create a good work environment including a good salary, bonuses, promotions and a positive working culture to motivate the activities of TOT. For example, a manager shared that his enterprise designed an improved salary

system, which has enabled them to retain skilled employees as well as implement a more effective technical training process (2M).

The value of qualitative analysis is apparent in this data. Several interviewees believed that an important economic environment factor that influences TTT in Vietnamese SOEs was Vietnam joining the WTO. The findings indicate that Vietnam joining the WTO is a significant factor motivating SOEs to improve ETTT. Joining the WTO is an opportunity to manufacture high quality products by utilizing technically skilled employees for the global market. Furthermore, these findings also noted that enterprise managers are encouraging their staff to undergo training and development by offering payment strategies. These findings provide valuable suggestions for devising employee training and development strategies in SOEs.

5.3.2. Reform of SOEs

This section relates to responses that examine the process of reform impacting TTT in SOEs. Figure 5.2 shows that all respondents (100%) considered reform of SOEs as a primary significant economic influence on their enterprise's activities for TTT. Firstly, the respondents reported that SOE reform has led to competition for employees that may significantly impact TTT activities. Traditionally, advancement in SOEs was mainly decided by loyalty, relationship and seniority, rather than individual productivity. This led to a complacent attitude in employees towards their skill level. They had no motivation to improve their performance. However, after SOE reform, the government did not directly intervene in business activities of SOEs. The main objectives of an enterprise are profit and other benefits. Promotion is now based mostly on personal performance. All employees have to be selected from a highly skilled labor force to work in an enterprise. As a result, managerial appointments are related to educational qualifications and work experience, and high quality employees are always available to fill these positions. Promotion is a way to encourage employees to engage in the process of TOT to gain higher skill levels and acquire a better position.

According to the participants, in the past, SOEs had to follow the directions of the government when employing workers. In some cases, they had to accept employees who were not suitable for the enterprise. This situation has now changed. Each SOE has the right to select employees who have the appropriate skills for the position, based on the skill level requirements. This also means that good employees can aspire to positions with higher salaries. Thus, employees feel encouraged to develop their skill level in the

belief that this will lead to a better life in the future. A female training director (12F) gives an example to support this.

"Traditionally, if two employees were doing the same job, but one could not do his job well, they were still paid the same wage. Now business pays according to productivity. SOEs have applied a new salary system where a wage is based on the skill and productivity of employees... So, if employees want gain higher wages and bonuses, they need to continuously develop their skill levels. This is an important element to enhance effective TOT in our enterprise".

Secondly, the data reveal that SOE reform gives SOEs autonomy that it can use to put pressure on an employee to develop their skills to meet the changing organizational demands and contribute to productivity and increased profits. According to the managers, in the past, SOEs often held a monopoly and they had easy access to cheap bank credit. The production targets of SOEs were assigned by the State, and all the products had to be delivered back to the State for distribution. As the enterprise did not have to worry about customer satisfaction, they did not need to improve the quality of their products which was often determined by low employee skill levels (Storper, 2000). Thus, although SOEs' products were of low quality, they could still be sold for a high price that covered the costs. Consequently, they were under no pressure to improve their products. This was illustrated by the following quote from an SOE manager:

"Under the centrally planned economy, our products were made according to the government's production plans and they were also sold through the government plans... and there was no competition with products from other companies. Thus we did not need to worry about the enterprise's profit as well as employee's quality," (4M).

Consequently, in order to maintain government support and protection, SOE managers often spent the majority of their time lobbying and they did not care about whether and how their enterprises could outperform their competition. Although SOE performance was controlled by the government's production plans, the living standards of employees were low.

According to the respondents, after the reform period, SOEs had to hunt for material input, funding and customers by themselves. Their products had to meet the needs of the consumers. Therefore, the SOEs had to increase the quality of their products and the TTT

activities of the enterprise needed to be effectively conducted to develop the technical skill levels of their employees. One male manager (5M) commented:

"Now, our benefits are decided by our business results. This has encouraged our efforts to gain potential customers and increase profit. This means that our products must be improved by technically skilled employees. This is a reason to develop the activities of TOT".

Nevertheless, the tardy implementation of SOE equitizati on that was designed in the reform process also created problems for SOEs. Some participants reported that if their enterprises were equitized, they could make important business decisions themselves that could bring about significant profits for their enterprise, including an opportunity to improve the skill level of the employees. SOEs are monitored by many unclear ownership responsibilities with many distinct actors. For example, while one government ministry has the main responsibility for a SOE, other ministries are involved. For example, the Finance Ministry is responsible for capital, the Social Affairs Labor Ministry for employment matters and other ministries for management. Thus, when an SOE wants to make a business decision, such as tendering for foreign project, the SOE has to explain the tender and seek approval from all involved parties. This may be very time-consuming and involve many complex procedures. As a result, due to this prolonged process, the SOE might miss out on securing the foreign project, which may have provided materials and a design for product improvement. A comment by 7M is relevant:

"We have lost some potential foreign customers because we must meet their specific demands. In order to conduct all that they require, we must have modern technologies and high technical skill level of employees. However, it is very difficult to resolve these problems because we have to get permission from many involved state officers... In some cases, our applications may be permitted, but it is too late to connect with these customers. So, if the enterprise is equitized, we may make business decisions ourselves such as devising strategies for technology improvement or employee skill training to meet the needs of foreign customers".

While most of the managers of the eight SOEs confirmed that there is a positive relationship between TTT and an enterprise's performance, they often lack the necessary financial investment to conduct advanced training programs. The interviewees claim that they want to develop western technical skills for their employees to meet the labor demands of foreign customers, so they were more likely to employ western training programs for their employees. These training programs, including international vocational institute courses and practices were reserved for employees with higher technical levels. This would involve a large training cost and would require financial assistance from the government. However, the SOEs did not receive this financial support. A female training director (9F) commented:

"We asked for permission to implement a western technical training program but this was declined. Once our enterprise connected with a foreign customer, but we could not deliver their specific order because the technical skill levels of the employees were low compared to their requirements. We thought western training could improve this situation. But they said that the costs of international training courses are higher than the costs of national training courses, so our request was declined... If our employees are not given a chance to gain a western education, I do not know how the enterprise will have foreign customers... So, if the enterprise is equitized, we may decide to conduct external training programs ourselves".

In addition, the managers also claimed that managerial power in SOEs had an impact on the business result, including employee development activities. It is recognized that many managers of large SOEs are appointed to their position by the government based on relationships rather than skill levels. Thus, in some cases, their skill levels are limited and they could not adapt to the progress of the country. In fact, according to 8M, in a competitive environment, a weak manager may lose control of several aspects of the enterprise or decisions may be made too slowly which could result in ineffective performance. As a result, the weakness of some managers may drive their employees to despair, which can result in employees moving to other companies. Similarly, a manager of one of the enterprises (3M) was optimistic about the influence of SOE equitization and the role of managers:

"In my opinion, everything in an equitized SOE is managed as a business, so the manager is required to be very creative and be responsible for managing the enterprise... when a manager has good knowledge and high level skills, they will have positive attitudes towards training and using skilled employees and they also have the ability to retain trained employees rather than losing them to developed companies".

Thus, when SOEs are equitized, shareholders are compelled to recruit the most talented managers to effectively control all the activities in their enterprise.

In summary, reform of SOEs was considered to be a significant influential factor on ETTT, giving SOEs the opportunity to enter into a market economy to seek higher benefits. Consequently, it is imperative that all aspects of SOEs, including the quality of their employees, must continuously improve to meet the difficult demands of the competitive markets.

5.3.3. Open access to the Vietnamese market

While the findings of previous studies show that training activities at an organizational level are positively motivated by the entry of imported technologies (Yamamoto, 2010) and competition from international joint ventures (Nguyen & Truong, 2007), the interview data analysis provided additional clarification.

The interview data from eleven interviewees (92%) confirmed that open access to the Vietnamese market was an opportunity to enhance the flow of technology from abroad to the domestic market. It is easy for Vietnamese enterprises to access new imported technology. This movement may facilitate the acquisition of technological capability in their enterprises. This was explained by one of the managers as follows:

"...If my enterprise was using old equipment for production, we probably wouldn't provide technical training for the employees because I think it is not necessary and it is costly... even after finishing their training, if the trained employees do not have an opportunity to apply and transfer these skills on the job, either they may forget what they have learned or they may want to move to other enterprises to gain a higher salary... So, it would be a stupid training plan". (2M)

In the current context of economic integration, enterprises need to renew their technology to improve their competitiveness. With the door now open to the Vietnamese market, many modern technologies have been imported into the country, so enterprises find it easy to access new technology.

In addition, according to the SOE managers, there is a strong link between using new imported technologies and improving the technical skills of the employees. When machinery is imported into their enterprises, the equipment manufacturer may also deliver valuable technical assistance.

"I think when the enterprise is buying a new imported machine for our manufacturing operation, we will consider carefully. We understand that our employees will not know how to operate it properly... so we will find a technological provider who is willing to add valuable technical assistance. This assistance may be to train our employees in the necessary technical skills to help them use the new imported machine properly". (8M)

However, when asked the question, "What assistance do you seek from technical assistance partners", many participants reported that their enterprises had not received much technical assistance at all. This may have a negative impact on productivity. According to some managers, technical assistance partners often only provide training or advice on the basic skills that are needed to operate the new technology. Other skills such as machinery maintenance and small repairs are not provided. Thus, when there are some small problems with the new technology, the employees are not able to fix the equipment. Hence, production must be halted until the machinery is repaired. A manager gave the following example:

"After our enterprise had purchased new technology, the employees received technical assistance from the vendor in relation to using this technology, but when this technology developed problems, our employees could not fix these problems. It is very costly to hire external experts or return the equipment to the vendor for repairs". (2M)

Consequently, for TTT to occur in the workplace there is a need for highly skilled employees who can use advanced technology as well as fix some basic faults in high-tech equipment. A manager noted:

"A good approach to high technology is only possible when our enterprise has highly skilled employees who are able to operate modern equipment imported from abroad; we need to train some engineers to be able to repair basic faults in the equipment". (11M)

In addition, when the managers and training directors were asked to discuss "significant use of imported high technology in Vietnamese firms", they identified that this has led to products being very competitive. Participants reported that with open access to the Vietnamese market, many high technologies from developed countries had been sold in Vietnam. Vietnamese enterprises with the capability to use imported high technologies in manufacturing want to create new products to enhance their competitive advantage against both domestic and imported products.

According to the respondents, they have faced several challenges such as how to maintain an advantage in a competitive market when they have low skilled workers. In the past, the domestic market was small and the industry was dominated by certain SOEs. Domestic competition was basically nurtured by the licensing of investment, price controls, output quotas and other interventions that benefited some SOEs over others (Malesky et al., 1998). There was no competition from abroad because it was very difficult for foreign companies to access the Vietnamese market. However, after introducing the "Doi moi" policy, Vietnam encouraged inward foreign investment and therefore the inflow of FDI has increased significantly. According to the participants, this strongly impacts the competitiveness of the domestic enterprises, including private companies and SOEs. 1M recognized:

"We often lost market share by the arrival of international companies". As an explanation for this, he says "professional skills of these companies are better and their technologies are more modern ... so their competitive advantage is higher".

His opinion is not surprising because the vocational skills and the professional capacity of Vietnamese employees are still very low compared to other ASEAN labor markets (Schwab et al., 2011).

While the costs of SOE products are high, the quality of products is often low. 5M said:

"Our products have been produced by old machines and low skilled employees that add extra costs, so it is very difficult to compete with products from other companies". In order to overcome this difficulty, he continues: "it is necessary to require our enterprise to effectively develop technical training activities for the employees".

The respondents gave some examples to confirm that more ETTT would enhance the market competitiveness of their enterprise in terms of price, quality and innovation of their products and services. According to them, in a competitive market, the quality of products must meet international standards. This depends on the skill level of workers who need to be able to expertly operate modern technologies. Thus, when TTT is effectively conducted, the technical skill level of trainees is improved and their productivity is increased, making the product more competitive. For instance, a manager (3M) said:

"With highly skilled employees, their productivity will be higher, so they can save working time as well as the manufacturing and maintenance costs of the enterprise such as electricity, water and administration costs. This means that

the costs of making a product are reduced and the price of the product is also reduced".

Although the findings of a previous study by Hakkala and Kokko (2007) stated that SOEs had not been significantly impacted by the presence of foreign companies in their industry, an examination of this interview data shows this is no longer the case. According to SOE managers, their products are facing strong competition from the products of foreign companies. Thus, SOE managers need to understand that they need to significantly improve both equipment and employee technical skill levels to be able to create better products and compete with imported goods. As one participant (10M) pointed out:

"We need to have financial support to improve technology and develop the skill level of the employees".

If some enterprises import technology, this may motivate other SOEs to do the same to enhance their competitive advantage. However, the amount of capital that SOEs will spend on high technologies will be decided by the state, not by SOE managers. Thus, it is not easy to make a decision to update the technology of SOEs. They felt that they had to focus on developing the skills of their employees to create better products. As a manager (7M) remarked:

"We want to have high technologies for production. However, our financial ability for technology modernisation is limited by the state budget plan... so, we confirm that developing highly skilled employees is always the best way to improve our products and remained competitive in the market".

Additionally, in order to gain the best advantage from imported technologies, it is necessary to have highly technically skilled employees. Consequently, technical training in enterprises which have imported technology is necessary to improve the technical skills of their employees (Wei, 1995). Furthermore, many of the skilled applicants want look for jobs with the higher salaries in technologically advanced enterprises rather than being willing to work in enterprises who are inviting them (Pathak et al., 2012). As a result, competition in labor would also be increased. This is illustrated by a quote from a SOE training director:

"It is very difficult to recruit the best students although we were contacted by their schools when their graduation was forthcoming. Most of them would like to work in enterprises using high technology, especially technologically advanced multinational companies. Because we cannot give them the high salary that they want, these technologically advanced enterprises are attracting them". (12F)

In summary, the above aspects that are relevant to the impact of open access to Vietnamese market were raised by the respondents. In particular, their discussion focused on the significant influence of the use of imported high technology by Vietnamese enterprises and the increasing number of international joint ventures in the Vietnamese market. Thus, it is important to recognize that open access to the Vietnamese market is strongly related to ETTT on Vietnamese SOEs.

5.3.4. Development of the export market

Eight of twelve interviewees (67%) referred to the development of the export market as having an impact on TTT at the workplace. The other four participants, (three managers and a training director) did not provide comments on this aspect because their products were not exported overseas.

According to these respondents, there is a positive relationship between an enterprise's export participation and investment in TTT for employees. Firstly, the managers believe that the export market may bring higher profits compared to the benefits gained from the domestic market. Creating products that are appealing to other countries will be more beneficial than producing products by employees with no technical skills and thatare only purchased by low income people. Managers want to make high quality products and they want to have foreign customers. This motivated SOEs to improve their products to meet the needs of foreign markets. A manager reported: *"I know that in a global market, our products can be negotiated with higher value and I sense...that is very valuable*". (10 M)

While the need to increase the level of employee skill becomes more critical with every passing day, the advantage gained from securing foreign projects is far greater. This point was further clarified by the managers who acknowledged that external investment projects provide both high technology and funding resources that may help their enterprise to expand their business activities.

Furthermore, when the export market develops, enterprises which export their products gain valuable experience that will help them to better understand what the export market needs and which products will be wanted in the near future. As a result, the enterprise will be able to accurately predict if their products will be suitable to a future export market. They will then know what the enterprise has to do, including technological changes and the improvement of employee skill levels.

According to the responses, exporters that have focused on their employee training investment have higher future productivity than enterprises that are only waiting for designs and materials given from customers. The prefabrication will influence its growth opportunities by not creating an applicable export platform. This is illustrated by 1M's experience:

"In the past, our exports were only based on prefabrication from foreign customers such as designs and materials... and we thought it is ok. We did not focus on the development of technology and employee skill level... but the next time one of our foreign customers required a new, specially ordered product our employees' technical skills were not able to create these new products. So we lost this customer".

Similarly, a manager of another enterprise (3M) was worried about his enterprise's future productivity. He said that if the products produced by his enterprise were not improved and did not meet the requirements of the marketplace, their enterprise would not be able to sell them and they would be unable to compete in the export market. Therefore, in order to exist and develop in a competitive export market, managers defined the development of highly skilled employees as the key to creating high quality products that will interest a foreign investor in their enterprise.

The interviewees believed it is necessary to have a sense of initiative in relation to the improvement of their products. This occurs when enterprises invest substantial amounts in developing the technical skill levels of their employees. Expenditure on employee technical skill training will facilitate an enterprise's ability to compete in the export market. The following quotes exemplify these consistent approaches towards the importance of employee training activities in the context of exporting enterprises.

"I think that in the context of the development of the export market, export opportunities are always available with quality products. Thus, when an enterprise significantly invests in new technical skill training for employees TTT is effective and trained employees may take on export market-oriented responsibilities, including the establishment of an export marketing plan". (10M)

"When trained employees create high quality products, the enterprise will be confident to introduce their products to the export market". (6M)

In conclusion, the above findings provide a more detailed understanding of the relationship between the external economic environment and ETTT. The data analysis clearly shows that four key economic factors (1. Vietnam joining the WTO; 2. Vietnamese SOE reform; 3. Open access to the Vietnamese market; 4. The development of the export market) significantly impacted TTT activities in Vietnamese SOEs. Further analysis showed that national educational system characteristics also significantly impact ETTT at the enterprise level. This finding is explained in the following section.

5.4. Impact of educational characteristics on transfer of technical training

This section is the second of three qualitative results sections and pertains to the impact of national educational environment characteristics on ETTT in Vietnamese SOEs. The respondents were firstly asked to comment on the relevant educational factors that have an impact on TTT in their enterprises. This was also explored later in the interview with the use of prompts.

Interestingly, when the participants were asked an open question such as "How do the national educational characteristics impact on TTT in your firm?", the majority of responses referred to, at least once, the prompts in the interview. As a result, three educational factors, namely the quality of institutional training, the quality of technical teaching staff and the quality of student technical training were noted as having the most influence on ETTT. Figure 5.2 shows the categorisation of three educational factors that impacted on TTT in Vietnamese SOEs and the number of responses relating to these factors. The following sections explain how two of these educational factors influence TTT in Vietnamese SOEs.



Figure 5.2: Educational characteristic factors impacting on transfer of technical training

5.4.1. Quality of institutional training in Vietnam

According to all twelve interviewees, the quality of existing vocational training institutions in Vietnam is below the actual requirements of enterprises. This has impacted further on the development of TTT at the organizational level and overcoming these problems is critical.

Analysis of the in-depth interviews with managers and training directors in the eight SOEs revealed three aspects of institutional training quality that has led to a chronic mismatch between the supply of institutional training and the demand of enterprises. These aspects include the structure of the vocational training system, the shortage of practical experience and skills of the graduates and the limited collaboration between training institutions and enterprises. Responses on these issues are explained in the following paragraphs.

Firstly, the structure of the vocational training system is often segmented according to the economic sector. Vocational schools do not have a common aim of enhancing students' technical skills to meet the needs of the labor market. Thus, according to the respondents, in several crucial areas such as automation, and mine industries, vocational training was not provided. This results in a limitation in the provision of some specific technical skills. As a manager (3M) shared:

"One year ago, when our enterprise needed some mining workmen, we visited many vocational institutions to ask for some, but they were unable to provide any. Some of these institutions did not plan to provide training in this skill while the rest only trained a small number of people in this skill according to

the government's distributive plan... so we have to employ non-skilled people and train them ourselves".

Respondents also further argued that while the government and schools did not make it a priority to encourage youth to enrol in training in mining skills, many people have been interested in other safe skill training, such as garment skills. Young people believe that these skills are easy to learn and lead to a job with safe conditions. This may result in a shortage of technically skilled labor in various sectors, such as mining, milling, metallurgy and metal cutting. This was summarised by one participant:

"I think that schools which provide specific technical skill training in hazardous environments have not been given much support from the government to encourage youth to enrol... so there is an insufficient supply of specifically technically skilled labor from national vocational institutions". (9F)

Secondly, according to managers and training directors, there was a lack of graduates with practical experience from education institutions. One reason for this may be that the curriculum in the Vietnamese educational system is not driven by practical training demands from industry. Thus, the students may have a good understanding of the theory, but their ability to apply learned knowledge to the job situation is limited. Consequently, after leaving school and going to the workplace, many graduates do not know how to apply the skills that they have learned to their job. A manager (2M) gave an example:

"Last year, 6 mine technical graduates applied for a position in our enterprise. After receiving a good result based on their knowledge of theory, their practical skills were tested... and unfortunately, none of these people knew how to operate our modern auger".

Although some institutions have currently started to focus on practical skill training, the educational technical equipment that is used to teach students is out of date compared to the modern high technology in enterprises. Thus, after graduating from vocational school, many students are unable to use technologically advanced machines in the workplace.

Neglecting to update advanced educational equipment clearly limits the ability of students to use high-tech machines. As a result, graduates from vocational institutions may fail to meet the demands of enterprises because they cannot operate modern machinery in the workplace. Thus, according to SOE managers, many technical graduates have to be retrained in certain skills before being assigned to the job and becoming productive.

The final issue concerning the quality of institutional training raised by respondents is the limited collaboration between institutions and enterprises. When asked whether enterprises contribute to educational institutions, such as by providing funds, by providing equipment, by having managers serve on educational advisory boards or by signing cooperative research agreements with local universities, most of the participants replied that this support was very limited. The respondents argued that while enterprises have some resources that can support training in vocational institutions and enterprises are willing to provide these to the vocational training institutions, they had not received any requests for help from training institutions. The vocational institutions are only moderately interested in collaborating with enterprises. For example:

"We have some modern specialized machines that schools do not have for practical teaching and we are willing to welcome students so that they can practice in the workplace. However, no school has asked for this". (5M)

"Sometime when we needed to recruit some skilled employees, we visited vocational schools to seek excellent students and offer scholarships to them. However, this is an initiative from us. The vocational institutions never asked for this". (6M)

SOE managers suggested that training institutions should organize meetings and workshops with enterprise managers so that they can gain a better understanding of the labor demand. This helps institutions to build an effective training strategy. When the quality of the training provided by institutions is improved, it is likely that graduates will be able to meet the needs of enterprises and therefore TTT in the workplace is also improved.

5.4.2. Quality of technical teaching staff

The managers and training directors considered technical teachers as playing an important role in the development of the technical knowledge and skill of the future labor force. However, according to these respondents, the poor quality of technical teaching staff in Vietnamese vocational institutions was also a significant problem that negatively impacts on their technical training activities. The analysis from the interview data raised two problems that may cause this situation - inadequately trained teachers and technical teachers not keeping up with technological changes. A clarification of these two aspects is given as follows.

The interviewees described the technical teaching staff as highly skilled. Staff were employed because of their past teaching performance and qualifications, but they were not required to have industry experience. Many technical schools also employed graduates who had very recently received their teaching degree so they have not yet gained teaching experience. This results in a lack of experienced teachers and may result in poor quality in the Vietnamese vocational training system. A large number of vocational teachers may understand the theory but may not have practical skills. This is illustrated by a quotation from a manager of an SOE (3M):

"I think that before conducting any duties as a vocational trainer, teachers of technical subjects have to be both experienced teachers and highly skilled workers. However, I read many teacher recruitment advertisements for teaching positions in technical schools and I recognized that industry experience was not a requirement".

In addition, the interviewees stated that with the rapid development of science and technology, technical trainers needed to keep up with these technological changes to train their students. However, this seems to be neglected by technical training staff. The training directors in SOEs felt that from what they had seen, technical teachers were not keeping up to date with the rapid advances in technology in order to equip their students with the most recent training and skills. Thus, many technical trainers who are hired from vocational schools to train SOE employees in new technical skills do not satisfy the firm's requirements.

The respondents gave several reasons to account for why technical teachers are not keeping up to date with recent advances. According to the respondents, in order to increase the school income, many institutions increased enrolments, while the number of teachers was reduced. Teachers' wages were based on the time they spent teaching, so this motivated them to teach more. As a result, teachers had little time for updating their skills. This was reported by a manager (7M) as follows:

"Some my friends are technical teaching staff in state institutions and are also guest teachers in some private vocational schools. Their teaching is provided in three shifts per day, even teaching in the evening... So, I don't know what time they can spend in research?"

Moreover, the managers and training directors also claimed that in the Vietnamese educational system, the content of the courses in tertiary institutions was often required to be in accordance with the curriculum framework provided by the Ministry of Education and Training. Teachers are responsible for the delivery of courses, according to these requirements. Hence, schools were not encouraged to develop new content. Thus, if teachers wanted to present new training materials, they may face many problems in their schools.

Consequently, technical teachers had no incentive to develop their knowledge and skills. According to the interviewees, the monetary incentive to undertake training activities in their enterprises was insufficient, so employees had to seek self-development through vocational institutions. Therefore, if the quality of both institutional training and technical teachers is not improved, it will be very difficult for Vietnamese enterprises to have sufficient technical skilled labor in the near future.

5.4.3. Quality of student technical training

The interview data revealed that eight of the interviewees (67%) stated that the quality of student technical training was a key factor influencing ETTT in their enterprise (see Figure 5.3). According to these interviewees, current technical students are low in both quality and quantity, making it difficult to meet the labor needs of enterprises, while SOE's financial capacity to provide training for their employees is also limited. This negatively impacts the effectiveness of TTT in SOEs.

The respondents provided many reasons to account for the low enrolment of technical students. Firstly, they believe that the majority of Vietnamese families feel that manual work is harder and is worth less than other work. Many parents want their children to gain employment in administrative occupations (Kieu & Chau, 2000). Students prefer to enrol in universities, therefore vocational student numbers were low. As many students are not able to pass a university entry test, they have to accept entry to a vocational school. However, this choice is only provisional. After attaining their vocational degree, the graduates may still seek a transition opportunity to a university. As a result, technically skilled graduates may be inclined to avoid doing technical job seven though technically skilled workers are in short supply. This was illustrated by an example given by a manager (6M):

"In fact, in our enterprises, many technical vocational degree employees did not give a concerted effort to improving their technical skill level, rather they spent their free time in the evenings studying non-technical subjects in universities... I think they still wish to get a university degree to change their working position". Additionally, as reported in Section 5.4.1, very few students enrol in specific technical subjects that will train them in technical skills in relation to hazardous and unsafe conditions such as off-shore mining and the petrochemical industry. While technical skills in hazardous industries are more difficult to learn, neither vocational institutions nor the government give any incentives, such as a remission of fees or guaranteeing a future career path, to encourage students to enrol in these subjects. As a result, students preferred to enrol in safe technical subjects. Therefore, there was a lack of professional technical labor to meet the needs of specific industries.

Another issue regarding the poor quality of technical students discussed by several participants was in relation to ETTT in their enterprises. As previously mentioned, due to shortages of practical experience and modern equipment in vocational institutions, the technical skill level of many graduates failed to meet the requirements of enterprises. Thus, before being given a technical task in the workplace, most graduates needed further training. However, based on their experience in evaluating the effectiveness of a training program by examining the performance of an employee, managers indicated that in some cases, the productivity of employees with a university degree was lower than that of employees without a degree. An explanation of this situation was given by a training director (9M) as follows:

"An employee with a degree has a deep understanding of old knowledge and skills learned at the institution. Thus, when employees are trained in new skills in the workplace, non-degree employees are willing to learn these new skills while graduates may be confused between old and new knowledge".

If an enterprise wants to attain ETTT, they prefer to hire people who have not yet had training in the relevant skill and to provide this training themselves. Also, according to the interviewees, graduates with poor skills have to be trained in a similar way to non-graduate employees however, the rate of pay for graduates is much higher.

Therefore, if the quality of student training in vocational institutions is low and does not meet the needs of the labor market, this training is a waste of time and resources and may significantly impact on the process of HR development at the organizational level. Many graduates are unemployable as they do not have the skills required by enterprises (both private and state enterprises).

In conclusion, the findings from this interview data indicate that the national educational system significantly impactsETTTin Vietnamese SOEs. This impact is due to problems with the quality of institutional training, technical teaching staff and student technical

training. Thus, in order to help enterprises effectively developTTT, it is necessary to improve the quality of thenational educational system. To be internationally competitive, strong national educational reform is needed to improve the quality of labor for enterprises in Vietnam.

5.5. Impact of the legal and regulatory environment on transfer of technical training

This section details the results of the final of the three qualitative sections and relates to the impact of the national legal and regulatory environment on ETTT in Vietnamese SOEs.In the interviews relating to the exploration of the influence of the legal and regulatory environment, the respondents were firstly asked to comment on the relevant factors that have an impact on TTTin their enterprises. This was explored again later in the interview with the use of prompts. This interview data provided a better understanding of what factors associated with the national legal and regulatory environment influenced the process of TTT in their enterprise.

When asked the open question "How do the national legal and regulatory characteristics impact the TTT in your firm", the majority of responses were in relation to at least one theme that was prompted in the interview. As a result, three key factors, namelytraining policies, foreign investment policies and technological policies were indicated as having the most influence on ETTT. Figure 5.3 shows the categorisation of these three factors that impacted on TTT in Vietnamese SOEs and the number of responses relating to these factors.




5.1. National training policies

According to the interviewees, since the quality of the technical graduates from vocational institutions often fails to meet the needs of enterprises, it is necessary to conduct training in the workplace to gain skilled labor. Four SOE managers (50%) reported that their enterprises had established a vocational training centre to provide their skilled labor. Moreover, the participants also claimed that theory and basic technical skills may be better taught in vocational institutions, but advanced technical skills were more efficiently taught in the workplace. The managers and training directors of the SOEs believe that:

"From the actual labor needs for our business strategy as well as a real understanding of the competitive economic market, we know exactly what skills are needed and how to effectively train our employees". (5M)

However, when asked about the situation of technical trainers in their firm, the interviewees recognized that while industry demands for training are increasing, trainers still lack the professional competence to run highly technical training programs. When asked to give a reason for this, the respondents argued that highly skilled trainers require a higher salary but the salary scales of SOEs are based on the governmental salary system, which is often lower compared to private enterprises. Thus, their enterprise could not hire enough highly skilled trainers; sometimes they had to hire consultants to teach specific technical classes because they could not pay a competitive salary to employ them as permanent teaching staff.

Furthermore, the respondents also stated that although the national government gave a high priority to training, SOEs still face difficulties in the development of training activities. According to these SOE managers, the government gives a low priority to vocational training in enterprises. Grants from the national government, such as a remission of fees and scholarships, were only provided to students who studied in public vocational institutions. The Vietnamese government provides financial support to poor students but only if they are enrolled in a government vocational institution. Students in vocational centres that are run by enterprises cannot receive financial support from the government. This was illustrated in the following example given by one of the managers:

"In fact, students in vocational institutes that are directly under the Ministry of Educational and Training have a remission of fees from the government. However, poor students who are trained in our vocational centres do not receive this support". (10M)

All the interviewed managers and training directors acknowledged that being able to receive a grant from the government was one of the strongest influences on a student's decision to enrol in a government school. Training director (12F) said:

"Compared to public vocational institutions, a vocational centrals run by an enterprise has better facilities, materials, equipment and practical training programmes. However, a lot of youth do not want to study with us. In order to know why our vocational centre always had low enrolments, we conducted a survey of high school students and many stated that the most important aspects when selecting where to study are the fees and the opportunity to receive a government grant".

Thus, in order to encourage students to enrol in vocational centres run by enterprises and to help the enterprises conduct ETTT in the workplace, the government should give equal priority to both public vocational institutions and enterprise vocational schools. This means that opportunities such as financial support and scholarships must be offered to excellent students in vocational schools run by enterprises.

When discussing government training scholarships being given to enterprises, all the interviewees commented that the national government sponsored several projects to train scientific and technical staff overseas with the state budget. Through these programs, many talented technical staff and teachers have studied abroad which may provide more advanced knowledge and skills. According to the interviewees, these programs have a significant impact on improving the quality of Vietnamese labor. When the quality of these foreign-trained teachers and technical staff improved, their teaching was more effective and the quality of the students increased. 8M said:

"For example, one engineer in our enterprise received technical training in Germany supported by a scholarship from the national government. After finishing the course, he came back to the enterprise and took on the role of a technical teacher, providing training to other employees. This has helped our workers gain access to western technical skills".

However, the interviewees reported that scholarship programs mainly focus on teachers in universities and technical staff in ministry offices. Few government training scholarships are given to employees of SOEs. Moreover, these scholarships focus on training for technical engineers rather than workers. Thus, the interviewed managers suggested that the national government should provide more scholarships to SOEs to help their experts develop advanced technical skill levels by benefitting from the experience of developed countries with world-class training and education system.

5.5.2. National technological policies

When asked about the impact of technological policies on enterprise TTT, 83% of the responses (10 out of 12) provided evidence to demonstrate how these national technological policies significantly influence training activities at the organizational level. Responses from the participants are discussed in the following passages.

According to the participants, the state has numerous policies and financial mechanisms to encourage enterprises to invest in research and development as well as technological modernisation in production. However, most of the interviewed SOEs stated that they were the ones in their enterprise to purchase new technology and according to them, there are risks when investing in the technology market. For example, 2M said:

"Firstly, the enterprise may lack good inventors or if they have acquired some new equipment or technology, they may not have sufficient capacity to successfully utilize the equipment. Furthermore, many other complex procedures such as the registration of property rights, quality standards, provision of specific product services (e.g., instruction, maintenance, repairs and so on) are very costly". (2M)

The policies of the government have resulted in SOEs mainly focusing on adopting advanced technologies and creating better quality products that are able to compete in both the domestic and international markets. In order to master new technology, it is necessary for enterprises to address several factors such as the appropriate technical skills of workers, effort and investment (Westphal, 2002). A training director (10M) gave an example:

"Clearly, if you purchase new technology, you need to understand it and know how to operate it... so you have to learn the necessary technical skills to master this technology".

However, the interviewed managers reported that the implementation process of the national technological policies was ineffective and several support policies were delayed or not applied. The amount of investment did not match the level of technology, therefore the acquisition of advanced technologies in SOEs was still limited. Consequently,

technological modernisation had not occurred to a significant level. This was illustrated by an example given by a SOE manager (8M):

"In fact, when our enterprise needs to purchase equipment and machines, we also look at the foreign technological market. However, the state budget support for technological modernisation investment is low so it is not possible to buy this advanced equipment. Thus, we are only able to buy old technologies".

The managers also stated that when enterprises had no modern technology, there was no reason to train their employees in advanced skills as their employees would have no opportunity to apply their newly acquired skill. They would probably forget this new skill or find other companies where this skill could be utilized. Thus, the cost of training was a waste of the enterprise's money. (4M)

In addition, the managers and training directors stated that the effectiveness of using new technology has been not matched by an accompanying significant investment from the government in the technical skill levels of SOE employees. As discussed in the previous section, the government gives a low priority to training support at the enterprise level, but technological modernisation is expected to be a continuous process in order to develop new technical skills (Westphal, 2002). Investment in technology modernisation in SOEs was provided, but investment in technical skill training for the employees was not sufficient to cover the costs of necessary training. As a result, the technical skill levels of the employees were too low to effectively utilize high-tech equipment.

When asked about the kinds of internal technical training provided by their enterprises, the interviewees reported that it mainly focused on basic technical skills for new employees (both new graduates and non-degree staff). Moreover, if new technology was purchased, the technical skills needed to operate the technology were also taught. However, according to the interviewees, in order to effectively use new technology, skills not only related to the operation of the equipment need to be taught, but also skills related to the maintenance and adaptation of equipment. As the training costs of SOEs cannot exceed the state norm, it does not cover the cost associated with the training required to impart all the necessary technical skills. Consequently, as Vietnamese SOEs have staff with limited technological skills, they are not able to effectively utilize the new technology. Therefore, one interviewee suggested that:

"I think that even given technology and encouragement, there will be little change to performance if there are few incentives to run skills training. Thus, government policies should be established to encourage enterprises to acquire technology and run skills training to help improve performance". (1M)

5.5.3. Foreign investment policies

This final section on legal environment influences details responses in relation to the FDI policies that impact TTT. Fifty-eight percent of the respondents considered FDI policies to have a significant influence on their enterprise's TTT activities (see Figure 5.3). The interviewees reported that FDI policies encouraged foreign investors to invest in Vietnam. In appropriate conditions, FDI results in the movement of capital and bringing advanced technology and higher technical skills into the country. As local enterprises do not have the necessary capital to purchase advanced technologies and improve their employees' technical skill levels, cooperation with foreign investors is an effective way to improve the enterprise's performance which will result in higher benefits for both local enterprises and foreign investors.

"Clearly, the national investment policies of Vietnam have been revised to attract foreign investors, so FDI inflows to Viet Nam are increasing. I think this context is a great opportunity for local enterprises to collaborate with these investors to increase their capital capacity and expand their business operations... and of course, when business strategies and capital resources are increased, technological equipment and the technical skills of employees have to be improved to meet the aims of these strategies".

However, as mentioned in Section 5.3.2, the interviewed managers and training directors noted that the state's program of SOE equitization, which allowed non-strategic SOEs to transform into joint-stock companies, had been poorly implemented. Thus, many SOEs said their enterprises have not been equitized and they were not allowed to seek foreign investors.

On the other hand, as detailed in section 5.3.3, the interviewees recognized that foreign affiliates create competitiveness in the labor market. They can often attract skilled technical workers with higher salaries and advanced technology. Thus, skilled technical labor (both graduates and employees) usually prefer to work for a foreign-owned company and SOEs have less opportunity to employ talented graduates. This was described in an example given by F12 (see Section 5.3.3). Since there is a shortage of qualifications and skills in the labor market for production, SOEs have to employ lower

skilled labor or even non-skilled employees and train them to improve their skill levels. As one manager (5M) said:

"With the increase in the number of foreign companies in Vietnam, we know that it is difficult to recruit high skilled employees, so we are forced to hire less skilled people and train them in the basic skills".

The interviewees also noted that there had been an increase in foreign companies with advanced technology in the Vietnamese market, which had significantly increased product competition. SOE products not only have to compete with the products of local enterprises, but also with foreign companies. Thus, SOE managers and training directors understood that if their products were not made using advanced technology and high technical skills, it was difficult for these products to compete with products from more advanced enterprises. This is a key reason to require SOEs to develop ETTT in the workplace. Additionally, foreign investors may bring technical skill sets and advanced technology into the Vietnamese market. This is an opportunity for local enterprises and SOEs to adopt and use these resources.

5.6. Chapter summary

This chapter examined the findings of the qualitative study of this thesis. It described three external factors, namely the economic environment, educational characteristics and legal environment which have an influence on the effectiveness of TTT activities. This chapter illustrated that while all the external factors prompted in the interview were examined and found to have a significant influence on the activities of TTT, an economic characteristic that was not on the list of economic prompts was revealed in the interview data. The additional economic characteristic identified was Vietnam joining the WTO. This confirms that the use of prompts was not the only way to gather respondent comments as interviewees added thoughtful, considered responses on factors that had an intrinsic effect on their enterprises.

The findings identified that the factors relating to SOE reform, namely the quality of technical institutional training and training policies were the most commonly cited influences on ETTT. This was followed by joining the WTO, open access to the Vietnamese market and technological polices. Finally, the less cited influences were the quality of technical teaching staff, the development of the export market, the quality of technical student training and foreign investment policies. The following chapter

discusses the key results from the quantitative data to identify the organizational factors which influence ETTT in Vietnamese SOEs.

Chapter 6

Quantitative Results: The Impact of the Organizational Environment on Transfer of Technical Training

6.1. Introduction

This chapter begins by reporting the pilot test results on the reliability and validity of the responses to identify the quality of the survey questionnaire, after which the results of the preliminary analysis are given. A general description of the respondents is provided using descriptive statistics to examine the demographic characteristics of Vietnamese employees. The differences in transfer of technical training (TTT) between the two groups of employees (those with a vocational degree, including vocational education and higher education and those without a vocational degree) are also investigated. As discussed in Chapter 3, many Vietnamese students after graduating from school do not meet enterprises' requirements due to their lack of practical skills. Enterprises spend time and money on skill training for employees who have either a vocational or a nonvocational qualification. Therefore, a better understanding of employees with a vocational qualification is an excellent way to appreciate the important role of technical training in Vietnamese SOEs. The next section reports the results of multivariate analysis to investigate the relationship between organizational environment factors and effective transfer of technical training (ETTT) in Vietnamese SOEs. Prior to using multiple regression analysis, exploratory factor analysis was used to identify the not-directly observable elements created by a set of observable variables (Norusis, 1999) and "the underlying dimensions or regularity in phenomena" (Zikmund et al., 2012: 585). The findings from the regression analysis provide evidence and an in-depth understanding of the influence of organizational environment factors (including individual characteristics, training design characteristics and work environment) on ETTT in Vietnamese SOEs.

6.2. Pilot test results

As discussed in Chapter 4, careful attention was paid to the length of questionnaire, the wording of the questions and the organization of the content during the development of the questionnaire. Pre-testing was undertaken to ensure that the survey questionnaire was suitable to collect data to answer RQ2 in this research. The pilot test helps to avoid

statistical bias and the survey questionnaire was pre-tested for validity and reliability using Cronbach's alpha.

The questionnaire draft was distributed to 30 employees who had been trained in a Vietnamese manufacturing SOE, but they did not participate in the main survey. All 30 survey questionnaires were completed and returned to the researcher for analysis. Every question in the questionnaires was answered and there were no problems relating to the wording of the questions or the ideas behind the questions that may cause confusion or misunderstandings. Thus, the pilot test confirmed the clarity of the wording of the questionnaire were also tested and this is discussed in detail in the following sections.

6.2.1. Reliability

Hair et al. (2010) noted that reliability reflects the consistency of the measurement instrument. The positive effect of reliability may be strongly linked to the objectivity of the study. Moreover, Neuman (2011: 190) gave an extensive description of reliability in a quantitative study as follows: "measurement reliability means that the numerical results produced by an indicator do not vary because characteristics of measurement process or measurement instrument itself". Thus, the main aim of establishing the reliability of a study is to ensure that a scale creates consistent statistical results and increases the quality of the survey.

Given the significant importance of reliability, the development of the survey instrument needs to be done carefully to ensure a high quality questionnaire is created. When questions are clear, they help respondents to fully comprehend the actual meaning of the questions. Thus, examining the reliability of the responses identifies whether all the questions in the questionnaire are clear and appropriate.

According to authors such as Neuman (2011) and Creswell (2014), lower reliability and high measurement error may occur when a single-item measurement scale is used to assess a construct. In addition, many constructs are too complex to be effectively measured using a single-item scale. As a result, a multi-item scale was employed to measure constructs in relation to the proposed conceptual framework in Study 2 (see Chapter 3).

In order to determine the reliability of a survey instrument, some statistical techniques are suggested, such as examining the values of Cronbach's coefficient alpha (Hair et al.,

2010) or calculating the correlation of two comparable forms of the scale(Neuman, 2011). However, one of the most popular statistical techniques for estimating the internal consistency among items of a survey questionnaire is to test the Cronbach's coefficient alpha value by using scale analysis (Sekaran & Bougie, 2009). The scale analysis technique in SPSS was used to calculate the alpha values in this study. Hair et al. (2010) suggested that the minimum value of the coefficient alpha of reliability should be more than 0.5 in exploratory research.

After the completed questionnaires were received, the reliability of the survey instrument in this study was calculated using Cronbach's alpha. All the main constructs, individual characteristics, training design, work environment and effectiveness of TTT were tested for Cronbach's alpha via empirical investigation. As a result, the scales for the main constructs were found to be reliable because the Cronbach's alpha values are greater than 0.7 (see Table 6.1). A reliability higher than 0.7 indicates satisfactory reliability for all the variables (Xiao, 1996). These results also indicate that the internal consistency among the items of the survey questionnaire is appropriate for examining the hypotheses in Study 2 (see Chapter 4).

Constructs of measures	Number of items	Cronbach's alpha
Determinant attributes of individual characteristics	21	0.817
Determinant attributes of training design	10	0.715
Determinant attributes of work environment	15	0.774
Determinant attributes of effectiveness of TTT	3	0.713

Table 6.1: Cronbach's alpha of the constructs in the pilot test

N = 30

6.2.2. Validity

Hair et al. (2010: 5) define validity as "the extent to which a measure or set of measures correctly represents the concept of study". While reliability is associated with the consistency of the measures, "validity is concerned with how well the concept is defined by the measures" (Hair et al. (2010: 5). Establishing the validity of the scores will assist in confirming whether an instrument is appropriate for a main survey (Creswell (2014).

As a result, in order to increase the validity of item content and avoid misunderstandings in relation to the wording within this survey questionnaire, additional measures were conducted by analysing the collected data from the pilot test.

Neuman (2011) suggested that the validity of the scale indicates that all the items in the questionnaire assess the same concepts in a specific dimension. The validity of the scale was confirmed by testing the goodness of all items that were used to measure each dimension in the quantitative research model. According to Creswell (2014), there are three main kinds of validity: content validity, concurrent or predictive validity and construct validity. Content validity refers to whether the items assess the subject content. The chosen items should be identified through a review of the relevant literature or by interviewing expert scholars to obtain their feedback in refining the survey instrument (Creswell, 2014; Neuman, 2011). In this study, the items used in the survey questionnaire were adopted from previous studies and the content validity was obtained by checking with four professionals who observed the appropriateness of the survey instrument (as mentioned in Chapter 4).

Concurrent or predictive validity (criterion validity) is the method to test how well scores predict a criterion and, as suggested by Zikmund et al. (2012), may be used when testing content validity. Construct validity is the ability of items to measure concepts or constructs derived from the theoretical foundation associated with the conceptual framework. Construct validity is primarily useful for researchers to guarantee the internal reliability of the survey instrument. According to Lu (2006), construct validity involves the examination of the proposed constructs that were measured using different items.

Although several techniques have been suggested to verify the validity of a survey instrument, correlation and exploratory factor analysis (EFA) are the most commonly used techniques to calculate construct validity(Hair et al., 2010). Hair et al. (2010) state that construct validity is evident if the scale correlates positively with a variety of other measures of the same construct. From this recommendation, in this study, the correlation amongst items was checked. Moreover, the internal consistency of the questionnaire instrument was tested using Pearson's correlation method to help the researcher know whether the items in the questionnaire measured the concepts in the main survey. As a result, most of the correlations amongst the indicators of each item were significant with p < 0.05 (see Appendix 9).In conclusion, from the above findings, the reliability and validity of the survey questionnaire was examined appropriately. Therefore, this survey questionnaire was appropriate for collecting data in the main survey.

6.2.3. Findings and discussion

Based on the findings of the pilot test, the survey questionnaire was deemed appropriate for collecting the data in this study. The survey instrument employed is a useful measure to assess the main constructs in the conceptual framework (Study 2) from the viewpoint of Vietnamese SOE employees. In Table 6.1, Cronbach's alpha on each construct is an acceptable score of reliability being higher than 0.5 (Hair et al., 2010). This includes individual characteristics, training design, work environment and ETTT. In addition, the construct validity of the survey instrument was also calculated using the correlations among the measurements of each proposed construct. All values were reported to be at a significant level (p < 0.05) and the correlations were higher than 0.5. From the above findings, the validity and reliability of this survey instrument was deemed appropriate. As a result, it was decided that the survey questionnaire would be used to collect and analyse the quantitative data to achieve the key aims of Study 2 in this thesis.

6.3. Main survey results

6.3.1. Data analysis procedure

As discussed in Chapter 4, this quantitative study employs a self-completed questionnaire that was administered to 200 Vietnamese SOEs employees who have been trained in the workplace, of which185 questionnaires were completed and returned. The findings from the self-completed questionnaires reported in this section provide a general picture of participant perceptions of the factors that influence the effectiveness of TTT.

Coding

The survey data was coded using SPSS software (version 21) for statistical analysis. According to Lavrakas (2008:102), "coding is the procedural function of assigning concise and specific values (either alpha or numeric) to data elements collected through surveys or other forms of research so that these data may be quickly and easily counted or otherwise processed and subjected to statistical analyses". After collecting the data, the first step in data analysis is to build a well-organized codebook. The code categories in the investigation instrument are described in this codebook. Therefore, this step is very important to produce high quality data for advanced analyses.

Missing data

One of the important elements to consider when examining the quality of a survey questionnaire is whether there is missing data. According to Tabachnick and Fidel (2013), missing data often appear in particular questions to which participants might be sensitive responding (e.g., financial information); perhaps they simply lack the necessary information to answer the question; or maybe the researcher did not phrase the question clearly (Creswell, 2014). If respondents are not able to understand the question, they will not be able to provide an answer. Missing data may cause errors in the data analysis (Tabachnick & Fidel, 2013). However, it may be acceptable if the rate of missing data is small (less than 5%) and there is no missing data in the key factors (Graham, 2009).

In light of the above, the issue of missing values in this study was checked after coding the data to make sure that the amount of missing data in each case was less than 5% and did not relate to the key factors. In this study, a total of 185 questionnaires were returned and there was only one questionnaire where an item was unanswered. This means that this data is acceptable because the rate of missing data in this survey questionnaire is very small.

The normality of the data

According to several scholars, in multivariate analysis, the most important assumption is normality which refers to the form of the distribution of the data for individual variables as well as its correspondence to a normal distribution (Burns, 2000; Hair et al., 2010; Tabachnick & Fidel, 2013). These scholars indicate that examining the normality of the data is very important for checking the quality of the data. According to Hair et al. (2010), empirical tests indicate the factors which deviate considerably from normality and the normal probability plot offers a visual description of the shape of the data distribution. Moreover, checking the normal distribution of the data may also assist researchers to choose the most suitable techniques of data analysis (Tabachnick & Fidel, 2013).

In order to measure the normality of the data, one technique is to test the value of the skewness of items of the survey questionnaire (Hair et al., 2010). Muthén and Kaplan (1985) recommended that the skewness statistic should range between -1.50 and +1.50 for a normal distribution. In light of this, the normality of the items of the key constructs was analysed in the present study. After checking the sample distribution using statistical

techniques of mean, standard deviation and the skewness using SPSS, a summary of the results is presented in Appendix 7.

The skewness values of the items ranged from -1.388 to +0.348. This means that the skewness scores were diminutive on each item (see Appendix 7), indicating that the distribution of the data was normal (the skewness falls between +/-1.5). Additionally, these results indicate that any material deviation in the normality of the data will not lead to significant distinctions in the analysis. As a result, this data is suitable for additional statistical analyses, including exploratory factor analysis with principal axis extraction and a rotation of the promax method and multiple regression analysis (Hair et al., 2010; Tabachnick & Fidel, 2013).

Statistical analysis techniques

Reliability analysis: As discussed in Section 6.2.1, reliability reflects consistency. If a measure provides consistent results, it is reliable. Thus, in the first step of the pre-test questionnaire, Cronbach's alpha was employed to test the internal consistency of the survey instrument, while the reliability of multiple measurements was calculated to examine the reliability of inter-item consistency and convergent validity (validity of all of the survey questionnaire measurements). A value higher than 0.6 for Cronbach's alpha is acceptable when estimating reliability.

Descriptive statistics: Descriptive statistics are used to describe demographic characteristics including age, gender, skill level, education, work experience, received training by frequency, as well as to analyse the organizational influences impacting the effectiveness of TOT in the participants' opinions through means and standard deviation.

Exploratory factor analysis (EFA) is a statistical technique which is conducted when new survey instruments are being explored, or a theoretical foundation associated with the study topic is lacking (Bryman & Cramer, 2012; Hair et al., 2010). Hair et al. (2010) suggested that this technique is useful to sum information from a large number of items in a small number of factors. Therefore, EFA was employed to explore the validity of the survey instrument in this study. Each name of the factors arose from the main themes amongst the elements of the dimensions. In order to demonstrate whether the distribution of the factors was acceptable for undertaking factor analysis, the Kaiser-Mayer-Olkin (KMO) measure was used to test each factor analysis before using EFA. If $0.5 \leq$ KMO values ≤ 1 , the factor analysis was considered acceptable (Bryman & Cramer, 2012; Hair et al., 2010).

EFA was conducted to measure the validity of each construct in relation to the convergent series. The absolute value of the factor loadings was reported at ≥ 0.45 as being significant (Hair et al., 2010). Therefore, EFA was conducted to examine the key factors that were contained in the constructs of individual characteristics, training design, work environment and effectiveness of TTT. This provided greater insights for investigating a series of multiple regression analyses.

Multiple regression analyses were performed to demonstrate the relationships amongst the main constructs to provide evidence for examining the influence of these key constructs in relation to the result variable in the research model. Multiple regression analysis is used for two main reasons. Firstly, this technique provides better insights into the complex interrelations amongst independent and dependent factors proposed in the conceptual framework. Secondly, the total relationships may be accepted after testing the regression analysis (Hair et al., 2010). According to Pallant (2013) and Hair et al. (2010), multiple regression analysis is a powerful statistical tool to determine whether the independent factors are able to explain the dependent factors. In particular, it calculates the extent to which the variation in the outcome variables may be predicted by the independent variables. Moreover, it also assigns values to each outcome variable. This technique offers researchers a positive opportunity to explore the strength and existence of planned relationships.

In order to verify the appropriateness of using multiple regression analysis, several statistical tests were conducted to investigate whether the regression assumptions were met. In the first step, an examination of multicollinearity was tested to indicate whether an independent factor was also correlated to other independent factors in a regression model (Hair et al., 2010). In order to avoid an incorrect interpretation of the findings generated from the multiple regression analysis, as well as possible misspecification of the regression model, possible biases that may arise from multicollinearity were checked before conducting regression analysis.

In this research, multicollinearity was examined by testing the correlation amongst the key variables in relation to the individual characteristics, training design, work environment and ETTT in the conceptual framework of this research. Pallant (2013) suggested that if the correlation coefficient was between 0.3 and 0.7, multicollinearity will not greatly influence the multiple regression findings.

In addition, in the multiple regression analysis, the values of the variance inflation factor (VIF) and tolerance were also examined for evidence of multicollinearity. Hair et al.

(2010:241) defined tolerance as "the amount of variability of the selected independent variable not explained by the other independent variables". This means that an independent factor is not impacted by other independent factors in the regression model. For example, if a tolerance value of an independent variable (X1) is 0.75 (meaning that VIF = $1.0 \div 0.75 = 1.33$), this means that 25% of X1 may be explained by other independent variables. Hair et al. (2010) suggested that when a maximum VIF value is 10 (as well as a maximum tolerance value is 1.0), there is no significant multicollinearity.

In light of this, the use of multiple regression analysis is appropriate and a valid means to predict the effects of independent variables on the outcome variable. Therefore, regression analysis is a suitable statistical technique to demonstrate the relationships proposed in the research conceptual framework. For this study, this technique may help to examine the influence of the predictors, namely individual characteristics, training design and work environment on effectiveness of TTT.

Furthermore, in order to measure the total fit of a model, the linear regression analysis shows the percentage of the variation of the outcome factor (ETTT) that arose from the organizational environment variables. As Hair et al. (2010) indicated, the coefficient of determination (R2) measures the percentage of variance of the outcome factor that may be explained by the independent factors. An investigation of R2 was computed to examine the important roles of the independent factors predicted in the conceptual framework. The value of R2 may identify both the significance and strength of the correlations amongst the independent factors and the dependent factor. As a result, the influences of individual characteristics, training design and work environment on ETTT were tested using linear regression analysis.

In order to assess the significance of regression analysis in this study, a t-test analysis was used. This analysis investigates whether the value of a regression coefficient was significantly different from zero. The level of significance was tested to investigate a significant linear relationship amongst the independent variables and the dependent variable in the linear regression model. A significance level of 0.05 was used in this research.

6.3.2. Reliability analysis

Employee responses to items in the questionnaire were checked for reliability using Cronbach's alpha which measures the internal consistency of responses and the correlation between one particular scale with other scales that aim to measure the same phenomenon (Hair et al., 2010). In the present study, the researcher conducted reliability analyses on all 21 items of individual characteristics, 10 items of training design, 15 items of work environment and 3 items of ETTT. The alpha for these scales was high, from 0.753 and 0.893 (see Table 6.2), which indicates that the scales were highly reliable. The researcher examined each of the items in turn to classify whether the Cronbach's alpha for the scales as a whole would be improved by the deletion of an item. There was no item that met the condition for deletion, thus all 49 items were maintained in the overall analysis.

Constructs of measures	Number of items	Cronbach's alpha
Determinant attributes of individual characteristics	21	0.893
Determinant attributes of training design	10	0.826
Determinant attributes of work environment	15	0.796
Determinant attributes of effectiveness of TTT	3	0.753

Table 6.2: Cronbach's alpha of the constructs in the main survey

N = 185

6.3.3. Demographic characteristics of respondents

A convenience sample of 200 SOE employees, who had completed, at minimum, a technical training program provided by their enterprise, was invited to participate in this study. A total of 185 useable questionnaires were collected. The response rate was high at 92.5%. In the first step, the profiles of the SOE employees were examined to give an enhanced understanding of the sample.

The socio-demographic outlines of the sample Vietnamese SOE trained employees are summarised in Table 6.3.From the total of 96 male respondents, over half had a non-vocational qualification and the rest had a vocational or higher educational degree. Of the 89 females, nearly half had a non-vocational qualification and the rest had a vocational or higher educational degree. The majority of the respondents (42.7%) were aged between 26 and 35 years, followed by the 18-25 year old group (37.3%), the 36-45 year old group (17.3%) and the 46-60 year old group (2.7%). Regarding their technical skill level, approximately 30% had a level 4 of proficiency, 26.5% were level 2, 21.1% were level 5 and 19.5% were level 2. Only 3% of respondents had a level 6 proficiency and no respondents had a level 7, which is the highest skill level. With regard to educational

attainment, 52% of the 185 respondents stated that they had a vocational degree or higher educational qualification, while 48.1% had a high school qualification.

The results also show that all employees had between 2 to 18 years of work experience in their current enterprises. The biggest group of respondents had 4 years of work experience in their current enterprises (21.1%), while the smallest group (0.5%) had 17 years of experience. Additionally, when the participants were asked when they had received their most recent training from their enterprises, over 82% indicated 2013 (the survey year).

The analysis also showed that approximately 30% of non-vocational degree employees belonged to the 18-25 age group, compared to only 8.1% of the vocational degree employees. Moreover, 14.6% of the non-vocational degree employees had 4 years of work experience in their current enterprise compared to only 6.5% of the vocational degree employees. Table 6.3 shows that 17.3% of vocational degree respondents did not receive any technical training that year compared to 0.5% of non-vocational degree employees. In conclusion, non-vocational degree and vocational degree Vietnamese SOE employees differed in many of their demographic characteristics, including age, technical skill level, educational attainment, work experience and most recent training date. About 52% indicated that they had a vocational degree or higher education, but the non-vocational degree employees tended to be younger and had a lower technical skill level compared to the vocational degree employees.

These findings were consistent with information published by UNIDO (2011), which indicated that the quality of education in Vietnam is very low and the practical skills of graduates remains low. Training was not matched strongly with organizational and practical needs (Vietnam General Statistics Office, 2011). Only 34% of enterprises are satisfied with the quality of vocational training (Schwab et al., 2011)and many vocational degree employees continue to receive skill training in the workplace(Nguyen & Truong, 2007). Additionally, according to the findings of the HR and Training Committee of the European Chamber of Commerce in Vietnam, over 65% of Vietnamese employees have no technical skills (Pham, 2011b). Therefore, these results suggest that the demographic characteristics of the sample for this research might be considered as representing the total population.

Demographic Characteristics	Non-vo qualifi	cational ication	onal Vocational qualification (Vocational and higher		Total %
Characteristics	(High s	school)	educati	education)	
	No.	%	No.	%	
Gender (n=185)					
Male	49	26.5	47	25.4	51.9
Female	40	21.6	49	26.5	48.1
Age (n=185)					
18-25	54	29.2	15	8.1	37.3
26-35	26	14.1	53	28.6	42.7
36-45	5	2.7	27	14.6	17.3
46-60	4	2.2	1	0.5	2.7
Skill Level (n=185)					
2	47	25.4	2	1.1	26.5
3	25	13.5	11	5.9	19.5
4	14	7.6	41	22.2	29.7
5	3	1.6	36	19.5	21.1
6	0		6	3.2	3.2
Education (n=185)					
Year 12	89	48.1	0	0	48.1
Vocational training	0	0	72	38.9	38.9
Higher education	0	0	24	13.0	13.0
Work Experience (n=185)					
2 years	0	0	4	2.2	2.2
3 years	11	5.9	12	6.5	12.4
4 years	27	14.6	12	6.5	21.1
5 years	19	10.3	9	4.9	15.1
6 years	5	2.7	1	0.5	3.2
7 years	5	2.7	6	3.2	5.9
8 years	3	1.6	9	4.9	6.5
9 years	2	1.1	8	4.3	5.4
10 years	5	2.7	10	5.4	8.1
11 years	3	1.6	5	2.7	4.3
12 years	4	2.2	5	2.7	4.9
13 years	3	1.6	7	3.8	5.4
14 years	2	1.1	1	0.5	1.6
15 years	0		2	1.1	1.1
17 years	0		1	0.5	0.5
18 years	0		4	2.2	2.2
Received Training (n=185)					
This year	88	47.6	64	34.6	82.2
Last year	1	0.5	32	17.3	17.8

Table 6.3: Demographic Profile of Respondents

Note: valid N= 185

6.3.4. Employee evaluation of the influence of the organizational environment on effective transfer of technical training

As discussed in the previous chapter, this study investigates Vietnamese SOE employees to determine whether organizational factors influence the effectiveness of TTT. In order

to construct a measure to evaluate employee beliefs on this, the questionnaire responses to 49 Likert statements were analysed. The mean value represents the degree of agreement ranging from 1 (strongly disagree) to 5 (strongly agree). While an average score of over 3.00 demonstrates a positive tendency, an average score of fewer than 3.00 represents a tendency towards a negative perception.

Employee evaluation of the statements relating to individual characteristics

To provide a better understanding of the extent of employee behavioural intentions and their perception of each individual characteristic, the mean values of the 21 statements relating particularly to individual characteristics were calculated (see Table 6.4). As shown in Table 6.3, of the 21 items in the individual characteristics dimension, the mean values fluctuate from 3.39 to 4.42. In particular, item 3 had the highest average rating (4.42). For this item, 172 employees (93%) strongly agreed/agreed that "I am looking forward to using the new training on the job", while 12 employees (6.5%) were undecided (see Figure 6.1). However, the item that had the lowest average rating was Item 10. One hundred and three employees (55.7%) strongly agreed or agreed that "I have received a promotion for accomplishing tasks in a more efficient way". In addition, the standard deviations for this dimension are in the interval of 0.514 and 1.114. This means that employees have quite different perceptions about this element.



Figure 6.1: Agreement level of respondents to individual characteristic items

	Items	Mean	SD
1	The training I have completed will help me do my current job better.	4.30	.514
2	I believe the training that I have received will help me to improve my professional competence.	4.35	.572
3	I am looking forward to using my new training on the job	4.42	.638
4	I feel very committed to apply what I have learned to my job	4.11	.744
5	The skills I learned in the training course will be useful in solving problems encountered on my job	4.23	.621
6	I will look for opportunities to use the skills that I have learned	4.14	.666
7	I have received a wage increase because I accomplished tasks more effectively using my new skills.	3.64	1.013
8	My supervisor has praised mefor using my trained technical skills.	3.77	.836
9	I have received a bonus because of improved performance using new skills.	3.48	1.114
10	I have received a promotion for accomplishing tasks in a more efficient way.	3.39	1.011
11	I still remember the key topics that were discussed in my training course.	4.06	.595
12	I easily understood contents that I have learned in the training course.	3.92	.714
13	I am now able to identify appropriate situations for the application of my new learned skills.	3.92	.616
14	I am able to identify ways to improve with practice and frequency of use.	3.89	.545
15	I am able to use my new skills in my work.	4.09	.555
16	I am able to apply skills acquired from my on-the-job training.	4.17	.610
17	I am confident in my ability to use my new skills in my work.	3.95	.665
18	I have used my new skills even in complex work situations.	3.89	.667
19	I have overcome obstacles to use my new skills on the job.	3.91	.611
20	I do well in activities where I have to remember lots of information	3.95	.662
21	I can accomplish my job better by using my new skills	4.16	.554

Table 6.4: Individual Characteristic Items - Descriptive Statistics

N = 185

Employee evaluation of the statements relating to the influence of training design

In this section, the average mean of the 10 items that formed the training design statements were computed, as shown in Table 6.5. The mean values of these items

fluctuate from 3.63 to 4.41. In particular, item 1 in this dimension had the highest average rating (4.41) and item 8 had the lowest average rating (3.66).

Based on Figure 6.2, it can be seen that 173 employees (93.5%) strongly agreed/agreed with item 1, "The training I received from my enterprise is relevant to my job". However, 11 employees (5.9%) were not sure and 1 employee disagreed with this statement. In contrast, for item 8, 41 respondents (22.2%) were "undecided" about the statement "After training, I am encouraged to participate in conversations with people about how to improve their job performance" and 20 strongly disagreed/disagreed (10.8%). 55.7% strongly agreed/agreed with the statement "I have received a promotion for accomplishing tasks in a more efficient way". The standard deviations of the 10 items in this dimension range from 0.625 to 0.805, which shows that the respondent opinions in this dimension are similar.

	Items	Mean	SD
1	My training is relevant to my job.	4.41	.629
2	The trainers gave me confidence to use my training.	3.99	.651
3	The trainers used exercises that helped me to apply my learning to my job.	4.15	.650
4	Additional sessions were offered to improve the effectiveness of the training.	3.77	.882
5	I am satisfied with the quality of the training content in my recent training course.	4.08	.625
6	I was satisfied with the quality of the trainers in my most recent training course.	4.02	.642
7	During my training, people shared tips that helped me to improve my job performance.	3.85	.667
8	After training, I am encouraged to participate in conversations with people about how to improve their job performance.	3.63	.805
9	I was required to submit a post-training report after attending the training program to evaluate my learning.	4.08	.726
10	I have received positive feedback regarding myperformance after training.	3.96	.736

Table 6.5: Training Design Items - Descriptive Statistics

N = 185



Figure 6.2: Agreement level of respondents to items relating to training design

Employees' evaluation of the statements relating to the influence of the work environment

Table 6.6 shows the average mean score of the 15 items that formed the work environment statements. Overall, the mean values of these items fluctuate from 2.62 to 4.25. Specifically, the first item had the highest average mean value of 4.25, while items 15, 12, 14 had the three lowest mean values at 2.62, 2.76 and 2.86, respectively.

Figure 6.3details the responses of the participants on the influence of the work environment. 166 respondents (89.8%) strongly agreed/agreed with the statement "The job requires me to use new skills" and 18 employees (9.7%) were undecided. The standard deviation of the 15 items in this work environment dimension range from 0.672 to 1.150, which means that the participants' opinions are very different.



Figure 6.3: Agreement level of respondents to work environmentitems

	Items	Mean	SD
1	My job requires me to use new skills.	4.25	.672
2	Appropriate equipment is available to apply my new skills on the job.	4.02	.703
3	My managers give meadequate time to practice my new skills on the job.	4.04	.747
4	After training, I have used new skills on the job frequently.	4.14	.736
5	I am allowed enough time off work to attend training.	4.04	.829
6	My supervisor asks me what I gained from the training I attend.	3.66	.882
7	My supervisor discusses ways to apply my trained skills to my job.	3.70	.796
8	My supervisor has provided assistance to resolve problems in applying my training.	3.89	.702
9	My supervisor has helped me set goals for using my new skills on the job.	3.20	.937
10	I was provided with the support (time, money, other resources) needed to consolidate my new skills.	3.86	.852
11	My supervisor often checks with me to see how my efforts to use my new skills are going.	3.97	.773
12	My peers have helped me to apply my new skills.	2.76	1.084
13	I have talked to members of my training class group to share ideas about using new skills on the job.	2.98	1.068
14	I have worked with other people to share ideas on using new skills on the job.	2.86	1.054
15	My peers have shared with me the benefits of applying new skills on the job.	2.62	1.150

Table 6.6:Work Environment Items - Descriptive Statistics

N = 185

Employee evaluation of statements relating to the effectiveness of transfer of technical training

Unlike the three previously discussed dimensions, the three items of the dimension relating to the effectiveness of TOT had an average value over 4.0 (see Table 6.7). As shown in Figure 6.4, the majority of participants agreed with all three items. This means it is necessary to employ this dimension as the dependent factor for study compared to the above independent factors. In this dimension, employees indicate that they agree that they work faster because of the training. Moreover, the standard deviations for the TOT

effectiveness dimension are in the interval of 0.576 and 0.617, meaning that the employees hold similar views in relation to this factor.

	Items	Mean	SD
1	I have effectively incorporated my new skills into my daily tasks.	4.01	.576
2	My job performance has improved because of my new skills.	4.19	.585
3	I am now able to work faster because of my training.	4.24	.617

 Table 6.7: Training Transfer effectiveness Items - Descriptive Statistics

N = 185



Figure 6.4: Agreement level of respondents regarding training transfer effectiveness items

6.4. Multivariate analysis

In order to achieve the research aims of this thesis, a conceptual frameworkwas developed (see Section 3.5). Hair et al. (2010) state that multiple regression analysis is a way to ascertain the influence of each independent variable on the dependent variable. Prior to using multiple regression analysis, exploratory factor analysis (EFA) is frequently used to calculate the complex interrelations amongst factors (Hair et al., 2010). This approach gives a foundation for subsequent statistical analysis. Through EFA, a large number of elements are reduced to a smaller set of aspects as a result of ascertaining the main underlying dimensions. Moreover, as explained in the methodology chapter, some of the items in the questionnaire were adapted from previous studies to collect data for this research. This means that the dimensionality of the survey was not guaranteed for this sample. As a result, the EFA technique may be used to develop the structural dimension

of each proposed concept by the representative measurements(Tabachnick & Fidel, 2013). According to Hair et al. (2010), this step is very necessary for supplementary statistical analysis.

Three major aims for using EFA are (1) exploring the development of the theoretical underpinning contribution factors relating to the main constructs shown in the conceptual foundation; (2) corroborating the strength of the study instrument by decreasing a set of variables; and (3) providing a foundation for the subsequent analysis of the investigations. According to Conway and Huffcutt (2003), EFA may be useful for refining measurements, evaluating construct validity and testing hypotheses. The purpose of conducting EFA is to summarise and describe the data through a decreasing number of variables to be used for the statistical analysis. This may provide enhanced information that is associated with the structure of the research data.

There are many factor extraction models that are available for factor analysis, such as component models (e.g., principal component analysis or PCA) and common factor models (e.g., principal axis or maximum likelihood). However, according to a study by Conway and Huffcutt (2003) which reviewed 371 studies to evaluate the practices of EFA, the quality of EFA decisions is related to the researcher's purpose. When the purpose of the researcher is to interpret the latent structure of a set of variables, common factor models are the best selection. Similarly, several academics indicate that for the purpose of developing scales, common factor analysis is preferred over PCA(Fabrigar, Wegener, MacCallum, & Strahan, 1999; Worthington & Whittaker, 2006).

In relation to a high-quality rotation decision, Conway and Huffcutt (2003) favour the use of oblique rotations, such as direct oblimin or promax, because these rotations have better reality and create a better solution. When an oblique structure is applied, the factors are allowed to correlate with each other. According to Henson and Roberts (2006), as oblique rotations need the estimation of more parameters, they regularly fit sample data better than orthogonal rotations. Therefore, in order to understand the latent structure of correlations amongst the measured factors in this quantitative study, EFA was employed in this study using SPSS (V21.0). In using EFA, the principal axis extraction and the promax method were selected to develop the scales.

Furthermore, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to maximise the possible distinctions between variables before implementing the EFA investigations (Hair et al., 2010; Tabachnick & Fidel, 2013). Items were clustered together in a factor if they loaded higher than 0.45 on that factor and the individual factor

scores were calculated using the regression approach. Although Ho (2006) and Tabachnick and Fidel (2013) suggested a factor loading should be higher than 0.32 to meet the minimal value of practical significance, other authors such as Stevens (1996) suggested a minimum factor loading of 0.4. It is also further suggested that, with a sample size of 150 - 200, it may be adequate to have at least 3 items per factor and factor loading of 0.45 was used to interpret the contribution of each variable to the factors extracted from this data that was collected from a sample size of 185. The percentage of variance explained was also reported for each factor individually and for the overall analysis.

6.4.1. Exploratory Factor Analysis

In the present research, EFA was conducted by applying the principal axis extraction and rotation of promax method to examine the key concepts of the conceptual framework concerning "individual characteristics", "training design", "work environment" and "ETTT" in Vietnamese SOEs. (Fabrigar et al., 1999) argued that each common factor determined should be represented by at least 3 measured items. Thus, if any common factor was determined with less than three measured variables, it will be deleted. Items with a low factor loading (< 0.45) will also be deleted. After obtaining the results of EFA, Cronbach's alpha will be recomputed for the scales of those remaining items (Tabachnick & Fidel, 2013).

Individual characteristics

The first stage inprincipal axis extraction analysis with promax rotation is to conduct the KMO Measure of Sampling Adequacy and Bartlett's test of sphericity. The acceptability of the factor is confirmed when the KMO score ≥ 0.6 and significance ≤ 0.05 (Hair et al., 2010). According to Field (2009), a minimum KMO is 0.5 and values from 0.5 to 0.7 are average, values from 0.7 to 0.8 are good, values from 0.8 to 0.9 are very good and values over 0.9 are excellent.

The results of the EFA (see Table 6.8) demonstrate that the data matrix is appropriate to perform factor analysis. The KMO measure of sampling adequacy was.839, which falls in the range of very good, and Bartlett's test of sphericity had a value of 1683.845 (p

<0.001). Additionally, all factor loadings are greater than 0.45. Thus, it can be confidently said that the sample size is suitable for factor analysis.

T	KMO and Bartlett's Test			
1	KMO Measure of Sampling Adequacy			.839
	Approx. Chi-Square		16	583.845
	Bartlett's Test of Sphericity Sig.			.000
		E		1
II	Dimensions of individual characteristics	Fac	or Loa	aing
		F1	F2	F3
1	I am able to apply skills acquired from my on-the-job training.	.682		
2	I can identify appropriate situations for the application of my new skills.	.678		
3	I easily understood contents that I have learned in the training course.	.620		
4	I have overcome obstacles to use my new skills on the job.	.619		
5	I am confident in my ability to use my new skills in my work.	.616		
6	I still remember the key topics that were discussed in my training course.	.582		
7	I am able to use my new skills in my work.	.578		
8	I do well in activities where I have to remember lots of information	.573		
9	I can accomplish my job better by using my new skills	.570		
10	I can identify ways to improve with practice and frequency of use.	.559		
11	I used my new skills even in complex work situations.	.557		
12	I received a bonus because of improved performance using new skills.		.879	
13	I received a wage increase as I accomplished tasks using new skills.		.751	
14	I received a promotion for accomplishing tasks in a more efficient way.		.746	
15	My supervisor has praised mefor using my trained technical skills.		.703	
16	I feel very committed to apply what I have learned to my job		.518	
17	I am looking forward to using my new training on the job			.723
18	I believe the training will help me to improve my professional competence.			.563
19	The skills I learned in the training course will be useful in solving			.485
	problems encountered on my job			
20	I will look for opportunities to use the skills that I have learned			.456
21	The training I have completed will help me do my current job better.			.453
	Initial Eigenvalues	6.796	2.534	1.661
	% of Variance Explained (Total = 52.342)	33.02%	11.61%	8.18%
	Cronbach's Alpha	.883	.857	.715

Tuble 0.01 mai mai auto mai acter ibrieb i acter i inarybie	Table 6.8: Ir	ndividual	Characteristics	Factor	Analysis
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Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

N = 185

After considering the factor loading results of the 21 items in relation to individual characteristics, three factors were extracted to explain 52.34% of the total variance.

Moreover, Cronbach's alpha of the extracted items was from 0.72 to 0.89 which surpasses the suggested level of 0.60 (Hair et al., 2010). This shows that there is a high degree of internal consistency. Thus, the reliability statistics of the study instrument have been demonstrated and three identified factors were extracted.

Table 6.8 also shows that of the list of 21 individual characteristics items, 11 items are in factor 1, *Trainee ability*, five items are in factor 2, *Outcome expectation* and the last five items are in factor 3,*Perceived relevance of training*. These three factors are not contaminated by any other type of term and are discussed in detail below.

Factor 1, *Trainee ability*, includes eleven items associated with the effectiveness of training and the employee's belief in their ability to effectively apply their new skills on the job. Trainee ability factors accounted for 33.2% of the total variance. All items in this factor had factor loading values over 0.55. The item that was ranked the highest in this factor (0.682) was "I am able to apply skills acquired from my on-the-job training". This result suggests that cognitive-related elements provide a supportive description of those aspects of training retained by SOE employees. The ability of the trainee comprises both training retention and performance self-efficacy activities such as "I can identify ways to improve with practice and frequency of use"; "I can identify appropriate situations for the application of my new skills"; "I am able to apply skills acquired from my on-the-job training" and "I am confident in my ability to use my new skills in my work". This factor is the key contributing factor of effectiveness in technical training.

Factor 2, *Outcome expectation*, consists of four items associated with beliefs relating to the outcomes from training. The items ranked highest in Factor 2 were "I received a bonus because of improved performance using new skills" and "I received a wage increase as I accomplished tasks effectively using my new skills". This reveals that bonuses and promotions play a key role in relation to outcome expectation. Factor 2 explains about 11.6% of the overall variance. The majority of variables in this factor have factor loadings higher than 0.7, excluding item 8, "I feel very committed to apply what I have learned to my job" with a factor loading of 0.52.

Factor 3, *Perceived relevance of training*, consists of five items relating to the employees' perception of technical training as a way to secure a high-tech job. Factor 3 explains 8.18% of the overall variance. The item ranked the highest in this factor (0.723) was item 17, "I am looking forward to using my new training on the job". The item with the lowest loading value was item 21 (0.453).

In conclusion, the results in Table 6.7 show that the key individual characteristics relating

to TTT in Vietnamese SOEs are attributable to the three aforementioned factors. From this finding, an improved understanding of the individual characteristics associated with TTT is gained.

Training Design

In order to identify the sub-dimensions that may reveal more relative factors in relation to training design characteristics, EFA was used by applying principal axis extraction and a promax rotation. As shown in Table 6.9, Bartlett's test of sphericity was significant (p < 0.001) with a value of 526.711 and the KMO value of sampling adequacy was calculated at 0.804. These findings indicate that factor analysis can be conducted on the data relating to training design.

Ţ	KMO and Bartlett's Test		
1	KMO Measure of Sampling Adequacy		.804
	Approx. Chi-Square	5	526.711
	Bartlett's Test of Sphericity Sig.		.000
II	Dimensions of Training Design	Fac Loa	ctor ding
		F4	F5
1	I am satisfied with the quality of the training content in my recent training course	.845	
2	I was satisfied with the quality of the trainers in my most recent training course	.776	
3	The trainers gave me confidence to use my training	.611	
4	The trainers used exercises that helped me to apply my learning to my job	.610	
5	Training is relevant to the job	.434	
6	Additional sessions were offered to improve the effectiveness of the training		
7	I have received positive feedback regarding my performance after training		.791
8	People shared tips during my training that helped me to improve my performance		.573
9	I was required to submit a post-training report after attending the training to		.533
	evaluate my learning		
10	After training, I am encouraged to participate in conversations with people about		.414
	how to improve their performance		
111	Initial Eigenvalues	3.771	1.221
	% of Variance Explained (Total =55.470)	41.9%	13.6%
	Cronbach's Alpha	.807	.698

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization. N = 185

After considering the factor loadings of ten items in relation to training design characteristics, it was noted that one item, "Additional sessions were offered to improve the effectiveness of the training" did not load significantly on any factor. This suggests that this item was unreliable and should be deleted from the analysis (Worthington & Whittaker, 2006). Thus, the analysis was undertaken again without this item. As a result, two factors associated with training design were reported. Of the nine items relating to training design, five are in Factor 4, *Transfer design*. The remaining four items are in Factor 5, *Performance feedback*. Both these factors are not contaminated by any other term.

These two factors explain approximately 55.5% of the total variance, which is acceptable from the perspectives of statistics and theory. The findings also demonstrate that a greater level of reliability was reported by the two factors. The Cronbach's Alpha values of these factors were good from approximately 0.7 (Factor 5) to over 0.8 (Factor 4), which is above the acceptable level for reliability (Hair et al., 2010). From the above results, EFA is considered suitable. These two factors are discussed in detail below.

Factor 4, *Transfer design*, contains four variables relating to whether the training content and training instructions matched the job requirements. Factor 4 explains 41.9% of the total variance. Items 1 and 2 had very high factor loading values, 0.85 and 0.77, respectively; items 3 and 4 had the same factor loading value of 0.61; but item 5 had a low loading value of 0.43. These findings affirm that Vietnamese SOE employees consider the content and the techniques used in the training when evaluating ETTT. It comprises activities such as "I am satisfied with the quality of the training content in my most recent training course"; "I was satisfied with the quality of the trainers in my most recent training course"; "The trainers used activities and exercises that helped me to apply my learning to my job" and "The trainers gave me confidence to use my training".

Factor 5, *Performance feedback*, consists of four items in relation to trainee performance and accounts for 13.6% of the total variance. Although the factor loading value of item "I have received positive feedback regarding my performance after training was very high (0.79), three items in this factor had low loading values of 0.5 (items 8 and 9) and 0.4 (item 10). These findings suggest that the items associated with performance feedback may be taken into account when evaluating the effectiveness of TTT amongst Vietnamese SOE employees. These items are "I have received positive feedback regarding my performance after training" and "people shared tips during the training that helped to improve the job performance". To summarise, the key training design characteristics

relating to TTT in Vietnamese SOEs are attributable to the two aforementioned factors. These factors were considered significant aspects of TTT from the viewpoints of theory, practice and statistics.

Work environment

In relation to work environment characteristics, EFA was also applied to examine this construct. Table 6.10 shows that the KMO score of sampling adequacy was 0.795, and Bartlett's test of sphericity was 1476.179 (p< 0.001). These findings demonstrate that it is appropriate to conduct factor analysis.

As shown in Table 6.10, there are three factors that relate to work environment characteristics. Of the 15 work environment characteristics items, 4 items appeared in Factor 6 that was defined as *Peer support*; 7 items were in Factor 7, *Opportunity to use training*; and 4 items were in Factor 8, *Supervisor support*. Both Factor 7 and Factor 8 are not contaminated by other items.

Over 65.1% of the total variance was explained by these three extracted factors. The findings also show that these extracted factors have a superior score for reliability, as indicated by the value of the Cronbach's alpha (0.91 for Factor 7, 0.86 for Factor 8 and 0.75 for Factor 9). These levels are acceptable for reliability. From the above results, EFA is considered suitable.

The three factors relating to the work environment characteristics are discussed in detail as follows. Factor 6, *Peer support*, measures the support of peers in relation to ETTT in Vietnamese SOEs, with 31.3% of the total variance explained by this factor. This factor consists of four items that may be taken into account when evaluating the effectiveness of TTT amongst Vietnamese SOE employees. The factor loadings on these fours items were very high, over 0.81, which indicates it is important to measure their influence on ETTT. These four items are "My peers have shared with me the benefits of applying new skills on the job"; "I have worked with other people to share ideas on using new skills on the job"; "I have talked to members of my training class group to share ideas about using new skills on the job." and "My peers have helped me to apply my new skills".

	KMO and Bartlett's Test				
Ι	KMO Measure of Sampling Adequacy			.795	
	Approx. Chi-Square		14	76.179	
	Bartlett's Test of Sphericity Sig.			.000	
п	Dimensions of work environment	Fac	tor Loa	ding	
11			F7	F8	
1	My peers have shared with me the benefits of applying new skills on the job	.887			
2	I have worked with other people to share ideas on using new skills on the job	.848			
3	I have talked to members of my training class group to share ideas about using new skills on the job	.848			
4	My peers have helped me to apply my new skills	.816			
5	My managers give me adequate time to practice my new skills on the job		.755		
6	Appropriate equipment is available to apply new skills on the job		.727		
7	After training, I have used new skills on the job frequently		.664		
8	My job requires me to use new skills		.617		
9	I am allowed enough time off work to attend training		.615		
10	I was provided with the support (time, money, other resources) needed to consolidate my new skills		.612		
11	My supervisor often checks with me to see how my efforts to use my new skills are going		.545		
12	My supervisor discusses ways to apply my trained skills to my job			.738	
13	My supervisor asks me what I gained from the training I attend			.626	
14	My supervisor has provided assistance to resolve problems in applying my			.619	
15	We approximate has helped me set goals for using my new shills on the left			551	
III	Initial Eigenvalues	1 60	3 605	1 38/	
		4.00	3.095	0.004	
	% of Variance Explained (Total = 65.125)	31.3%	24.6%	9.2%	
1	Cronbach's Alpha	.913	.859	.754	

Table 6.10: Work Environment Factor Analysis

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

N = 185

Factor 7, *Opportunity to use training*, accounted for 24.6% of the overall variance. This factor comprises seven items to measure the influence of opportunity to use training on ETTT. While the loading values of items 5 and 6 were high (> 0.70) and that of items 7, 8, 9 and 10 were higher (0.6), the last item in this factor did not have high loading value (<0.55). As shown in Table 6.9, this group of variables is "My managers give me adequate time to practice my new skills on the job"; "appropriate equipment is available

to apply new skills on the job'; "After training, I have used new skills on the job frequently"; "I have talked to members of my training class group to share ideas about using new skills on the job."The findings show that the variable of opportunity for using training is important in examining ETTT in the context of Vietnamese SOEs.

Factor 8, *Supervisor support*, comprises four items associated with the support trainees receive from their supervisors to apply their newly acquired training, and Factor 8 accounted for 9.2% of the total variance. Most of these items had a factor loading between 0.55 and 0.63, except item 12, "My supervisor discusses ways to apply my trained skills to my job" which had a factor loading of 0.738. This demonstrates that this group of items was helpful in measuring the influence of supervisor support on improving ETTT in Vietnamese SOEs. These variables are "My supervisor discusses ways to apply my trained skills to my job"; "My supervisor has provided assistance to resolve problems in applying my training" or "My supervisor asks me what I gained from the training I attend". In conclusion, these three factors were useful in measuring the significance of work environment attributes of Vietnamese SOEs from the viewpoint of theory, practice and statistics. The following section focuses on the examination of the key dimension of effectiveness of TTT in the context of Vietnamese SOEs.

Effectiveness of transfer of technical training

In order to evaluate the construct of TTT effectiveness, EFA was employed with the oblique promax-rotated common matrix. The results from Table 6.11 demonstrate that the KMO measure of sampling adequacy was 0.680 and the value of Bartlett's test of sphericity was 132.954 (p< 0.001). Thus, it is appropriate to perform factor analysis in this case.

As shown in Table 6.11, only one factor related to the dimensions of TOT effectiveness, comprising the following three items: "My job performance has improved because of my new skills"; "I am now able to work faster because of my training" and "I have effectively incorporated my new skills into my daily tasks". The values of the factor loading were high, ranging from 0.64 to 0.8.

This factor accounted for 67% of the total variance in the research data with an eigenvalue of 2.011. The Cronbach's alpha of this factor was $\alpha = 0.753$ which indicates adequate reliability (Hair et al., 2010). As a result, it is appropriate to use EFA and the three-factor explanation was accepted as appropriate for the examination of this research model. The factor regarding the effectiveness of TTT may be detailed as follow.

Ι	KMO and Bartlett's Test	
	KMO Measure of Sampling Adequacy	.680
	Approx. Chi-Square	132.954
	Bartlett's Test of Sphericity Sig.	.000
п	Dimensions of training transfer effectiveness	Factor loading
		F10
1	My job performance has improved because of my new skills	.807
2	I am now able to work faster because of my training	.694
3	I have effectively incorporated my new skills into my daily tasks	.635
III	Cronbach's Alpha	.753
	Initial Eigenvalues	2.011
	% of Variance Explained (Total = 67.024)	67.02%

Table 6.11: Factor analysis of training transfer effectiveness

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization. N = 185

Factor 10, *effective transfer of technical training*, explained 67.02% of the total variance. While the loading value of item 1 wasvery high (> 0.8), the other two items did not have high loading values (<0.07). This factor consists of three variables associated with the effectiveness of applying newly acquired skills on the job.

In conclusion, the factor analysis confirmed the organizational environment characteristics (individual characteristics, training design and work environment) may impact ETTT. The findings demonstrate that there were nine factors associated with organizational environment attributes. The nine factors were considered significant predictor variables that may affect the effectiveness of TTT in the context of Vietnamese SOEs from the viewpoint of theory, practice and statistics. The following section focuses on an examination of the potential influence of forecaster factors on the suggested dependent factor in the research model by using multiple regression analysis.

6.4.2. Multiple regression analysis: Testing the research hypotheses in Study 2

In order to provide a greater understanding of the key study objectives (see Chapter 1), a series of multiple regression analyses were conducted. Linear regression analysis is a technique used to identify the relationship between independent variables and a dependent variable. In this case, multiple regression analysis is employed to calculate and explain the linear relation between predictor variables, such as individual characteristics (Trainee ability, Outcome expectation, Perceived relevance of training), training design (Transfer

design, Performance feedback), work environment characteristics (Peer support, Opportunity to use training, Supervisory support) and the dependent variable, ETTT.

Before employing multiple regression analysis, it is important to undertake correlation analysis to give a better understanding of the pair-wise relations through testing the coefficient of correlation among the factors (Hair et al., 2010). As a result, all the variables which were found by testing the factor loadings will be tested to detect any potential high interaction between predictor variables and the dependent variable in the research model. In order to undertake this, the Pearson product-moment correlation was employed. According to Pallant (2013), if the values of the correlation coefficients are higher than 0.8, these are viewed as a problem. Moreover, Hair et al. (2010) suggested that collinearity is more serious if the correlation is higher than 0.9 in statistical analysis. Thus, correlation coefficients r in the correlation matrix is less than 0.5, which is an acceptable value for the variables.

Overall, the proposed organizational factors were possibly correlated with the dependent factor of transfer effectiveness. The four individual characteristic variables are positively correlated with ETTT (r scores > 0.3, p values < 0.01), while outcome expectation and performance self-efficacy were more significantly correlated with transfer effectiveness (r scores > 0.525, p < 0.01). In relation to training design variables, both transfer design and performance feedback variables were significantly correlated with ETTT (r = 0.556 and 0.559 respectively). Regarding the work environment attributes, while the opportunity to use training variable had the strongest correlation score in relation to its influence on the dependent variable (r = 0.954, p < 0.01), the lowest inter-correlation was the peer support variable (r = -0.154, p < 0.05). As a result, in order to better understand the above discussion, it is appropriate to apply statistical analysis, such as multiple regression analysis, to empirically test the proposed conceptual framework developed in the literature review. This analytical technique allows the researcher to investigate the direct influence of the proposed organizational factors on ETTT in Vietnamese SOEs.
	SD	1	2	3	4	5	6	7	8	9
Trainee ability	.92077	1								
Outcome expectation	.93503	.043	1							
Perceived relevance of training	.84602	.088	.016	1						
Design training	.89664	.358**	.246**	.212**	1					
Performance feedback	.83663	.257**	.395**	.112	.042	1				
Peer support	.95598	.159*	033	127	087	.056	1			
Opportunity to use training	.90816	.232**	.465**	.205**	.348**	.361**	017	1		
Supervisory support	.86882	.162*	.355**	043	.299**	.268**	011	.128	1	
Effectiveness of training transfer	.88106	.431**	.301**	.253**	.401**	.295**	.027	.484**	.246**	1

Table 6.12: Correlation Matrixof influence factors and effectiveness of transfer of technical training

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

N = 185

Relationships between individual characteristics and effective transfer of technical training

As previously discussed, one of the key purposes of the quantitative approach used in this thesis is to demonstrate the positive influence of individual characteristics, trainee ability, outcome expectation and perceived relevance of training on ETTT in Vietnamese SOEs. In order to test this influence, multiple linear regression analysis was used(Cohen et al., 2013).

The findings of the initial linear regression test are presented in Table 6.13. These results demonstrate the significant influence of the three individual characteristics on the dependent factor of transfer effectiveness. If the variance inflation factor (VIF) is lower than 10 which is calculated as the inverse of tolerance value, there is no multicollinearity (Hair et al., 2010). Thus, with VIF values of <1.1 for all individual characteristic variables, multicollinearity was not a problem in relation to the multiple regression analysis.

Model Summary						
R Square (R2)				.311		
Adjusted R Square (Adjusted R2)				.299		
F	27.193					
Sig.				< .001		
Independent variables	Beta	T-value	Sig.	VIF		
Trainee ability	.400	6.444	< .001	1.010		
Outcome expectation	.281	4.546	< .001	1.002		
Perceived relevance of training	.213	3.442	.001	1.008		

 Table 6.13: Linear Regression: the influence of individual characteristics on effective transfer of technical training

Dependent Variable: effective transfer of technical training

Table 6.13shows the strength of the relationship between the model and the dependent variable. The value of 0.299 for Adjusted R Square indicates that 29.9% of the variance of the dependent variable may be explained by the three proposed factors. The significance value of the F-test is less than 0.01, which shows that it is meaningful from a statistical perspective.

The correlation matrix in Table 6.12 shows a high level of inter-correlation amongst the three individual variables. All of the potential explanatory variables were significantly related to the dependent variable (p < 0.001). While the trainee ability variable had a high beta coefficient ($\beta = 0.4$, t = 6.44), the beta standardized coefficients of the other two factors, outcome expectation (t = 4.55) and perceived relevance of training (t = 3.44) were lower than 0.3. These results indicate that individual characteristic factors had a positive and significant impact on ETTT (F = 27.193, R2 = 0.311), with trainee ability having the largest influence on ETTT, followed by outcome expectation and perceived relevance of As a result. these findings suggest that hypotheses training. H1a. H1b andH1cweresupported by the quantitative data.

H1a: Trainee ability has a positive and significant influence on ETTT.

H1b: Outcome expectation has a positive and significant influence on ETTT.

H1c: Perceived relevance of training has a positive and significant influence on ETTT.

Relationships between training design and effective transfer of technical training

In this section, multiple linear regression analysis was used to measure the relationship between the training design variables as determinant predictors and the dependent variable that was developed in the contextual framework (see Chapter 2) to better understand the level of influence of performance feedback and transfer design on ETTT.

Table 6.14 shows that the two aspects of training design characteristics have a significant influence on ETTT. So it is concluded that this regression model was statistically significant. Moreover, multicollinearity is not a problem in relation to this multiple regression analysis because the VIF values of all the training design variables are lower than 2.0, thus there is no multicollinearity (Hair et al., 2010). The value of 0.23 of Adjusted R Square indicates that 23% of the variance of the dependent variable may be explained by the two proposed factors. The significance value of the F-test is less than 0.01, which shows that it is meaningful from a statistical perspective.

Model Summary						
R Square (R2)				.238		
Adjusted R Square (Adjusted R2)				.230		
F				28.449		
Sig.				< .001		
Independent variables	Beta	T-value	Sig.	VIF		
Transfer design	.389	6.013	< .001	1.002		
Performance feedback	.278	4.296	< .001	1.002		

Table 6.14: Linear Regression: the influence of training design on effective transfer of technical training

Dependent Variable: effective transfer of technical training

The correlation matrix in Table 6.14 shows a high level of inter-correlation amongst the two TOT variables. All of the potential explanatory variables were significantly related to the dependent variable (p < .001). While the transfer design variable had a high beta coefficient ($\beta = 0.389$, t = 6.013), the beta standardized coefficients of the last factor, performance feedback (t = 4.296) were lower than 0.3. These results provide strong evidence to suggest that both transfer design and performance feedback had a positive and significant impact on ETTT (R2 = 0.238 and F = 28.449). Furthermore, from the findings of the t value, it can be seen that the influence of the transfer design variable on TTT (t = 6.013) is more significant than that of the performance feedback variable (t = 4.296). Therefore, these findings support hypotheses H2a and H2b:

H2a: Transfer design has a positive and significant influence on ETTT.

H2b: Performance feedback has a positive and significant influence on ETTT.

Relationship between work environment and effective transfer of technical training

This section of the multiple regression examination is undertaken to measure the influence of the work environment on ETTT. With VIF values of < 1.1 for all work environment variables, multicollinearity was not a problem relating to the multiple regression analysis.

The findings in Table 6.15 show that approximately 25.8% of the variance of the dependent variable (ETTT) was explained by the three work environment variables (Adjusted R2 = 0.258). The significance value of the F-test is less than 0.01.

Model Summary						
R Square (R2)				.270		
Adjusted R Square (Adjusted R2)				.258		
F				22.201		
Sig.				< .001		
Independent variables	Beta	T-value	Sig.	VIF		
Peer support	.037	.585	.559	1.000		
Opportunity to use training	.461	7.177	< .001	1.017		
Supervisory support	.187	2.910	.004	1.017		

Table 6.15: Linear Regression: the influence of work environment on effectivetransfer of technical training

Dependent Variable: effective transfer of technical training

Excluding the peer support variable, the predicted work environment variables had a positive and significant influence on ETTT. The opportunity to use training variable had the highest beta weight ($\beta = 0.46$, t = 7.18, p < 0.01) on ETTT, followed by the supervisory support variable that had a high regression coefficient with $\beta = 0.19$, t = 2.91 and p < 0.05. Although the beta value of the peer support variable is positive ($\beta = 0.37$, t = 0.59), the p-value of this variable is not significant (sig. = 0.559). This result is similar to the finding in Table 6.14, which shows that the correlation between the peer support variable and the ETTT variable was not significant (p > 0.05). Thus, it is clear that there is no significant relationship between peer support and ETTT.

This regression analysis demonstrates that this test was statistically significant: R2 = 0.270, F = 22.201 and p < .001. Therefore, these findings support hypotheses H3aandH3b:

H3a: Opportunity to use training has a positive and significant influence on ETTT.

H3b: Supervisory support has a positive and significant influence on ETTT.

The data in relation to peer support did not support hypothesis H3c: *Peer support has a positive and significant influence on ETTT.*

6.5. Chapter summary

In this chapter, evidence from the employees who had received technical training in one of the eight Vietnamese SOEs was analysed to examine the influence of the organizational environment on ETTT. Eight research hypotheses relating to Study 2 were considered and tested. As mentioned earlier in Chapter 6, the EFA method is suitable for confirming the construct validity in a research thesis (Hair et al., 2010). Thus, a series of EFA tests were conducted to give a better understanding of the proposed constructs by extracting variables to classify their relevant subordinate factors, as indicated in the literature review. These results provided a foundation for investigating the hypotheses in Study 2 by examining the predicted relationships in the research conceptual framework by applying multiple regression analyses. Additionally, multiple regression models were tested to give a comprehensive insight into the three general hypotheses (H1, H2, H3)of the quantitative study. The predicted relationships between the constructs in Study 2 were examined in detail.

The results from the multiple linear regression analyses demonstrate that the predicted link in the contextual framework (see Chapter 2) amongst each influence factor was connected to ETTT. Overall, the results suggest that TTT may be improved through developing a greater understanding relating to individual characteristics, the training design and the work environment. In particular, the three individual factors (trainee ability, outcome expectation and perceived relevance of training) and the two training design factors (transfer design and performance feedback) had a significant influence on ETTT. However, of the variables associated with the work environment, only *opportunity to use training and supervisory support* variables had a significant influence on the effectiveness of TTT. There was no significant relationship between peer support and outcome expectation variables. Seven hypotheses (H1a, H1b, H1c, H2a, H2b, H3a, H3b) were supported by the data and one hypothesis (H3c) was not supported by the data in this study (see Table 6.16).

Based on the findings of the multiple regression analyses, this study contributes to the understanding of the organizational factors influencing ETTT. These empirical results confirm the three organizational factors (individual characteristics, training design and work environment) that have a significant influence on ETTT in Vietnamese SOEs.

The findings of both the qualitative and quantitative analyses presented in this chapter form the basis of the next chapter in which the RQs and the implications of the study are discussed and examined in detail.

Hypotheses	Descriptions	Results
H1a	Outcome expectation has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H1b	Perceived relevance of training has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H1c	Trainee abilityhas a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H2a	Transfer design has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H2b	Performance feedback has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H3a	Opportunity to use training has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
H3b	Supervisory support has a positive and significant influence on ETTT in Vietnamese SOEs	Supported
НЗс	Peer support has a positive and significant influence on ETTT in Vietnamese SOEs	Not supported

Table 6.16: Summary of results for hypotheses

Chapter 7

Discussion

7.1. Introduction

This chapter details the principal findings of the research. A clarification of the results and the significant relationships were presented in Chapters 5 and 6. This chapter addresses each of the research questions (RQs) in turn. Finally, the chapter closes with a summary.

The need to provide employee training to enhance organizational performance is increasing significantly. Nevertheless, the effectiveness of transfer of training (TOT) on employee performance may be directly and indirectly impacted by several variables, including both the external and internal environment of enterprises.

Based on earlier findings into transfer of training that were discussed in Chapters 2 and 3, the conceptual framework of external and organizational factors influencing transfer of technical training was extended to provide a more accurate examination of TTT as performed by managers and employees in real-world settings. As a result, examining TTT in a specific enterprise type using both an examination of the training experiences of managers and training directors and a questionnaire survey of the employees provided a comprehensive understanding of the impact of external and internal organizational factors on TTT in SOEs in the developing country of Vietnam. This analysis was based on the data collected in eight Vietnamese SOEs.

7.2. The research findings

Although this research is built on earlier work in the field of TTT, it creates its own contributions to the field of TTT by using multiple views and finding new methods and practices. By using an integrated framework, the thesis creates some contributions to the literature on the factors impacting on effectiveness of TTT in Vietnamese SOEs. Positive response rates of both SOE managers and employees were extremely high. Based on the results of qualitative and quantitative analyses presented in Chapters 5 and 6, this section discusses the integrated findings related to the three RQs with reference to previous studies on TOT.

7.2.1. Research Question 1 (RQ1)

RQ1 (What are the key external environment influences and constraints (legal, economic and educational) on developing ETTT in Vietnamese manufacturing SOEs?) examines the influence of external environment factors on the effectiveness of TTT in Vietnamese SOEs. The discussion focuses on the three external environmental dimensions considered throughout this study, economic conditions, educational characteristics and the legal environment.

In order to examine and understand how the external environment elements may impact the effectiveness of TTT on Vietnamese SOEs, it is necessary to carefully examine the manager interviews to explore what influences exist. Twelve manager/training director interviews were conducted using semi-structured questions. Twenty-five interrelated questions were asked. The managers/training directors responded to these questions and added additional information.

Vietnam's economic environment

As discussed in Chapter 3, the Vietnamese economy transitioned from a centrally planned economy to a socialist-oriented market economy. This reformation led to several key policy changes, such as SOE reform, open access to the Vietnamese market and the development of export markets. These changes provided SOEs with greater autonomy and motivated them to improve HRD practices to increase their competitive advantage (Collins et al., 2012).

The findings from the qualitative analysis indicate that the external factors were strongly related to the effectiveness of technical training activities, namely the economic variables of SOE reform, open access to the Vietnamese market and the development of export markets. The managers and training directors reported high levels of economic reform to encourage SOEs to develop their employee training activities. To the best of our knowledge, this is the first empirical study to examine the impact of the national economic environment on an enterprise's motivation to conduct technical skill training programmes for their employees.

In Study 1, the findings from the interview data mostly confirmed the conceptual framework (see Chapter 3) with the exception of the issue of Vietnam joining the WTO which was a new finding and was an unprompted response in the interviews. Global competition is already having an impact on Vietnam. SOE reform and the need for

equitization is growing across the country (Collins, 2005; Pham, 2011a). In particular, the entry of Vietnam into the WTO required significant changes to establish a modern SOE system with highly technically skilled labor for the production and trade of goods. The SOE managers/training directors recognized that the technical skills of employees are very important in the production process. They realised that they would not be able to produce competitive products simply by employing cheap labour, implementing labourintensive manufacturing and adopting advanced technology. Rather, their employees would need advanced technical skills in order to operate the advanced technology. Technical skills training will be helpful in increasing productivity and meeting the market requirements for product quality. Consequently, the existing unskilled employees will need retraining. Therefore, it is likely that Vietnam's entry into the WTO was a motivating factor for enterprises to provide technical skills training for their employees to improve enterprise competitiveness.

Regarding the factors of SOE reform, open access to the Vietnamese market and the development of export markets in relation to TTT in SOEs, the findings from this study confirm the influence of these factors. Most of the participants indicated that the most important thing in SOE reform is to bring about competition in relation to hiring employees, which may significantly influence the effectiveness of TTT. This finding was similar to the reports of earlier studies (e.g. Malesky et al., 1998; Zhu et al., 2008)on the assessment of SOE reform and its impact at the enterprise level. Moreover, under the pressure of autonomy, many decisions that were previously made by the government are now made by SOE managers (Zhu et al., 2008). SOEs have reluctantly adjusted to the need to significantly develop the technical skills of their employees to increase their ability to compete and be profitable.

Open access to the Vietnamese market has also led to the development of technical skills of employees in SOEs so as to encourage foreign investors to partner with them. Vietnamese SOEs perceive partnering with foreign investors as a chance to enhance their competitiveness. Weak SOEs also see FDI as a way to enhance their competitiveness as it motivates these enterprises to develop their technical skills training activities. FDI represents an important capital source which leads to technology transfer and advanced technical skills to upgrade the skill level of the local workforce (Nguyen et al., 2011). Following the logic of the conceptual framework (Figure 3.3), it is believed that the development of TTT is due to the direct influence of the national reforms to open access to the Vietnamese market.

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The process of TTT in Vietnamese SOEs is also influenced by the development of export markets. This finding is also supported by previous research (e.g. Aw et al., 2007; Malesky et al., 1998). The development of export markets provides easier access to new imported technology and more competition between products. While the need to use advanced technology to improve products is increasing, the technical skills of employees are quite limited (Schwab et al., 2011). SOEs need to train their employees in technical skills and then develop TOT from the training context to the job. Prior training investments and exports also increase the possibility of the enterprise continuing to invest in both activities. Enterprises with earlier export market experience are also more likely to invest in employee training designed to increase productivity. This is consistent with the empirical findings of Aw et al. (2007) which focus on the relationships between employee training and export decisions. Therefore, as found in the present study, the development of highly technically skilled employees is likely to assist SOEs to compete more effectively in the global market.

A key finding of this study is the impact of economic reform on the development of employee training activities as a motivation to improve ETTT in Vietnamese SOEs. In their studies, Nguyen et al. (2011) identify economic reform as a major influence that has radically changed the business context of Vietnam, particularly the openness of the economy and the encouragement of FDI. Consequently, skilled employees have been brought in and new HR training practices have been introduced in Vietnam. One of the important factors prompting enterprises to implement employee training is demand in the competitive global market and the skills available in that market. Therefore, SOEs recognize that when their employees have inadequate technical skills which impacts negatively on ETTT, it is vital to address this problem. Thang and Quang (2005) suggest that the progress of export-oriented development is dependent on advanced technology and highly skilled employee requirements. This study confirms these findings and the study of Zhu (2002) which reported that economic transition has created the chance for domestic enterprises (both SOEs and private enterprises) to adopt new HRD practices.

Educational environment

As expected, educational characteristics have a variety of effects on TTT in SOEs. These influences may be much more comprehensive than the findings of many past studies suggest (Nguyen and Truong (2007) This means that these influences are of considerable importance in terms of both theory and empirical implications. This study examined the

theoretical explanation of why the education and training environments may impact TTT at the organizational level. As presented in Chapter 5, to analyse the relationship between the educational environment and TTT, three educational factors (the quality of institutional training, the quality of technical teaching staff and the quality of student technical training) were found to have a significant impact on technical training activities (see Figure 5.3). The findings from this study also confirmed the conceptual framework that was outlined from the literature and described in Chapter 3.

It is interesting that all the participants in this study agreed that the quality of institutional training significantly impacted the effectiveness of TTT in their enterprises. The findings from the qualitative data analysis indicate that there are three main limitations of Vietnamese institutional training, resulting in low training quality which does not meet requirements of the enterprises (Nguyen & Truong, 2007; Vo & Hannif, 2012). These limitations are (1) the structure of the vocational training system; (2) the shortage of practical experience and the skills of graduates and (3) the inadequate collaboration between training institutions and enterprises. Consequently, as supported by this study, low quality of institutional training may further impact the development of TTT at the organizational level.

A key finding of this empirical study is the need to adopt a training approach that meets the needs of the labor market as a means of facilitating ETTT at the organizational level in the Vietnamese context. This finding supports suggestions from human capital theory and its implications for educational development ((Olaniyan & Okemakinde, 2008). These authors indicated that the contribution of training to economic development occurs through its ability to raise the productivity of an existing labour force in different ways. According to them, education is an option to "consumption, for it transfers to round-about production the resources that would otherwise be consumed now" ((Olaniyan & Okemakinde, 2008).

Hakkala and Kokko (2007) stated that Vietnamese vocational training institutions have little autonomy and the structure of vocational training is planned by one line ministry. These structures are often segmented in accordance with the economic sector. Vocational schools do not have the common aim of equipping students with the technical skills required by the labor market. Thus, training institutions do not provide the number and kinds of employees in demand (Vo & Hannif, 2012). The majority of graduates have limited practical technical skills and limited ability to undertake professional tasks. This view is similar to that suggested by Nguyen and Truong (2007) that 80% of Vietnamese graduates need to be retrained to meet the requirements of enterprises. As a result, in order to address this issue, SOEs need to reserve a significant proportion of their budget for employee training.

Secondly, the findings from the qualitative study also highlight that the poor quality of technical teaching staff adversely and significantly impacted the technical training activities of the enterprises. The results show that SOE employers and training directors clearly recognise these problems. They expressed the view that technical teachers had not been trained adequately and that their skill levels and teaching methodologies had not kept up with recent technological advances. This finding is similar to that of Duong and Morgan (2001) who highlighted the low quality of teachers in technical and vocational training institutions in Vietnam. There is a lack of vocational teachers (Kieu & Chau, 2000) and their salary is low and paid according to teaching time (Hamano, 2008). Thus, in order to supplement their income and improve their lives, technical teachers generally seek more teaching work at other institutions. As a result, many technical teachers do not have time to improve their knowledge and skills. This finding also supports the findings of previous studies by Duong and Morgan (2001) and (Tran & Nguyen, 2000) who stated that teachers in vocational institutions are less able to maintain their technical knowledge and skills.

Lastly, another interesting finding is that the quality of student technical training receives less attention than the two aforementioned factors. Perhaps the reason lies in the fact that the quality of students is a reflection of the quality of the institutional training and the quality of technical teaching staff. The SOE employers and training directors expressed concern that while those who graduate with a technical degree are well-versed in theory, their ability to apply the knowledge and skills they have learned to their work tasks is limited. This opinion is consistent with the findings of Duoc and Metzger (2007) who conducted an employer satisfaction survey on the quality of graduates in Vietnamese institutions. Their findings indicated that Vietnam institutions have taught their students only basic skills and enterprises had to retrain their newly recruited graduations to meet the requirements of their particular jobs. As a result, SOEs themselves have to offer employee training to gain highly technically skilled labor.

Legal environment

Attitudes to the influence of the legal environment clearly indicate that managers and training directors have concerns about the national training policies as the first important factor influencing effectiveness of TTT. Managers in Vietnamese SOEs tend to rate the effectiveness of technical training activities above the state's support for training. They view government support, such as the exemption of taxes associated with training as well as government training scholarships, as decisive factors in the development of training in the work place. These findings support Nguyen and Truong (2007)'s findings in their review. Therefore, when national training policies that support training activities at the organizational level are established, this will motivate enterprises to effectively assess their training activities (Nguyen et al., 2011).

The respondents also noted that the national technological policy was significant, though they did not completely agree on its influence with regard to ETTT. This finding reflects the importance of national government assistance with investment in technology modernisation in SOEs as the current rate of importation of modern technology and equipment is very low. In a competitive market, Vietnam SOEs need to improve their products to meet the requirements of the market. This means that the national government should introduce technological support policies to enable SOEs to purchase modern technologies. SOEs will then provide their employees with training in advanced technical skills so that they can effectively use the advanced technology.

Again, in terms of the impact of the legal environment, the participants have different views on foreign investment policies. Interestingly, the participants ranked this factor the lowest. A few managers said that foreign investment policies have not impacted ETTT in their enterprises because they had no plans to connect with foreign investors. Although the program of SOE equitization of the national government was established over 20 years, its implementation has been very slow. Many SOEs have not yet been equitized and they are not allowed to seek investors. Thus, the state's foreign investment policies are not seen as having a positive impact on the training activities of some SOEs.

However, over half of the 12 participants considered foreign investment to be an important funding source that may help enterprises to purchase modern technologies and conduct advanced technical training programmes for their employees. In the Vietnamese context, SOEs often have insufficient finance to meet the needs of their business. Therefore, they may see foreign investors as a way to resolve this deficiency. When the national government established national support policies to attract foreign investors to the Vietnamese market, local enterprises (both SOEs and private enterprises) had more

opportunities to satisfy their potential foreign investors. Furthermore, FDI may bring modern technologies and advanced technical skills into local vocational institutions, which will assist in skill development of the training staff as well as the technical staff.

In conclusion, the external factors that impact ETTT in Vietnamese SOEs were examined in RQ1. From the qualitative analysis, it was reported that all three contextual components (the economic environment, educational system and legal system) had a significant influence on the effectiveness of TTT in Vietnamese enterprises. Each of the components had a substantial impact on the training activities of the enterprises. The factors of the economic environment (joining the WTO, SOE reform, open access to the Vietnamese market, and the development of the export market) put pressure on SOEs to improve their training activities. The national educational environmental factors (quality of institutional training, quality of teaching staff and quality of student technical training) impeded the development of technical training activities at the organizational level. The legal and regulation environmental factors (training policies, technological policies and foreign investment policies) encouraged Vietnamese SOEs to develop their technical training activities to improve the technical skill levels of their employees.

7.2.2. Research Question 2 (RQ2)

RQ2 examines the impact of organizational factors on the effectiveness of TTT in Vietnamese SOEs: What are the key organizational factors that impact on ETTT in Vietnamese manufacturing SOEs?

In order to answer RQ2, the quantitative study was designed. Based on past studies in this area (including Baldwin & Ford, 1988; Dirani, 2012; Facteau et al., 1995; Tziner, Haccoun, & Kadish, 1991; Velada et al., 2007), a structural model was established. From this model, it was hypothesized that there are positive and significant relationships between the individual characteristics, training design, work environment characteristics and the effectiveness of TTT. The results detailed in Chapter 6 show that seven of the eight examined factors had a significant relationship with ETTT. This study provided a chance to validate, incorporate and extend previous studies that have examined the impact of individual characteristics, training design and work environment on the criterion of training effectiveness.

Individual characteristics

Overall, the findings from the quantitative data analysis indicate that all three individual variables (trainee ability; outcome expectation; perceived relevance of training) play important roles in predicting the effectiveness of TOT in the workplace. The standardised betas in the linear regression analysis of individual factors indicate that trainee ability (β =.400) had the strongest impact on the effectiveness of TOT followed by outcome expectation (β =.281) and perceived relevance of training (β =.213). These findings shed some light on the interaction between motivational factors and trainee ability and how this may impact the effectiveness of TOT. The results suggest that employees are more likely to think about how their technical training will be used in the workplace when they feel motivated, confident and interested in obtaining knowledge and skills, which may lead to improved TOT.

It should be noted that trainee ability (consisting of cognitive ability, training retention and self-efficacy) is the most significant factor impacting on TTT in Vietnamese SOEs. This finding is not entirely surprising, as employees with high levels of self-efficacy and cognitive ability have been found to be more likely to complete more difficult and complex tasks (Simosi (2012). This finding supports several existing studies (e.g. Chiaburu et al., 2010; Gist et al., 1991; Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991) that highlight the importance of self-efficacy in TOT.

The findings from this research also reinforce the empirically-based findings of previous research by Velada et al. (2007), who indicated that when employees are confident in their abilities to transfer training or when they maintain learning content, it is possible to confirm that they have engaged in TTT in the workplace. The results also support the findings of Blume et al. (2010) who conducted a meta-analytic review of the transfer literature to examine whether trainee ability had a very strong relationship with the transfer of closed-skills training.

In addition, when there is adequate motivation, employees are willing to improve new skills and subsequent transfer performance. Many employees believe that if they perform well, their managers will acknowledge them, thus they are willing to attend technical training programmes to improve their technical skill levels. When the perceived levels of outcome expectation and relevance of training are at a high level, this will encourage trainees to improve their TTT to the job. This conclusion also supports the study results of Cheng and Ho (2001), who found that there are positive relationships between outcome expectation, perceived relevance of training and TOT. The findings from this study

indicate that TOT may be promoted if the employees have a clear indication of the expected results from the training. Thus, this study offers further evidence of the role of motivational characteristics relating to levels of transfer effectiveness in the context of technical training.

Very little past research has examined the role of individual characteristics (Quinones et al., 1995; Seyler et al., 1998; Tracey et al., 2001) in the context of TOT. These studies have grouped several individual factors together as a combined assessment of individual support. Relating to the view of Cheng and Ho (2001) that numerous individual support forms can have significant relationships with TOT, this study extends previous research by examining whether the three forms of individual characteristics impact TTT. As a result, the study reveals that there are significant relationships between trainee ability, outcome expectation, perceived relevance of training and the effectiveness of TTT. From these findings, it may be suggested that when employee motivation and belief in their capabilities are important elements that encourage employees to improve TTT in the workplace. These results also indicated that trainee ability is a stronger influence on ETTT than the two motivational variables. This suggests that if the motivation to learn and transfer is adequate, Vietnamese SOE employees who have more ability are more likely to improve TTT.

Training design

In this study, employees who reported being satisfied with the quality of the training content and the trainers in their most recent technical training course indicated they were able to effectively use their new technical skills at their workplace. This finding provides strong evidence to support the research by Velada et al. (2007), which indicated that there is a positive relationship between transfer design and TOT. In particular, the influence of transfer design ($\beta = .389$) was significant in developing the effectiveness of TOT. From a practical viewpoint, these findings indicate that training may be more successfully promoted if the trainees know how the training program is intended to impact their performance and that the trainers will give them numerous examples and exercises to help them apply their learning. Enterprises need to be aware of the important role of training instructions in improving TOT. When the contents of a training program are connected to the use of practice exercises that will be applied on the job, ETTT is likely to be improved.

In addition, the findings on performance feedback ($\beta = .278$) are particularly relevant in this study, since data were collected the TOT from eight SOEs and technically trained employees answered questions about transfer and their perceptions of feedback given and received. The trained employees described several feedback situations that may help improve the effectiveness of TOT. For example, during the training, the employees shared tips with each other that helped them to improve their performance and after their training, they were also encouraged to participate in conversations with people about how to improve their job performance. Consequently, performance feedback significantly influenced ETTT. This finding supports the view of Cheng and Ho (2001), who reviewed major studies between 1989 and 1998 to identify the effect of performance feedback on TTT. These authors noted that when trainees received positive feedback, this resulted in more learning over time than those who received negative feedback. It is encouraging that employees in this study recognized the importance of performance feedback. When trained employees receive high levels of positive feedback regarding theirperformance during and after training, they are more likely to apply their new skills from the training context to their job. This finding indicates that organizational managers should design training programs in which there is an awareness of the importance of performance feedback in ETTT.

In conclusion, it is clear that both determinant aspects of training design were important factors in predicting ETTT. When transfer design is included in a training program, trained employees believe that performance feedback has a significant impact on the effectiveness of TTT. The quantitative analysis findings contribute to the TOT literature by testing the correlation between training design and the effectiveness of TTT. These findings show that although the effect of training-related variables have been overlooked in the relevant literature, training design has a significant influence on TTT. In particular, this finding is very important for managers because these design factors are more controllable than factors related to the individual and the work environment. These findings also provide evidence for managers that investing in the improvement of HR training strategies in SOEs in Vietnam can improve enterprise productivity. This supports the theoretical framework of human capital investment that noted that employers fund the employee training in hope of attaining a return on this investment in terms of being a more competitive, productive and profitable enterprise in the future (Unger et al., 2011).

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Work environment characteristics

As expected, the quantitative data analysis in this research found that the effectiveness of TTT is significantly influenced by the two independent variables relating to work environment aspects: opportunity to use training and supervisor support. An exception was in the relationship between peer support and ETTT. While supervisor support was positively and significantly related to TTT, peer support was not.

Both quantitative and qualitative research on the importance of opportunity to use training in relation to TOT has grown in recent years (Clarke, 2002; Gilpin-Jackson & Bushe, 2007; Quinones et al., 1995). The results of this research provide further evidence that opportunity to use training ($\beta = 0.461$) is the most significant influence of the work environment on ETTT. In fact, in this survey, employees who perceived better levels of opportunity to use training reported that this resulted in them applying their newly learned skills to a higher degree. The findings in Table 6.13 also advance the idea that the opportunity for using training is a key work environment factor influencing TOT. Learners need opportunities to apply their new trained skills in order for them to transfer this knowledge to their job (Chiaburu & Lindsay, 2008).

By way of linking to the previous literature on the role of supervisor support relative to TOT, it is worth noting that the findings of this study are consistent with the results of previous studies. Specifically, studies by Tracey et al. (1995); McLean and McLean (2001); Clarke (2002); and Cromwell and Kolb (2004) found that this variable was significantly related to transfer. Moreover, the qualitative analysis of Hawley and Barnard (2005) identified the importance of supervisor support in improving the TOT process, supporting results from previous studies (Baldwin, Ford, & Naquin, 2000; Gregoire et al., 1998). The current study also appears to resolve a discrepancy among these studies and the work of Velada et al. (2007) who found that supervisor support ($\beta = 0.19$) is recognized as one of the motivating forces that help organizational employees to improve ETTT. Although the majority of the past studies were based in training settings, the present study confirms similar results in a corporate setting.

Contrary to the results for *opportunity to use training* and *supervisor support*, *peer support* was not significantly related to employees' effectiveness of TTT. The finding that there was no relationship between peer support and TOT in this study contrasted with the findings of Hawley and Barnard (2005), Cromwell and Kolb (2004) and Facteau et al. (1995). An explanation for this non-significant influence may be that the participants

indicated that it was not common for employees in the selected SOEs to share their ideas with others about using new skills or the benefits of applying new skills, so peer support was unlikely to influence employee performance. This research found that peer support did not have a significant influence on TOT, which suggests that the main drivers of ETTT emanate from a management source (such as one's supervisor) rather than from peers. That is, even when employees have shared their ideas on using new skills on the job(Xiao, 1996)with their co-workers (an idea tied to TOT), employees still need additional support from their supervisor to improve TTT.

These findings extend previous research which found that other elements of the work environment, such as culture (Tracey et al., 2001) and political power (Dirani, 2012) were related to TOT. Furthermore, supervisor support positively and significantly impacted TOT and does so to a greater extent than peer support. In relation to the survey undertaken in this study, many Vietnamese SOEs trainees reported that they did not receive high levels of support from their peers. There are possibly two reasons for this non-significant result. First, it could be due to the fact that employees in developing countries such as Vietnam lack particular work skills, including team work skills (Nguyen et al., 2011) so this finding is not surprising. Second, most of the previous research that found there was a significant relationship between peer support and TOT used data collected from samples in developed countries. Thus, different results may be found when exploring the factors which influence TOT in the workplace in developed countries compared to developing countries. As a result, the findings from this study provide a greater understanding that could facilitate future research on the factors which influence TOT effectiveness in developing countries.

To summarise, the organizational factors that impacted ETTT were considered in RQ2. Characteristics of trainees, training design and work environment were found to have a significant influence on the effectiveness of TTT. These findings provide a better understanding of the inconsistencies found by previous studies on the influence of organizational factors on TOT. For example, Baldwin and Ford (1988) and Ford and Weissbein (1997) claimed that insight into TOT requires an investigation of individual characteristics, training design and work environment from a comprehensive view, that is, to treat these three factors as separate independent variables influencing the effectiveness of TOT.

In regard to the impact of trainee characteristics, the current study identified three individual factors (*trainee ability, outcome expectation* and *perceived relevance of*

training) that had a significant and positive influence on ETTT. Employee identification with training design characteristics was found in relation to both factors of transfer design and performance feedback, thus improving the content of training and ensuring feedback relating to training may improve the effectiveness of technical training programmes. Furthermore, ETTT may also be influenced by two work environment factors - *opportunity to use training* and *supervisor support*. Employees perceived that when their job requires them to use their new acquired skills and when they receive assistance of supervisors in application of the new skills, the effectiveness of TTT is improved.

7.2.3. Research Question 3 (RQ3)

RQ3 examines the changes which should be implemented to effectively develop technical training activities in Vietnamese SOEs: *What are the major changes that could improve technical training effectiveness in Vietnamese manufacturing SOEs?*

National changes

The discussion of the major findings in the qualitative analysis mostly focuses on economic transition issues in Vietnam that are generally seen as having a significant influence on SOE technical training activities and to propose changes to improve these activities. These findings suggest that the transition process is not yet complete and the quality of technical labor remain low. This is similar to the previous findings of Nguyen and Truong (2007). Policymakers in Vietnam need to face some difficult issues with regard to training in SOEs in order to facilitate faster growth in the national economy.

Firstly, the findings of this study indicate that with the open-door policy and SOE reform, Vietnam's state sector has been significantly restructured to accelerate the country's transition toward a market economy. Some SOEs have experienced success in competing in the open-door market. SOE performance is created by a variety of challenges and opportunities due to the open-door policy, such as open access to the Vietnamese market and the development of export markets. Technical training for the employees in SOEs has also been significantly increased. The success of many SOEs has not only contributed to the development of the state, but also has benefitted the employees working for them.

However, many SOEs that remain wholly owned by the state are still in an "ownerless" situation because they are completely dependent on state funding. In this "interim" environment, the managers of SOEs have not been motivated to generate success or

profits for their enterprises. The findings from the interviews demonstrate that some SOE managers are not recognised as professional managers. The majority of them were not properly trained in business administration, which is necessary for effective management in a market economy (Truong & Ha, 1998). More particularly, individuals were appointed to key managerial positions in certain SOEs according to their political performance rather than business performance. As 100% of the capital is subsidized by the state, their main roles are to maintain the assets of the state and ensure jobs for the employees. There is almost no necessity for these SOE managers to improve themselves or update their knowledge of the various elements of a competitive business environment. There is also no need for them to provide advanced skills training for their employees to improve enterprise performance. Furthermore, state funding may not be sufficient to allow these enterprises to provide training in the workplace. For these SOEs to compete in a market economy, much more effort and resources are required.

It is recognized that while political guidelines are still viewed as important because SOEs are regarded as an instrument of the state it will be increasingly necessary to emphasize business performance rather than political factors when appointing key managers in SOEs. An SOE manager's political performance cannot remain as the key criterion on which to appoint a person to a senior managerial position. An appointment to a managerial position will need to be based on relevant business qualifications in order to ensure talented managers are placed in key roles.

The Vietnamese government must devise effective solutions to promote the equitization process in SOEs. The equitization process is a method by which to draw capital to enterprises as well as to reduce pressure on the public budget (Sjöholm, 2006), but the progress on equitization is very slow in Vietnam. If foreign investors take over SOEs, they will bring with them advanced technology and access to foreign markets, which will require SOEs to develop employee technical skills and significantly improve SOE performance. In addition, with capital share in the equitized SOEs, the decision to appoint personnel into key positions will be made by investors rather than the state. However, some SOE managers reported that equitization had not yet been implemented in their enterprises. The expectation of many SOEs is that the equitization process will be the key to SOE reform. Thus, it is suggested that Vietnam will need to use the collected experience from over 20 years of equitization to achieve success in the equitization process in Vietnam. SOEs need to be quickly equitized to increase their autonomy to develop skilled labor and acquire advanced equipment in order to compete and succeed in a market economy.

Secondly, after finding significant relationships between national educational characteristics and the effectiveness of TTT at the organizational level, the focus of education reform in Vietnam must be shifted from quantitative expansion to *qualitative improvement*(Hamano, 2008). The qualitative improvement of education will require changes to institutional training, technical teaching staff and student technical training.

When SOEs are equitized, they are able to invite and cooperate with foreign investors who may introduce them to advanced HRM concepts (Zhu et al., 2008) and significant changes in employee skills training. Equitized SOEs are able to be more involved in high-tech and capital-intensive areas, hence they will need highly technically skilled employees to make products, because the effective use of advanced technology in relation to market competiveness is extremely important. These SOEs will need to focus on providing appropriate working conditions and employee training and encourage effective participation in employee skill training programmes. By cooperating with other organizations and private enterprises, SOEs may achieve their long-term goal of acquiring technically skilled employees.

In order to realise effective technical training in the workplace, teaching staff need three important elements: (1) adequate knowledge and skills in relation to the content of the training; (2) suitable educational methodology and (3) high task motivation. As it stands currently, the educational policy of the Vietnamese government focuses on the two former points, but measures to increase the motivation of teaching staff are inadequate. In Vietnam, a teacher's salary is 1.7 times the per capita GDP, which is significantly below the Asian average of 2.4 (Hamano, 2008). In Singapore, teachers receive not only performance bonuses that amount to one to three months salary for average to outstanding performers (10-30% annual bonus), but their salaries are calculated in the salary schedule(Lee & Tan, 2010). As shown in the qualitative data analysis (see Chapter 5), the interviewers noted that the salaries of technical teachers are too low to enable them to support themselves, hence teachers are more likely to seek a second job than to develop advanced technical skills required to teach trainees to use modern technology. Consequently, training has suffered from low-quality content and teachers (Vo & Stanton, 2011) and trainees are often taught outdated skills that do not meet the requirements of enterprises. Thus, it is essential to develop a salary scheme for teachers that will motivate them to focus on improving their teaching.

Furthermore, as reported by the interviewers in this study, the quality of Vietnamese technical graduates remains low. They often lack the practical skills needed on the

job(Nguyen et al., 2011). In order to resolve this problem, the national government must place an emphasis on technical skill training and development to promote a clear link between training and the workplace. This would encourage enterprises and technical training institutions to cooperate to improve training content and teaching materials and introduce new courses that combine training and work practices. If this approach was implemented, technical training organizations would meet the labour requirements of SOEs. If enterprises provide skills training for their employees, they may also obtain a reduction in income tax. The tax saving would encourage enterprises to conduct effective training activities and encourage transfer of training in the workplace.

Finally, the Vietnamese education system needs to be seen in the larger context of educational privatisation. This is supported by the reports of (Harman, Hayden, & Nghi, 2010) who suggested that funds for education should be provided by a number of actors outside the national government. This means that society as a whole should support education. Education privatisation is generally understood as an extension of the cost burden to communities. According to the interviews, as the Vietnamese national government lacks resources to sufficiently support the national education system, education privatisation may lead to better training quality. Several investors are involved in supporting educational activities. This activity at the community level appears also to play an important role in the development of TOT. As a result, support for training should be provided with full consideration of the policy trends in the Vietnam educational system, including decentralisation and educational privatisation (London, 2011). This is supported by the suggestion of Collins et al. (2012) that indicate that Vietnam's education and training needs to be expanded and should incorporate the cooperation of prestigious international universities and institutes, as well as training projects based on financial assistance or loans from international organizations to develop the technical skills of workers.

In conclusion, in order to meet the requirements of a transitioning economy, such as that of Vietnam, in a period of industrialization and modernization, the equitization of SOEs and the restructure of the education system are urgent issues. Laws and regulations involving training activities and technological improvement have to be developed to reform the training curricula, education management, as well as to promote international collaboration on technical training. The national government should encourage enterprises to conduct effective and essential technical training in the workplace. Furthermore, it is necessary that the Vietnamese government gives young people appropriate support, including financial and career opportunities, to encourage them to

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embark on vocational learning, rather than general learning in universities, in order to meet the changing demands of the job market in Vietnam.

Organizational changes

Based on the findings of the quantitative analysis in this study, it may be argued that in order to maximize returns on investment in technical training, organizational changes need to focus on all three aspects of TOT: (1) individual characteristics,(2) training design and (3) work environment. Due to the link between individual characteristics and TTT, the determinants of employee motivation to learn and transfer are important in developing organizational training programmes. It is critical that employees perceive training as being relevant to their jobs. Organizational effort is required to not only ensure that skills training programs are designed to meet specific requirements, but also that trainees perceive the training as relevant(Axtell, Maitlis, & Yearta, 1997). This means that the benefits of training should be emphasized to employees to increase the perceived value of training courses. This recommendation is relevant to suggestions made by Facteau et al. (1995) who argue that employees should be seen as capable of making their own decisions about attending training programs. When employees are motivated to participate in training, they are more likely to make a greater effort to transfer this training to the workplace and use their newly acquired skills on the job. Thus, it is important to understand that the presentation and marketing of training courses by the enterprise must be considered as essential tasks of the HR department arranging the training programmes.

Outcome expectation (wages, promotions and bonuses) is a significant factor influencing ETTT. However, due to the existing political system, out-of-date management practices and collectivism in Vietnamese SOEs, many aspects of HRM remain within traditional personnel management paradigms (Zhu et al., 2008). For example, with lifetime employment, wages are related to government wage scales based on length of service. This results in a non-causal relationship between payment and performance (Vo & Hannif, 2011). The appointment of personnel to key positions in SOEs still tends to go to members of the government or those who have a connection, rather than satisfactorily skilled people (Malesky et al., 1998). This may be one reason why there is little effective participation of employees in training activities. Therefore, changes are needed so that Vietnamese SOEs can create a competent and motivated organizational environment that will motivate employee involvement, creativity and innovation. Enterprises may increase

employee perceptions of training usefulness by ensuring that the relevance of training is clearly connected to opportunities for increasing salary, bonuses and their work position (Chiaburu & Lindsay, 2008). This means that a new salary system needs to be introduced in which wage levels are linked more closely to the performance of individuals in terms of responsibility, productivity and skills. For example, the employees receive a basic wage (according to government wage scales) and extra payments accrue from numerous bonus forms.

The findings of this study also suggest that trainee ability impacts TTT and thus enterprises must promote TOT by carefully considering the individual ability of an employee when recruiting. In particular, enterprises may benefit from aligning their selection practices with the aims of their training courses (Grossman & Salas, 2011). As trainee ability is found to be a significant factor related to TTT in this current study, enterprises can enhance the effectiveness of TOT by selecting employees who are motivated to receive additional training. Vietnamese SOEs need to develop an integrated HR policy with a focus on recruitment, training, incentive systems, career development and to build a clear link between training, performance and rewards.

In addition, this study suggests that training design, which includes both the content of training programmes and the provision of performance feedback in ways that will help employees develop, will increase the effectiveness of TOT. This means that enterprises need to ensure that training programmes are designed to link with the ability level and goals of trainees. This will motivate employees to not only attend training, but also be confident in their ability to successfully understand the training content. The literature argues that training must be associated with the job, and content must be presented in ways that link to the different learning styles of the trainees (Velada et al., 2007). Enterprises also need to be aware of how well the training content (activities, examples and exercises) relates to the job. Trainees should also be given a guarantee from the enterprise that they will receive feedback regarding their performance. The enterprise must follow up with employees after the training to evaluate how well the content of the training has been retained by the employees and how the training could be improved over time.

Finally, while there is little surprise that the work environment may enhance ETTT, the statistical analysis in Study 2 provides significant empirical support for supervisory contribution and opportunity to use training to TTT. In order to ensure there is better transfer by Vietnamese SOE employees to gain the benefits of technical training,

enterprises must take responsibility for providing training. This means that it is necessary to have effective supervisors who encourage employees to ask about training and how it might assist them to improve their performance (Axtell et al., 1997). A supervisor who follows up with employees after training demonstrates that there is an expectation that they will apply their training to the job (Garavaglia, 1993). As a result, in order to encourage willingness and ability of supervisors to enhance the benefit of training, enterprise changes to training must focus on improving employee performance.

As an indication of organizational commitment, a supervisor must be willing to act as a training coach, mentor and supporter to increase TTT to the job. Supervisors need to indicate to employees what training is expected, along with how their newly acquired skills will be applied to the job. It was recommended that an enterprise is instrumental in encouraging TTT in the workplace to ensure that its employees have adequate levels of competence. Independence at work is only possible when employees have attained a certain level of competence in their work situation. Newly acquired skills may not be used by employees if there is no time for them to practice these skills. Over time, as employees have opportunities to apply their newly acquired skills, they will feel confident in using their new skills. Thus, it is necessary to encourage SOE managers to create a work environment where trainees have more opportunities to use new skills and where they will benefit from being in such a work environment.

In conclusion, the key changes which need to be made to improve ETTT in Vietnamese SOEs were examined in RQ3. From the qualitative analysis, it was concluded that some national changes need to be made to improve organizational training activities. Accordingly, the national government should promote the process of SOE equitization, improve the quality of the national educational system and encourage closer coordination between enterprises and training institutions. Furthermore, evidence from the quantitative findings suggests that enterprises should develop HRD policies that include selection, training, salary system and career development to create a clear link between training and performance and rewards. Additionally, work support conditions such as supervisory support and opportunities to use training, should also be provided by enterprises to increase the effectiveness of TOT of their employees.

7.3. Chapter summary

The objective of this chapter was to examine the three main RQs in this study. Based on the findings of the qualitative analysis, the present research investigated the key external factors responsible for the effectiveness of technical training activities in SOEs in Vietnam. Specific attention focused on three key environment elements: the economic environment, the national educational system and the legal environment. In the second study of this thesis, the findings of the quantitative data analysis were employed to examine three organizational factors (individual characteristics; training design and work environment) that significantly impact ETTT. Furthermore, from the findings of the qualitative and quantitative studies, it is evident that both the national government and SOEs need to make key changes to improve ETTT in Vietnamese SOEs. In particular, while the Vietnamese government should introduce supportive policies to encourage enterprises to offer technical training to their employees, SOEs need to increase their effort to improve the quality of TOT.

Chapter 8

Conclusion: The Future of Technical Training in Vietnam

8.1. Introduction

The major objective of this thesis was to develop a better understanding of several issues relating to the motivation to develop and conduct technical training for employees and to encourage its transfer to the job at the enterprise level. Eight Vietnamese SOEs were selected to investigate what factors impacted on their activities of transfer of technical training (TTT). These SOEs are located in the two largest cities in Vietnam, namely the capital, Hanoi and Ho Chi Minh City. The research finds a number of key factors, both national environmental-specific and enterprise-specific, which were responsible for the motivation of Vietnamese SOEs to conduct their activities of TTT. Furthermore, the thesis also highlights some major changes that are needed to improve the effectiveness of this process.

This conclusion chapter reports the major outcomes and implications of this thesis. First, an overview of the research is given, followed by a summary of the main findings. After this, the implications of the study for government policy makers, TOT practice at the enterprise level, and theory development are noted before the limitations of the thesis are addressed. Finally, directions of future research are also suggested in this chapter.

8.2. Overview of the thesis

The current study began with a set of principal objectives to extend the current understanding of several aspects involving ETTTin Vietnamese SOEs. In doing so, the context of the study was established on the basis of the literature review in Chapters 2 and 3. The emphasis focused on three principal areas, the influence of national-environmental and organizational-conditional factors on the ETTT of SOEs and the implementation of technical training in SOEs. Following the overall introduction to build the context, a conceptual framework that depicts the proposed relationships amongst the key variables of interest (Bryman & Bell, 2011) was designed to cover the key study areas of this thesis. Based on the extent literature and the thesis objectives, three RQs were developed to guide the analysis.

Chapter 4 elaborated on the research design and methodology. A concurrent embedded design of mixed methods research with two phases was adopted to achieve the study objectives and to test the conceptual model in this study. Creswell (2014) describes this approach as having one information collection stage, during which both qualitative and quantitative data are gathered simultaneously. This strategy allows the researcher to use the secondary method to address another question rather than the primary method. In this sense, a multiple case study method was employed to investigate "... contemporary phenomenon within a real life context" (Yin, 2014: 4) and a quantitative method was used to examine the significant relationships amongst the predicted factors and a dependent variable.

The combination of qualitative and quantitative methods is a superior approach to scholarly research in the management discipline because it deals effectively with diverse RQs, thereby helping the researcher to generate and refine the issues by adopting each methodology and provides more opportunity to discuss and explain the results generated from different perspectives (Tashakkori and Teddie 2003). The two studies in the project involve humans. Study 1 used qualitative methods to explore both external and internal factors which impact on TTT in Vietnamese SOEs using interview data (i.e. multiple case study analysis). Study 2 used quantitative methods to examine how organizational factors influence TTT in Vietnamese SOEs (i.e. quantitative questionnaire). The findings from both Study 1 and 2 were used to recommend several major changes to improve the ETTT in Vietnamese SOEs.

In Study 1, qualitative data was collected through face-to-face interviews with twelve senior managers/training directors in the eight SOEs. The author visited Vietnam twice and data for the study objectives were collected. During the researcher's first field-work trip to Vietnam in early 2012, unstructured interviews with several Vietnamese SOEs were conducted which shaped a pilot for the consequent research. During this pilot period, the researcher's principal supervisor discussed the research with her and supervised the collection of this evidence. Preliminary information gathered in this stage assisted in identifying the RQs and research plan. In the next phase, conducted in the middle of 2013, the author returned to Vietnam and collected data from the selected SOEs through semi-structured interview questions (see Appendix 3). While most of the interviews were recorded on audio tape to be used to confirm the notes, the researcher took hand-written notes in three of the interviews. The interviews were conducted in the participants' native language of Vietnamese and were transcribed following the interview After this, each interview transcript was emailed to its author so that they could check that

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their views and opinions had been accurately transcribed and they were also given the opportunity to add further information, if they so desired.

In Study 2, a self-completion questionnaire was administered to trained employees in the eight selected SOEs. In order to increase the effectiveness of the data collection, a pilot test was conducted with a sample size of 30 Vietnamese SOE employees at the end of July 2013 to identify any potential misunderstandings or problems related to the survey questionnaire. After the reliability and validity of the survey questionnaire had been tested and appropriately considered, the main survey was conducted by distributing the self-administered questionnaire to 200 employees in these eight SOEs in August and September 2013. A total of 185 completed questionnaires (a completion rate of 92.5%) were returned and were used for the study.

The analysis of the qualitative data and quantitative data was presented in Chapters 5 and 6, respectively. The empirical evidence collected through these two studies was used to examine several issues in the conceptual framework. A discussion of the three RQs was presented in Chapter 7.

8.3. Summary of major findings

A summary of the major findings is given in three different sections. The first section concludes the possible findings on both the external environmental and the organizational factors influencing ETTT in Vietnamese SOEs. This is followed by a section outlining several major changes which are needed to develop the activities of TOT in these SOEs. The third section considers the relevance of the conceptual framework (described in Chapter 3) during the entire study process.

8.3.1. Findings on factors influencing the effective transfer of technical training

As discussed in the introduction to this research, it was assumed that after economic modernization had occurred, the Vietnamese government would implement many policies to support educational development to meet the demands of a market-oriented economy. However, the vocational skills of Vietnamese employees (particular in SOEs) are very low compared to the labor markets in ASEAN. This research attempts to understand why the technical skill levels of Vietnamese SOE employees are still low. In order to explore this, several factors which might have reduced the effectiveness of technical training activities at the enterprise level were investigated. These comprise both national-

environmental and organizational-conditional elements. The key findings are summarised as follows.

Findings regarding national-environmental factors: The environmental factors (economic, educational and legal) were examined in Chapter 5. From the findings of the qualitative data analysis, a new economic factor, "Vietnam joining the WTO", emerged as on of the most important factors influencing ETTT in Vietnamese SOEs. Although the perceived importance of this factor was not detailed in the literature review (Chapters 2 and 3), the evidence suggests that joining the WTO has had a significant impact on motivating SOEs to improve the technical skill levels of their employees. This finding may need some description. First, during the interviews, it became apparent that the phrase, "Vietnam joining the WTO" was familiar and important to most of the business managers in the context of the transition economy in Vietnam. Despite the lack of coverage of this external factor in the literature review, it has a clear domain of knowledge to it. In addition, because of Vietnam's recent entry to the WTO, the respondents have a strong awareness of this event. Second, as most of the previous studies were conducted in the context of developed economies that do not have an embargo on their economy as Vietnam has experienced, these studies may not have had an opportunity to take note of this factor.

The remaining environmental factors that were predicted in the contextual framework of this thesis (Chapter 3) were "Reform of SOEs", "Open access to the Vietnamese market" and "Development of the export market". The evidence shows that all these factors had a significant impact on ETTT. However, "Development of the export market" appeared to have less support than the remaining factors. Overall, the evidence from the qualitative study of this thesis explored four key external environmental variables influencing ETTT in Vietnamese SOEs.

In relation to the examination of educational factors, all the proposed variables, "Quality of institutional training in Vietnam", "Quality of technical teaching staff" and "Quality of student technical training" had limited impact on ETTT. "Quality of institutional training in Vietnam" had the most influence on ETTT and "Quality of student technical training" had the lowest influence.

Similarly, the findings on the influence of the legal environment showed that all three proposed factors, "National training policies", "National technological policies" and "Foreign investment policies" had an impact. The evidence suggests that "National training policies" had the strongest impact on motivating Vietnamese SOEs to conduct

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technical training programmes for their employees. This was followed by the impact of "National technological policies" and "Foreign investment policies".

Findings regarding organizational-conditional factors: The evidence for the impact of organizational variables on the effectiveness of TTT appears to be consistent with the three hypotheses (Chapter 4). All three organizational factors [individual characteristics (H1), training design (H2) and work environment (H3)] had a significant influence on ETTT in SOEs in Vietnam.

In relation to the impact of individual characteristic variables, the quantitative study confirmed the important role of all three factors, as proposed in H1. The evidence showed that the most important factor was "Trainee ability" in the training activities at the enterprise level."Outcome expectation" had the second strongest influence and "Perceived relevance of training" had the least impact on this activity.

Similar to the responses on the influence of individual characteristics, both the proposed factors of training design (H2) had a significant influence on improving TTT. However, the influence of "Transfer design" was found to be stronger than the influence of "Performance feedback".

The three hypotheses in H3 were devised to examine the influence of work environment factors on the success of TTT in Vietnamese SOEs. The findings showed that "Opportunity to use training" had a stronger impact on the success of technical training activities at the enterprise level compared to "Supervisory support". However, the Vietnamese SOE employees did not indicate support for the importance of the remaining factor, "Peer support" in relation to improving the effectiveness of TTT activities at the enterprise level.

8.3.2. Major changes needed to improve effective transfer of technical training

Evidence from both the qualitative and quantitative studies in this thesis suggest that in order to improve the effectiveness of TTT in Vietnamese SOEs, key changes in both governmental and organizational conditions will need to be implemented.

Regarding *national changes*, the evidence indicated that the national government should devise solutions to hasten the process of *SOE equitization* to attract potential investors and increase SOE capability. This will increase the autonomy of the SOEs, which require the development of skilled employees and the purchase of advanced equipment to successfully compete in a market economy. In addition, educational reform should be re-

focused to improve the quality of all aspects of training content and teaching effectiveness. In order to enable teachers to focus on improving their teaching, their salaries need to be increased and modern educational equipment has to be provided. Furthermore, the government should introduce policies to encourage cooperation between Vietnamese institutes and prestigious international universities to provide training in advanced technical skills to the Vietnamese labor force. Finally, the Vietnamese government should give young people more support, including financial and career opportunities, to encourage them to enrol in vocational learning in universities in order to meet the demands of the job market.

Regarding *organizational changes*, based on the findings of the quantitative analysis in this study, it may be argued that, in order to improve the effectiveness of investment in technical training in Vietnamese SOEs, organizational changes need to focus on some of the following key aspects. First, enterprise training departments must pay attention not only to designing relevant training programmes, but also to promoting and marketing the benefits of these training programmes to employees. Second, an integrated HR policy must be developed with a focus on recruitment, training, the incentive system, career development and establishing a clear link between training, performance and rewards. This will create an environment that will encourage the participation of employees in TTT. Third, the enterprise must offer feedback to employees after their training to make sure that the contents of the training are retained and improved over time. Finally, SOE managers need to create a work environment where supervisors are willing to act as a training coach, mentor, supporter and orchestrator to increase the TTT on the job as well as providing trainees with opportunities to apply their newly acquired technical skills.

8.3.3. Relevance of the conceptual framework developed in this research

A conceptual framework illustrates the key focus of the research, including the main factors and the proposed relationships among them (Creswell, 2014). The conceptual framework, as represented in Chapter 3 (see Figure 3.2), appears to be generally relevant to this thesis. Over the course of this research, this conceptual framework guided the research in the correct direction. Although one organizational factor, "Peer support", was found to be unimportant to ETTT (see Section 7.2.2), it is worth examining. This finding allowed the author to compare the findings of TOT research using data from two different types of samples. Most of the previous studies that found the "Peer support" factor to be significant used data collected from samples in developed countries where employees

may have a basic skill level (including technical and teamwork skills). Thus, using data collected in developed economies indicates the importance of peer support in the TOT process. In contrast, the data used in this thesis was collected from a developing country where employees lack teamwork skills(Nguyen et al., 2011)- as demonstrated in this study. However, the author is not questioning the research that indicates a significant relationship between peer support factor and TOT (Cromwell & Kolb, 2004; Dirani, 2012; Facteau et al., 1995). Future studies should therefore use data collected from other developing countries to examine this factor.

In addition, one new national environmental factor, "Vietnam joining the WTO", which was not included in the conceptual framework, was found to be very important to ETTT (see Section 7.2.1). This is also worth exploring. Due to the dearth of literature on the influence of the external environment on skills training at the enterprise level, in particular, the factor of Vietnam joining the WTO revealed some of the practical aspects that impact TTT. This suggests that further studies should be conducted to investigate the role of joining international trade organizations such as the WTO and its impact on HRD at the enterprise level in transitional economies such as Vietnam.

8.4. Implications of the findings of this study

8.5.1. Implications for government policy makers

The findings of this study reveal several implications for government policy makers in Vietnam. These implications are also applicable to policy development in other emerging nations that are encouraging the development of technical training activities at the organizational level. Given the importance of technical skilled labor as a key productive resource influencing competitiveness and the integration of an organization, Vietnamese policy makers should place a greater emphasis on encouraging SOEs to conduct employee training in the workplace.

There are a number of issues that Vietnamese policy makers should consider. First, the purpose of the Vietnamese government in economic reform in general and HRD in particular is twofold. The principal stated aim of economic reform is to move to a socialist-oriented market economy and to improve the development of SOEs that are the core of the state economy. The government sees SOE equitization as a means to improve SOE performance in general and employee skill levels in particular. Given the strategy of SOE reform, Vietnamese SOEs have gained the authority to make their own business

decisions. However, after nearly 25 years of the equitization process, many large SOEs are not yet equitized. These non-equitized SOEs must still operate from guidelines set through bureaucratic processes. As found in this study, the slow pace of this process may result in various limitations in the development of technical skill training activities for employees in Vietnamese SOEs. These may be limitations in SOE capital investment in training and advanced technological change as well as restrictions to investors. This limits the process of employee training in SOEs. Therefore, the national government must devise solutions to hasten this process to enhance the independence of SOEs, which will allow SOEs greater flexibility to address technical skill training for their employees if they are to compete and survive in a market economy.

As mentioned earlier in this thesis, there is a difference between an enterprise's need for technical skills and institution training. According to Nguyen and Truong (2007), there is a lack of technical skills and qualifications in the labor force of Vietnam. In order to promote vocational training, the Vietnamese government needs to have mechanisms and policies to establish a close link between enterprises and training institutions (Tracey et al., 2001). Throughout the present thesis, it was found that public sector departments were slow to make decisions on educational and training reform to improve the quality of both training content and teachers. In addition, many Vietnamese educational institutions lack the initiative to coordinate with enterprises to better understand the skills needed in the labor market, which would help them to improve the quality of their training programmes. In light of these findings, the Vietnamese government should consider implementing measures to ensure improvements in training institutions and educational relevant departments and more generally take more responsibility for driving national educational system reform.

Since Vietnam commenced economic transition, HRD improvement has been gradually introduced. However, as discussed in this thesis, problems still remain, including low vocational trainer salaries, insufficient funding for technical scholarships and a lack of relevant support policy to encourage youth to enrol in vocational training. To improve this situation, Vietnam should consider increasing its budget for vocational training. These reforms would help the technical labor force of Vietnam to become more skilled and more globally competitive.

This research also reports that although the government provides support for SOEs to use advanced technologies to create better products, the amount of investment does not match the level of technology. Many SOEs still maintain old technology in their production
lines. Thus, employees in these SOEs are not willing to attend advanced technical training programmes, because they know that the skills they will learn cannot be used in their workplace. From the evidence presented in this study, it is apparent that the national government should address this issue by allocating more of its budget for technology development in SOEs to improve the productivity of employees in particular and enterprise performance in general.

Finally, the Vietnamese government should continue its official reform process to position Vietnam as attractive for foreign investors. According to As-Saber et al. (1998), international investment is a key vehicle for transferring technical skill sets, advanced technology and a Western management culture. Vietnam might gain benefits by simplifying its foreign investment procedure and allowing special taxation and other incentives for international investors.

8.5.2. Implications for practice: transfer of technical training

The results of this research have a number of important implications for managers dealing with ETTT, particularly in SOEs. According to these results, it is suggested that in order to maximize enterprise return on investment relating to technical training and improve the effectiveness of employee training, SOEs must pay attention to all three key organizational factors influencing the TTT process: *characteristics, training design* and *work environment*. However, it is suggested that enterprises could not feasibly include all of these factors into their technical training programmes (Grossman & Salas, 2011). Managers may benefit from a set of guidelines classifying only those variables that are most likely to have a significant influence on their TTT results. Thus, a checklist of factors was developed in the present study that may be useful to managers of SOEs when introducing programmes of technical training for their employees in the workplace. On the basis of the data collected, it was noted that the importance of each factor was not considered to be equal.

This study suggests that enterprises need to focus on the importance of trainee characteristics that may impact differently on TTT. When trained employees already have high ability/or motivation to transfer, it is evident that this has a direct relationship with TTT. Of these individual factors, the trainee's ability appears to have relatively more impact on improving TTT than the motivational variables (outcome expectation and perceived relevance of training). These variables must be considered in any involvement to support effective TOT.

Several empirical studies have found that cognitive ability (Bates & Holton, 2004; Noe & Schmitt, 1986) and performance self-efficacy of trainees (Elangovan & Karakowsky, 1999; Velada et al., 2007) are positively related to TOT. These may help trainees to consider how they could generalize and use their newly acquired skills on their job. In the light of the present study, these factors may be beneficial for employees with high levels of ability, who are likely to be better engaged in the maintenance of their training. Therefore, enterprises may enhance their TTT by making sure that employees have a belief in their capabilities to successfully learn and use new skills on their job. In order to do this, enterprises need to highlight the improved performance of other trained employees, as well as clearly describing the aim and content of training. In the meantime, enterprises need to provide employees with benefits upon completion of training to encourage them to apply these skills on the job. For example, enterprises should introduce special policies related to allowances and rewards that will motivate employees to actively engage in the process of both pre-training and post-training.

Second, training design, which connects the skills learned in training and the skills used on the job, also need to greatly improve. This helps employees to be better prepared for training and also to apply their new skills upon returning to their jobs. Furthermore, in relation to the important role of trainee ability for ETTT, technical training programmes, which link trainee ability levels, need to be suitably designed for all ability levels from low to high. This means that training methods must be available for training employees with low ability levels because this facilitates targeted training for more able employees(Simosi, 2012; Stake, 1995). Additionally, in order to ensure that the knowledge employees have acquired during training is retained over time and applied on the job, enterprises need to conduct follow-up evaluations during and after the training courses to provide performance feedback for employees.

Finally, this study has confirmed the importance of work environment factors in improving TTT. A supportive environment needs to be provided for employees during the process of TOT. It is recommended that any effort to increase TOT must also be complemented by ensuring that the technical training provided closely matches the needs of enterprise performance improvement. TTT is only effective when it is clear that the training is highly relevant to address the main business needs. It is suggested that efforts are only made to increase the potential value of TTT when training is regarded as relevant by managers and employees.

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In a comprehensive review of the TOT literature byBurke and Hutchins (2007), several studies found peer support equal to or more significant than supervisor support for TOT. The findings of this study suggest that the role of the supervisor continues to have a strong impact on the performance of trainees. Supervisors can show their support for trained employees by providing feedback on their performance and giving them opportunities to use their training (Burke & Baldwin, 1999; Chiaburu et al., 2010; Lim & Morris, 2006). However, a large number of supervisors in SOEs are not required to focus on employee performance after training. Supervisors should be involved before, during and after training to have an impact on TOT (Broad, 2005; Chiaburu et al., 2010). Thus, training professionals need to teach supervisors how to best support the performance of their trained employees. Support from managers and supervisors, such as providing feedback on employee performance and providing an opportunity for employees to use their new skills, need to be given to help employees learn and apply their new technical skills. If employees feel they are in a supportive environment, they are likely to see training as useful for their job performance and for the development of the organization (Cheng & Ho, 2001).

8.5.3. Implications for theory development

The outcomes from this research have implications for theory development. The study has contributed to the literature on TOT by providing empirical evidence to confirm outcomes on a range of aspects involving ETTT at the enterprise level. As discussed in Chapter 7, the findings of the present study provide significant support for the conceptual framework that was created from predictions based on the existing literature. This thesis has contributed to the literature on TOT by suggesting the use of multidimensional models that provide insights into TOT. These models recognize the importance of both the external environment and organizational conditions in the process of TOT at the organizational level.

National environment factors

As discussed earlier in this thesis (Chapter 3), there are a number of environmental factors that contribute to the formation and development of technical training activities in Vietnamese SOEs. ETTT may be impacted by external factors such as the economic, educational and legal context. There is a range of literature focusing on these areas (e.g. Athukorala & Tran, 2008; Aw et al., 2007; Freeman, 2002; Hakkala & Kokko, 2007;

Nguyen & Truong, 2007; Truong & Ha, 1998; Zhu et al., 2008). Using a deductive process, relationships between the external environment and TTT were created on the basis of the existing literature. These relationships were assembled into one single study in the conceptual framework, as shown in Study 1 (see Section 3.6). Subsequently, these relationships were examined though the empirical case study data.

With the support of the extant literature, this data was then used to draw conclusions. The findings from the case study data confirmed all the relationships predicted in Study 1. Additionally, one new conclusion was drawn from these findings, which was not covered by the extant TOT literature, that is, the "Vietnam joining the WTO" variable which emerged as one of the most important recent external factors influencing ETTT in Vietnamese SOEs.

In an employee training context, it is possible that these findings address a new dimension of a theory of external environmental impacts on training and transfer activities at the organizational level. Due of the restricted scope of this study, it is not possible to investigate the importance of these outcomes in greater detail. Nevertheless, other researchers could find these aspects interesting and may consider investigating the implications of these outcomes for HRD and training.

Organizational factors

A large volume of literature emphasises the organizational factors influencing TOT in the workplace (Baldwin & Ford, 1988; Burke & Hutchins, 2008; Edwards, 2013; Facteau et al., 1995; Holton et al., 2000; McDonald, 2001; Tracey et al., 1995; Velada et al., 2007). Using a deductive process, hypotheses were developed on the basis of a review of findings in the existing training and development literature. These hypotheses were grouped into three different dimensions of one separate study, that is Study 2 (see Section 4.4.2), to deal with the impact of individual characteristics (H1), the impact of training design (H2)and the impact of the work environment (H3). Subsequently, these hypotheses were examined using the questionnaire survey data.

Much of the data gathered in this research reinforced the present theoretical foundation of the TOT process in the workplace. The findings of Study 2 offer further empirical evidence to support similar outcomes as advanced by other TOT studies such as Gist et al. (1991), Quinones et al. (1995), Tracey et al. (2001), Seyler et al. (1998). However, the importance of one factor, namely "Peer support", was not supported by the survey data collected in Study 2.

Overall, this thesis has contributed to the TOT literature by suggesting several new ideas. At the same time, it has strengthened a host of principles by confirming them during the study process. Previously, most transfer studies have dealt separately with particular issues of TOT (e.g., social support, economic context, individual motivation, work condition). This thesis, however, has incorporated major issues from national and organizational environments that influence TTT at the organizational level. This allowed the opportunity to compare factors across conditions and make some evaluations on the relationships between them. The findings relating to national environmental characteristics as well as organizational conditions were used to suggest some changes that would improve ETTT. This process has led to a combined approach to examining the major issues of TOT across two different environmental conditions. Further studies on these issues are required.

8.5. Limitations of this study

At the beginning of this thesis, the limitations of employing a mixed method research approach were acknowledged (Section 1.4). When discussing the methodology, these limitations were elaborated and detailed upon (see Chapter 4). At the same time, some possible ways of overcoming these limitations were also discussed. Briefly, they may be summarised as follows:

(1) The scope of the present research is restricted to TTT in one type of enterprise (SOEs) in a transition economy such as Vietnam.

(2) Selection of the cases was constrained by a relatively small initial population of only eight SOEs. Furthermore, the selection of the sample size of both the case studies and the questionnaire survey was constrained by a relatively small primary population of only 12 interviews and 200 questionnaires in 8 Vietnamese SOEs. This means that generalizations from the present research are limited. To advance this study, it is suggested that an investigation of different major industrial sectors in the two largest cities in Vietnam be conducted.

(3) The research is limited to a particular time frame. Only the employee training environment up to the end of the data collection in September, 2013 relate to this thesis. Events in Vietnam and other regions impacting on TTT relationships in Vietnamese SOEs post-September, 2013 did not influence the findings of the data collection phase.

(4) Regarding the methodology, several limitations need to be discussed. First, because of the significant geographic distance between the investigator and the enterprises under enquiry, only a small amount of time was spent with each of the participants. Additionally, the researcher's time and finances were limited, but the finalisation of appointments was costly. It was problematic making appointments with Vietnamese SOEs, especially organising the interviews. Consequently, long distance telephone calls and emails were required to communicate with the enterprises selected for the study.

(5) By its nature, the thesis has not purported to be comprehensive and the focus of the research was selective. That is, not all of the areas associated with TTT in Vietnamese SOEs have been considered.

(6) Although this was the first study of the Vietnamese context as an exploratory investigation, the findings from the interview data were not used to give a greater appreciation of the survey data to examine the external environment impacts on TOT.

(7) The study adjusted the transfer model to include direct relationships between some of the organizational factors and TTT. While relationships have been perceived in earlier studies (e.g. Holton et al., 2000; Tracey et al., 2001), the choice for this adjustment was also decided by the results of statistical analysis. Consequently, the final model should be duplicated in another sample.

As suggested by Creswell (2014), most of the limitations, such as the lack of rigour and probable study bias, may be minimised by careful case design and questionnaire development. The utmost effort was taken to incorporate the cases by matching them with the study objectives and propositions. Furthermore, the use of multiple case studies may overcome the threat of a representative shortage. Through the selection of cases from a number of major industries, industrial variation was accommodated. The study examined real-life situations. Diverse cases may help in the analysis of each of the cases in light of others to strengthen the validity and reliability of the findings (Eisenhardt, 1995).

8.6. Future research directions

The empirical report derived from this thesis suggests the necessity for an expanded future research schedule to consolidate the results and to further advance theories described in the TOT literature. There are several issues that could be studied in the future. Primarily, future research could directly address the limitations of this study. Other TOT areas that have not yet been covered in this research may also be considered.

The key purpose of this study was to explore the influences of both national and organizational factors on ETTT at the enterprise level in the single developing economy of Vietnam. Further research should try to validate these results in the context of other developing nations. Such comparative investigations may provide a new dimension and approach with attention to examining existing theories and creating new theories. This can also enhance the reliability, validity and generalizability of the results reported in this thesis.

Second, the present study is not restricted to a particular industry. The data was collected from the experience of employers/training directors and employees in different industries. Future research could consider exploring TOT within a specific industry to investigate the factors from a relatively homogenous manufacturing background.

Third, this thesis only focused on examining the factors influencing the transfer of technical skill training. The findings may provide evidence to distinguish technical skills transfer influences from other skills transfer influences. Thus, confirmation of transfer results from other skills training data such as open-skills training data (e.g., leadership development, team working) might be a significant focus of future studies.

Fourth, although the data were gathered from employers/training directors and employees across eight manufacturing industries, the generalizability of the results may be limited because these industries belong to one type of enterprise, namely the SOE. Thus, future research should focus on a broader target population. This means that the findings should be replicated in other types of enterprises (e.g., private companies, international joint ventures) to reveal meaningful findings in relation to the influence of both national environmental and organizational factors.

This study conceptualized technical training without differentiating between different levels of technical skills, from basic, advanced or Western, which does not provide a link between the way employees think about their particular learning content. Levels of influence may be embedded further by differentiating degrees of the trained technical skills, from basic to advanced. Technical skill is more specific in nature, thus the choice of this skill type may be considered (Cheng & Ho, 2001). It is worth investigating whether the current model generalizes to a wide range of different technical skills to be done on the job.

Finally, it is the view of the author that, thus far, the national environmental factor, as a separate set of dimensions (economic, educational and legal), has never before been investigated in relation to its impact on effective TOT at the enterprise level. This research may act as a guide for further studies for investigating these constructs in more detail, as they associate with the study of training activities at the organizational level. The present study, at least, has tried to spread the domain of transfer research through addressing the national environment as a HR training component and has built a scope for future research in this region.

8.7. Chapter summary

The key objective of this thesis was to offer a broader understanding of TOT at the organizational level, with particular emphasis on exploring the factors influencing TTT in Vietnamese SOEs and suggesting major changes for improving this activity. Using multiple cases, Study 1 of this thesis investigated three key environmental factors impacting on TTT. These factors were economic characteristics, educational characteristics and legal conditions. At the same time, the thesis conducted Study 2 using a questionnaire survey to examine the influence of three organizational factors, individual characteristics, training designand work environment. From the findings of both of these studies, major changes were suggested to enhance the effectiveness of this transfer process in SOEs in Vietnam.

During the study process, the author was aware of numerous limitations. Most of the limitations, nevertheless, were overcome by careful case design and detailed questionnaire development. Addressing with interview data and questionnaire data, the relevant existing literature was also used to examine the issues to overcome the limitations.

The outcomes reported show that TTT activities are an important way for Vietnamese SOEs to develop employee technical skill levels, which area key for improving an enterprise's business performance. It has been found that ETTT is impacted by a host of national environmental and organizational factors. However, the importance of each of the factors was considered to be different.

The concluding chapter of this thesis has provided an overview of the research, a summary of the findings of both the qualitative and quantitative studies and their implications for national government policy development, the practice of TOT at the organizational level and theory development. Based on the results, this thesis has also pointed to a number of possibilities for further research associated with several issues of TOT in SOEs in particular and other types of enterprises in general. Therefore, it is argued that the present thesis has contributed to the academic literature on TOT.

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APPENDIX1



FACULTY OF BUSINESS, ECONOMICS AND LAW

MEMORANDUM

To:Ms Lan Anh Thi Pham, School of Business, Department of ManagementCc:Professor Peter Dowling, School of Business, Department of ManagementFrom:Professor Russell Hoye, Chair, Faculty Human Ethics CommitteeSubject:Final Approval of Human Ethics Committee Application No. 38/13PGTitle:Human Resource development in State-owned enterprises (SOEs) in Vietnam: The challenges of developing effective transfer of technical training.Date:18/07/2013

Dear Ms Pham,

Thank you for your recent correspondence in relation to the research project referred to above. The project has been assessed as complying with the National Statement on Ethical Conduct in Human Research. I am pleased to advise that your project has been granted ethics approval and you may commence the study now.

The project has been approved from the date of this letter until 25 July 2015.

Please note that your application has been reviewed by a sub-committee of the University Human Ethics Committee (UHEC) to facilitate a decision before the next Committee meeting. This decision will require ratification by the UHEC and it reserves the right to alter conditions of approval or withdraw approval at that time. You will be notified if the approval status of your project changes. The UHEC is a fully constituted Ethics Committee in accordance with the National Statement under Section 5.1.29.

The following standard conditions apply to your project:

- Limit of Approval. Approval is limited strictly to the research proposal as submitted in your application while taking into account any additional conditions advised by the FHEC.
- Variation to Project. Any subsequent variations or modifications you wish to make to your project must be formally notified to the FHEC for approval in advance of these modifications being introduced into the project. This can be done using the appropriate form: *Ethics - Application for Modification to Project* which is available on the Research Services website at http://www.latrobe.edu.au/researchservices/ethics/HEC_human.htm. If the UHEC considers that the proposed changes are significant, you may be required to submit a new application form for approval of the revised project.
- Adverse Events. If any unforeseen or adverse events occur, including adverse effects on participants, during the course of the project which may affect the ethical acceptability of the project, the Chief Investigator must immediately notify the FHEC Secretary on telephone (03) 9479 1443. Any complaints about the project received by the researchers must also be referred immediately to the FHEC Secretary.
- Withdrawal of Project. If you decide to discontinue your research before its planned completion, you
 must advise the FHEC and clarify the circumstances.
- Monitoring. All projects are subject to monitoring at any time by the Faculty Human Ethics Committee.
- Annual Progress Reports. If your project continues for more than 12 months, you are required to submit an Ethics - Progress/Final Report Form annually, on or just prior to 12 February. The form is available on the Research Services website (see above address). Failure to submit a Progress Report will mean approval for this project will lapse.

- Auditing. An audit of the project may be conducted by members of the FHEC.
- Final Report. A Final Report (see above address) is required by 25 August 2015.

If you have any queries, or require any further clarification, please contact the FHEC Secretary on 9479 5164, or via e-mail: <u>FBEL.ERGS@latrobe.edu.au</u>

On behalf of the Faculty Human Ethics Committee, best wishes with your research!

Yours sincerely,

Professor Russell Hoye Chair, Faculty Human Ethics Committee

APPENDIX 2

Participant Information Sheet (Interview)

Project Title: "Human Resource development in State-owned enterprises (SOEs) in Vietnam: The challenges of developing effective transfer of technical training"

My name is Lan Anh Thi PHAM, I am a PhD student at the Department of Management, Faculty of Business, Economics and Law at La Trobe University, Victoria, Australia.

This research project aims to investigate and measure the influence factors on transfer of training in Vietnamese State-owned enterprises (SOEs). The research aim is to determine how we can develop employees' technical skills in Vietnamese SOEs. This research also responds to the Vietnam Vocational Training Development Strategy 2011-2020 of the Vietnamese National Government (degree No 630-TTG, 29th May 2012) which aims to reform vocational training and improve skill levels of employees to meet the demands of the labor market.

This research will enhance our understanding of the issues that Vietnamese SOEs have encountered after a number of national government reforms - especially after joining the WTO in 2007. Many of these reforms have focused on developing technical training and transfer of technical training for employees at the workplace. This research will inform trainees, managers, trainers, policy makers and researchers so your participation is very important.

The results of this study and your personal data collected in the course of this study will be sent to you at your request. Your participation is voluntary and you are under no obligation to consent to participate in the project. You may withdraw within four weeks of completion of your joining in this project, by notifying the researcher by e-mail or telephone as below.

This interview questions comprises questions and a section on enterprise background. The interviewee should take approximately 40 minutes to complete.

The data collected in this research study will remain confidential and will not be connected in any way to your personal information when the data is analysed. Use of the data collected in this study will be as follows:

The data will only be presented in an aggregated form. Storage of the data collected will adhere to La Trobe University regulations and kept on University premises in a locked cupboard/filing cabinet or on a password protected computer for 5 years. The raw data will be accessible only to the researcher who is strictly controlled by the University

confidentiality guidelines. The aggregate data is expected to become the subject of journal articles and to be presented at conferences according to strict guidelines on privacy and intellectual property governed by La Trobe University.

If you have any queries or are interested in a summary of the results of the research I would be happy to provide these, please let me know if you would like me to do this. Any questions regarding this project may be directed to the investigators as follows:

Lan Anh Thi Pham Department of Management Faculty of Business, Economicsand Law La Trobe University, Victoria, 3086 Ph: +61 415943125, Email: t35pham@students.latrobe.edu.au Prof. Peter Dowling Department of Management Faculty of Business, Economics and Law La Trobe University, Victoria, 3086 ph: +61 43 9479 2731 p.dowling@latrobe.edu.au

If you have any complaints or queries that either investigator has not been able to answer to your satisfaction, you may contact:

The Secretary,

Faculty Human Ethics Committee,

La Trobe Business School

La Trobe University, Victoria, 3086,

E-mail: FBEL.ERGS@latrobe.edu.au

Thank you for your co-operation and assistance.

Lan Anh Thi Pham

APPENDIX 3

Manager Interview Questions

The purpose of this study is to measure influence factors on transfer of technical training in Vietnamese SOEs. Interview questions were designed by Ph.D. candidate Lan Anh Thi PHAM in collaboration with Prof. Peter Dowling and Dr. Jennifer Spoor from La Trobe University, Australia.

This interview focuses on the following areas:

- The impact of the economic environment on transfer of technical training in SOEs;

- Educational environment characteristics that impact on transfer of technical training in SOEs;

- Legal factors that impact on transfer of technical training in SOEs;

- Suggested changes for developing more effective transfer of technical training in SOEs.

If you have any questions in regard to this study please contact:

Lan Anh Thi Pham

Email: <u>t35pham@students.latrobe.edu.au</u>

Mobile phone: +84-913522243

PART A

ENTERPRISE BACKGROUND

Q 1:What are the main products/services of your enterprise?

Q 2:*When was the enterprise established?*

Q 3: How many employees were on the firm's payroll at the end of the calendar year 2012?

Q 4: When was the most recent employee technical training program offered in your enterprise?

Q 5.Who is primarily responsible for employee training in your enterprise?

□ Training director

 \Box Line managers

 \Box Others (Please specify)

Q 6:What were the total costs (VND) of the technical training programs run in 2012?

Q7:How long have you been working for this company?

Q 8:What is your role in the company and the extent of your involvement in training technical employees?
PART B

ENVIRONMENTAL FACTORS INFLUENCING TRANSFER OF TECHNICAL TRAINING

Q 9: How does the external economic environment (both international and national) impact on the transfer of technical training in your firm?

Q 10: Please discuss the impact of each of the following economic factors on the transfer of technical training in your firm?

1) SOE reforms

2) Significant use of imported high technology in Vietnamese firms

4) Increasing numbers of international joint ventures in the Vietnam market

5) Growth in export markets for the firm's products

Q 11:How do the national educational characteristics impact on the transfer of technical training in your firm?

Q 12: Please discuss the impact of each of the following educational factors on the transfer of technical training in your firm:

1) Shortage of educational Technical equipment at governmental educational institutions

2) Shortage of practical exercises in training programs (as a result, students may understand the theory, but their ability to apply theory to the work situation is limited)

3) The quality of training staff in training institutions.

Q 13: How does the national legal and regulatory environment impact on the transfer of technical training of your firm?

Q 14: Please discuss the impact of each of the following national legal and regulatory factors on the transfer of technical training in your firm?

1) Exemption of taxes related to training

2) Government training scholarships to firms

3) National government policies encouraging technological innovation

4) Vietnamese Foreign Direct Investment Law

Q 15: What are the most important organizational factors that influence the transfer of technical training in your firm?

PART C

TRANSFER OF TECHNICAL TRAINING IN YOUR FIRM

Q 16: What are the key drivers of technical training in your firm? Please discuss

Q 17: Do you have enough technical trainers in your firm? Do you think they are professionally competent to run technical training programs when industry demands for training are increasing?

Q 18: What kind of internal technical training has been provided within your firm?

Q 19: What kind of technical assistance does your firm receive from technical assistance partners?

Q 20: What assistance do you seek from technical assistance partners?

Q 21: How do you evaluate the quality and the effectiveness of a training program? How often is evaluation undertaken?

Q 22:Do you think more effective transfer of technical training would enhance the market competitiveness of your firm in terms of price, quality and innovation of your products and services? Please provide examples

Q 23:How could your firm contribute to developing a more effective transfer of technical training?

Note: The following prompts will be suggested if the respondent finds this question difficult.

- Providing funds to educational institutions
- Providing equipment to educational institutions
- Managers serving on educational advisory boards
- Cooperative research agreements with local universities
- Other activities, please specify

Q 24:Do you think overall employee performance will improve as a result of transfer of technical training? If so, please discuss and give examples.

Q 25:What specific government support would assist your firm to more effectively transfer technical training?

Thank you for your participation

Employee Questionnaire

The purpose of this study is to measure the factors that influence transfer of technical training in Vietnamese SOEs. This questionnaire was designed by Ph.D. candidate Lan Anh Thi PHAM in collaboration with Prof. Peter Dowling and Dr. Jennifer Spoor from La Trobe University, Australia.

This employee questionnaire focuses on the following areas:

- Individual characteristics that influence transfer of technical training;
- Work environment characteristics that influence transfer of technical training;
- Training design characteristics that influence transfer of technical training;
- Effectiveness of training transfer.

This questionnaire is designed to make completion as easy as possible. Most questions may be answered by simply circling your response. If you are unsure regarding a particular question, please provide us with your best guess.

If you have questions regarding the survey please contact:

Lan Anh Thi Pham

Email: <u>t35pham@students.latrobe.edu.au</u>

Mobile phone: +84-913522243

PART A INDIVIDUAL INFORMATION

Please indicate your response by circling the appropriate response.

Q 1: Age:

18-25 26-35 36-45 46-60

Q2: Gender:

Male Female

Q 3: Technical skill level (the level of proficiency - seven is highest)

1 2 3 4 5 6 7

Q 4: Educational attainment (years of schooling completed)

Less than year 12 Year 12 Vocational training Higher education

Q 5: How many years have you worked in your current firm?

Q6: When did you last receive technical training?

This year Last year 2-3 years ago 5 or more years ago

PART B

FACTORS INFLUENCING TRANSFER OF TECHNICAL TRAINING

The following questions are about your beliefs regarding the training you have received. Please indicate your level of agreement or disagreement with each of the following statements:

Strongly	Disagree	Undecided	Agree	Strongly
disagree				agree
(1)	(2)	(3)	(4)	(5)

Please indicate your level of agreement by circling the appropriate response.

Q7. Motivation to learn and transfer skills

Perceived relevance of training					
1) The training I have completed will help me do my current job better.	1	2	3	4	5
2) I believe the training that I have received will help me to improve my professional competence.				4	5
3) I am looking forward to using my new training on the job	1	2	3	4	5
4) I feel very committed to apply what I have learned to my job	1	2	3	4	5
5) The skills I learned in the training course will be useful in solving problems encountered on my job	1	2	3	4	5
6) I will look for opportunities to use the skills that I have learned			3	4	5
Outcomes from training					
7) I have received a wage increase because I accomplished tasks more effectively using my new skills.	1	2	3	4	5
8) My supervisor has praised mefor using my trained technical skills.	1	2	3	4	5
9) I have received a bonus because of improved performance using new skills.	1	2	3	4	5
10) I have received a promotion for accomplishing tasks in a more efficient way.	1	2	3	4	5

Q 8. Training effectiveness

1) I still remember the key topics that were discussed in my training course.			3	4	5
2)I easily understood contents that I have learned in the training course.	1	2	3	4	5
3) I am now able to identify appropriate situations for the application of my new learned skills.		2	3	4	5
4) I am able to identify ways to improve with practice and frequency of use.					
5) I am able to use my new skills in my work.	1	2	3	4	5

Q 9. Application of new skills

1) I am able to apply skills acquired from my on-the-job training.			3	4	5
2) I am confident in my ability to use my new skills in my work.			3	4	5
3)I have used my new skills even in complex work situations.			3	4	5
4) I have overcome obstacles to use my new skills on the job.			3	4	5
5) I do well in activities where I have to remember lots of information			3	4	5
6) I can accomplish my job better by using my new skills			3	4	5

Q 10. Design of training

1) My training is relevant to my job.	1	2	3	4	5
2)The trainers gave me confidence to use my training.	1	2	3	4	5
3) The trainers used activities and exercises that helped me to apply my learning to my job.	1	2	3	4	5
4) Additional sessions were offered to improve the effectiveness of the training.	1	2	3	4	5
5) I am satisfied with the quality of the training content in my most recent training course.	1	2	3	4	5
6) I was satisfied with the quality of the trainers in my most recent training course.	1	2	3	4	5

Q 11. Performance feedback

1) During my training people shared tips that helped me to improve my job performance.		2	3	4	5
2) After training, I am encouraged to participate in conversations with people about how to improve their job performance.		2	3	4	5
3 I was required to submit a post-training report after attending the training program to evaluate my learning.		2	3	4	5
4) I have received positive feedback regarding myperformance after training.	1	2	3	4	5

Q. 12 Opportunity to use training

1) My job requires me to use new skills.	1	2	3	4	5
2)Appropriate equipment is available to apply my new skills on the job.		2	3	4	5
3) My managers give meadequate time to practice my new skills on the job.	1	2	3	4	5
4) After training, I have used new skills on the job frequently.	1	2	3	4	5

Q 13. Supervisory support

1) I am allowed enough time off work to attend training.			3	4	5
2) My supervisor asks me what I gained from the training I attend.	1	2	3	4	5
3)My supervisor discusses ways to apply my trained skills to my job.				4	5
4) My supervisor has provided assistance to resolve problems in applying my training.			3	4	5
5) My supervisor has helped me set goals for using my new skills on the job.	1	2	3	4	5
6) I was provided with the support (time, money, other resources) needed to consolidate my new skills.		2	3	4	5
7) My supervisor often checks with me to see how my efforts to use my new skills are going.	1	2	3	4	5

Q 14. Support of Peers

1)My peers have helped me to apply my new skills.			3	4	5
2) I have talked to members of my training class group to share ideas about using new skills on the job.	1	2	3	4	5
3) I have worked with other people to share ideas on using new skills on the job.	1	2	3	4	5
4) My peers have shared with me the benefits of applying new skills on the job.	1	2	3	4	5

PART C EFFECTIVENESS OF TRANSFER OF TECHNICAL TRAINING

Q 15. I have effectively incorporated my new skills into my daily tasks.				4	5
Q 16. My job performance has improved because of my new skills.			3	4	5
Q 17. I am now able to work faster because of my training.	1	2	3	4	5

Q 18: Do you have any comments about this survey?

Thank you for taking the time to complete this questionnaire!

Consent Form of Participants

Project title:

Human Resource development in State-owned enterprises (SOEs) in Vietnam: The challenges of developing effective transfer of technical training

I______ have read and understood clearly the participant information statement and consent formand any questions have been answered to my satisfaction. I agree to join in the projectand comprehending that I may physically withdraw from the research at any time. I also may request that no data arising from my participation are implied, up to four weeks following the completion of my participation in the study. I agree that research data supplied by me may be included in a thesis, published in journals and presented at conferences on the condition that neither my name nor any other identifying information is used.

I understand that my involvement is voluntary, that I can select not to participate in part or the entire of this project without being penalised or disadvantaged in any way.

I agree to be interviewed by the researchers and allow the interview to be audio-taped

Participant's name (printed):

Signature:

Date..../ 2013

Participants	Work experience years	Role in the company	Involvements in training
1 M	30	Manager	Managing training activities
2M	20	Manager	Managing training activities
3M	17	Manager	Managing training activities
4M	17	Manager	Managing training activities
5M	21	Manager	Managing training activities
6M	23	Manager	Managing training activities
7M	9	Manager	Managing training activities
8M	27	Manager	Managing training activities
9F	20	Training director	Conducting training program
10M	30	Training director	Conducting training program
11M	20	Training director	Conducting training program
12F	15	Training director	Conducting training program

Demographics of the Interviewees of this Study

Normality Examination

Items, N = 185	Mean	SD	Skewness
Items of Individual characteristics			
Training will do the current job better	4.30	.514	.273
Training will improve professional competence	4.35	.572	189
Looking forward to using my new training on the job	4.42	.638	759
Committed to apply what learned to the job	4.11	.744	417
Useful in solving problems encountered on the job	4.23	.621	478
Look for opportunities to use new skills	4.14	.666	271
Receive a wage increase	3.64	1.013	842
The supervisor has praised for using trained skills	3.77	.836	794
Receive a bonus	3.48	1.114	834
Receive a promotion	3.39	1.011	715
Remember the key topics in my training course	4.06	.595	644
Easily understood contents learned in the training	3.92	.714	605
Identify situations for the application of new skills	3.92	.616	516
Identify ways to improve with practice and frequency of use	3.89	.545	888
Can use new skills in the work	4.09	.555	348
Can apply skills acquired from the on-the-job training	4.17	.610	835
Confident in the ability to use new skills in the work	3.95	.665	275
Use the new skills even in complex work situations	3.89	.667	541
Overcome obstacles to use new skills on the job	3.91	.611	388
Do well in activities where must remember lots of information	3.95	.662	289
Can accomplish the job better by using new skills	4.16	.554	332
Items of training design			
Training is relevant to the job	4.41	.629	718
The trainers gave me confidence to use my training	3.99	.651	348
The trainers used activities and exercises that helped me to apply my	4.15	.650	519
learning to my job	0.55	000	0.50
Additional sessions were offered to improve the training effectiveness	3.77	.882	970
I am satisfied with the quality of the training content in my most recent training course	4.08	.625	328
I was satisfied with the quality of the trainers in my most recent training course	4.02	.642	144
People shared tips during the training to improve the job performance	3.85	.667	932
After training, I am encouraged to participate in conversations with people about how to improve their job performance	3.63	.805	863
I was required to submit a post-training report after attending the training program to evaluate my learning	4.08	.726	633
I have received positive feedback regarding my performance after training	3.96	.736	-1.172
Items of work environment			
My job requires me to use new skills	4 25	672	- 785
Appropriate equipment is available to apply new skills on the job	4 02	703	- 876
My managers give me adequate time to practice my new skills on the job	4.04	747	-1 326
After training I have used new skills on the job frequently	4 14	736	- 963
Lam allowed enough time off work to attend training	1.17	000	1.047
	4.04	.629	-1.24/
My supervisor asks me what I gained from the training I attend	3.00	.082	824

My supervisor discusses ways to apply my trained skills to my job	3.70	.796	-1.242
My supervisor has provided assistance to resolve problems in applying my	3.89	.702	984
training			
My supervisor has helped me set goals for using my new skills on the job	3.20	.937	090
I was provided with the support (time, money, other resources) needed to consolidate my new skills	3.86	.852	-1.388
My supervisor often checks with me to see how my efforts to use my new	3.97	.773	-1.374
skills are going			
My peers have helped me to apply my new skills	2.76	1.084	.213
I have talked to members of my training class group to share ideas about using new skills on the job	2.98	1.068	.016
I have worked with other people to share ideas on using new skills on the job	2.86	1.054	.144
My peers have shared with me the benefits of applying new skills on the job	2.62	1.150	.348
Items of transfer effectiveness			
I have effectively incorporated my new skills into my daily tasks	4.01	.576	691
My job performance has improved because of my new skills	4.19	.585	388
I am now able to work faster because of my training	4.24	.617	346

Background of the Enterprise

		Year	No. of	The most	responsible for	costs (VND)
SOE's	Main products/services		Employees	recent	training	of training in
name		established		training		2012
E1	Building hydropower plants, infrastructure, civil and industrial works	1961	Over 1500	3/2013	manager	2 billion
E2	Producing industrial construction	1982	Over 3000	3/2013	manager	1,4 billion
E3	Manufacturing equipment and steel structures	1960	Over 1000	2/2013	Training director	500 million
E4	Producing engine and agricultural machinery	1990	Over 1500	5/2013	manager	1,1 billion
E5	Producing jewel and fine art	1991	Under 500	5/2013	manager	20 million
E6	Manufacturing and supplying power	1995	Over 7000	4/2013	manager	8 billion
E7	Petro services	1975	Over 1500	3/2013	manager	900 million
E8	Supplying industrial project, road system	2000	Over 1500	3/2013	manager	900 million

Correlation between the Total Score of the Scales and Score of

Corrected Items of organizational characteristics **Item-Total** Correlation **Items of Individual characteristics** Training will do the current job better 0.327 Training will improve professional competence 0.323 Looking forward to using my new training on the job 0.151 Committed to apply what learned to the job 0.390 Useful in solving problems encountered on the job 0.310 Look for opportunities to use new skills 0.178 Receive a wage increase 0.599 The supervisor has praised for using trained skills 0.438 Receive a bonus 0.632 Receive a promotion 0.318 Remember the key topics in my training course 0.441 Easily understood contents learned in the training 0.104 Identify situations for the application of new skills 0.205 Identify ways to improve with practice and frequency of use 0.149 Can use new skills in the work 0.436 Can apply skills acquired from the on-the-job training 0.379 Confident in the ability to use new skills in the work 0.287 Use the new skills even in complex work situations 0.401 Overcome obstacles to use new skills on the job 0.124 Do well in activities where must remember lots of information 0.283 Can accomplish the job better by using new skills 0.524 Items of training design Training is relevant to the job 0.247 The trainers gave me confidence to use my training 0.180 The trainers used exercises that helped me to apply my learning to my job 0.522 Additional sessions were offered to improve the training effectiveness 0.420 I am satisfied with the quality of the training content in my training course 0.292 I was satisfied with the quality of the trainers in my most recent training course 0.281 People shared tips during the training to improve the job performance 0.153 After training, I am encouraged to participate in conversations with people 0.207 about how to improve their job performance I was required to submit a post-training report after attending the training 0.243 I have received positive feedback regarding my performance after training 0.433

Items for Measuring Organizational Factors

Items of work environment	
My job requires me to use new skills	0.173
Appropriate equipment is available to apply new skills on the job	0.126
My managers give me adequate time to practice my new skills on the job	0.258
After training, I have used new skills on the job frequently	0.389
I am allowed enough time off work to attend training	0.441
My supervisor asks me what I gained from the training I attend	0.434
My supervisor discusses ways to apply my trained skills to my job	0.419
My supervisor provided assistance to resolve problems in applying my training	0.679
My supervisor has helped me set goals for using my new skills on the job	0.656
I was provided with the support needed to consolidate my new skills	0.561
My supervisor often checks to see how my efforts to use my skills are going	0.539
My peers have helped me to apply my new skills	0.464
I talked to my class group members to share ideas about using skills on the job.	0.174
I have worked with other people to share ideas on using new skills on the job	0.182
My peers have shared with me the benefits of applying new skills on the job	0.317
Items of transfer effectiveness	
I have effectively incorporated my new skills into my daily tasks	0.221
My job performance has improved because of my new skills	0.505
I am now able to work faster because of my training	0.582

All correlation values are significant with p < 0.05



State Management of Vocational Training in Vietnam

(Source: Duong, 2011)

Guide to the correction - PhD Thesis (Lan Anh Thi Pham - 16417707)

Name of the examiner	Error/ Comment	Action
Associate Professor Holland	P.1 - I would like to see in the setting up of research in Chapter 1, some reference to key in this field of human capital theory (HCT) and/or resource based view of firm (RBV). In a discussion about competitive advantage linked to a HRD focused research thesis, theory provides depth and structure to the research being undertaken	This is a valid comment and I have discussed this important element in Chapter 1 (Please see p.1, 5 section 1.1 and p. 7 section 1.2 – red words) - P1. Business managers are conducting new and advanced strategies to manage the turbulent environment and ensure success for their enterprise. A general subject of the most popular plans is a focus on human capital, or using the knowledge and skills of employees as a key strategic resource for achieving and maintaining competitive advantage (Weldy, 2009). - P5. It is argued that human capital attributes such as training, knowledge, experience and skills are a critical resource for success in enterprises (Unger et al., 2011). - P7. HRD carries with it the potential for profits of economic development at the societal level (Zidan, 2001). One of the important causes of economic development is human capital formation. <i>Human</i> <i>capital</i> has been defined as the productive investment in humans, such as knowledge and skills, that may be results of education, on the job training and other types of experience (Zidan, 2001). Human capital theory (HCT) is established to estimate income distribution of employees from their investments in human capital (Unger et al., 2011).

P.12 - Section 2.2 the context of the research should be framed around key HRM theory and in particular RBV and HCT.	This comment is also a valid one and I have included the RBV and HCT in section 2.2 (Please see p. 12-13) - P12. (Burke & Hutchins, 2007; Edwards, 2013) - P13. In an extremely competitive environment, characterized by market globalization, changing demands and increasing product-market competition, human resources may acquire greater power because other resources of competitive success are less valuable. In order to achieve
	competitive success, human resources have to be seen as a resource of competitive advantage rather than as merely a cost (Saá-Pérez & Garcia-Falcon, 2002). From the approach of the resource-based view (RBV), human resource and/or human capital, in which the organizational invests create higher performance. Therefore, the RBV of the firm provides a vital view about the relationship between HRM and enterprise success (Kraaijenbrink et al., 2010). Human resources form a resource of competitive advantage because it is a rare, valuable and inimitable resource. This resource may add value to enterprise because people are different in their abilities and capacities, as well as their contribution to the enterprise (Kraaijenbrink et al., 2010)
	Human capital theory is indicated as an economic theory that addresses the economic development and macro-economic perspective of production. It views human capabilities (including efforts, knowledge and skills) as integral elements of the country capital, along with natural and financial resources (Olaniyan & Okemakinde, 2008). This theory emphasizes how training increases the

	efficiency and productivity of employees by raising the level of cognitive stock of productive human capability, which is a creation of natural ability and investment in human beings. The provision of formal training is considered to be a productive investment in human capital, which the proponents of the theory have seen as equally or more useful than that of physical capital. Therefore, education and training play a vital and significant role in a national economy, and expenditures of training are found to constitute a form of investment (Boxall, 2013).
P.14 - The majority of references we between 10 and 2 years old. The section needs to be reviewed and updated	 I have updated some references in this section (see p. 15-16) P15. The nature of transfer and the context of its occurrence have been the subject of considerable study for over 100 years (Grossman, 2011). According to Sofo (2007), training is described as an intended experience planned to lead to change in an employee's attitudes, knowledge and skills. Moreover, Issurin (2013) addressed an organizational aspect in his description of TOT by stating that it is the extent to which the knowledge achieved from training courses is used and maintained on the job to improve productivity and performance. In a definition by Grossman and Salas (2011), positive TOT is described as the effective application of the attitudes, knowledge and skills achieved in a training context to the learner's job. Although the description of TOT by Noe et al.

	 (2012) is restricted to training, the concept of transfer is also implied. The trainee gains knowledge and skills from a training process and then these knowledge and skills are transferred into improved job-related performance (Wen & Lin, 2014). P16. Near transfer refers to the events in the training that are directly related to and/or highly similar to the tasks and conditions found on the job (Baldwin & Ford, 1988; McDonald, 2001; Merriam & Leahy, 2005). These individuals are then more likely to transfer the trained skills from the training context to the job
P.16 - Dated reference and descriptive without research evidence to provide insight, evidence and depth to the analysis	 (Saks & Burke-Smalley, 2014). I have updated some references in this section (see p. 17) For example, Los Arcos et al. (2014a) distinguished between two types transfer, horizontal and vertical. Horizontal transfer may occur when a skill is transferred from one situation to another at the same level of difficulty. In contrast, vertical transfer may occur when a learned skill influences the achievement of a more complex skill.
P.17 - references needs to be updated	 Some references were updated (see P. 18, 22) P18. but no studies have examined activities of training in SOEs in transitional economics (Warner & Goodall, 2009). Devos et al. (2007) noted that trainees with high confidence levels were more motivated to use their training. Employees who had effective career planning and high job involvement would prefer to learn and transfer (Lim and Morris (2006). More

	generally, employee performance is a function of motivation, ability of employee and opportunity to perform (Boxall & Purcell, 2011). - (Seyler et al., 1998) and - P22. (Dirani (2012) - (Wen & Lin, 2014)
P.18 - Regarding Equity Theory - you need to cite Adams and define and explain its significance to the research in more detail	Adam's Equity Theory explained in more detail (see P. 19 - 20) - Equity theory, developed by Adams (1965), considers motivation and job satisfaction as the outcome of a comparison of an employee's perceived results and inputs to the results and inputs of a referent other. Equity theory implies that individuals want to be treated fairly in relation to others. Adams (1965) argued that people could react in any of the following methods when they feel distress from inequity: (1) employees could limit their inputs to a level they believe to be consistent with the results gained; (2) employees a better deal - meaning they will try to find a balance between work and payment; (3) the distress of feelings of inequity could cause some workers to quit the enterprise. However, when employees had feelings of inequity, managers still do not know how to communicate with them. Employees of a company seek equity in their job, so they may attend training to achieve equity in relation to pay or other benefits.
P.24 - no evidence to support this statement; provide evidence	I have included some evidences to support the statement (see P. 22, 24) - P22. Bates and Holton (2004). This means that, if

	 trainees notice a "connection" between improved performance (resulting from applying their trained skills and knowledge) and rewards (e.g., wage increases, promotions, bonuses, status rewards), this may influence transfer effectiveness (Velada et al. (2007). P24. Gegenfurtner et al. (2009) proposed numerous main elements for motivating employees to attend training courses and engage in TOT in the workplace,
P.24 - Section <i>Perceived relevance of</i> <i>training</i> - section is supported by very dated references - this needs updating	Some references were updated in this section (see P. 26) - It is argued that the perceived importance of training impacts not only the motivation to learn but also the motivation to apply the newly acquired skills (Massenberg et al., 2015). - (Cheng & Ho, 2001).
P.25 - provide evidence for this key statement	Some evidences were included in this section (see P. 26) - Devos et al. (2007) noted that if a trainee believes new skills cannot be used in the performance of their job, there is no incentive for them to effectively learn those skills.
P.25 - Noe reference is good but very dated, need to updated	This is a valid comment and one good reference was included to replace Noe reference (see P. 27) - A study by Wen and Lin (2014) examined the effectiveness of training associated with employees' attitudes toward the motivation to learn and transfer. The study surveyed 316 employees from broad industries in Taiwan. The findings indicated

	there was a relationship between the trainee's approach to career planning and job involvement. For example, if the trainee assumed there was value in the training for their career development, then the probability of behavioural adjustments were higher than for others who did not engage in the same level of career planning. According to Awais Bhatti et al. (2013), when an individual believes that the knowledge and skills learned in the training context will result in a high likelihood of a salary increase, a promotion, or elevated feelings of satisfaction and self-worth, then their motivation related to training and transfer will also increase.
P.26 - need to provide support evidence	 Two references were addressed to support this (see p. 28) Velada et al. (2007) have also suggested that three dimensions related to training effectiveness should be investigated to describe trainees' cognitive ability, Similar to cognitive ability, training retention has an impact on trainee performance due to its effect on intentional resource capacity ((Chiaburu et al., 2010).
P.28 - need to provide support evidence	Some evidences were provided in this page (see p. 29-30) - (Grossman & Salas, 2011). In addition to skill improvement, these trainees also have more information and knowledge to understand where and how their trained skills can be used to improve performance (Wen & Lin, 2014). - These studies applied social learning concepts to examine the effect of an individual's belief in their ability to use trained skills on the job (Ford &

Weissbe	in, 1997; Warr & Bunce, 1995).
P.29 - This paragraph This para can be deleted	agraph was deleted (see p. 31)
P.29 - Section Transfer Literature Design - Literature - Previo raining & Ford, - trainer - Thap involves worthine performation - Addit several Baldwin - A const design is 2014). - Holto - More combina may imp (Gegenfit) - As a knowled knowled knowled	e was updated in this section (see p. 31-32) us studies on TOT indicated that several design factors influence TOT, such as content and clear objectives (e.g. Baldwin 1988; Gregoire et al., 1998), credibility (Thapa, 2013). (2013) states that trainer credibility a combination of expertise and trust iss. When credibility is established, unce feedback may be applied to raise the of self-efficacy and motivation of the solf self-efficacy and motivation of the tonally, training is a process including activities in relation to training design the Ford, 1988) ideration of the construction of the transfer is necessary for TOT to occur (Wen & Lin, on (1996) noted that transfer design may significantly depending on culture, content r situational conditions. over, research has indicated that the tion of self-efficacy and expectancy theory pact on the motivation to learn and TOT artner et al., 2009). (a result, when trainees have previous ge, when they have practiced how to use vly learned skills on the job and when the instructions are suitable to the iob

	requirements, the effectiveness of transfer should be
	significantly increased (Chiaburu et al., 2010).
	•••
P.33 - Section Performance feedback -	Literature was updated in this section (see p. 35)
literature needs	- (Letmathe et al., 2012),
updating	- In a study by Lim and Morris (2006) on the effects
	of feedback on performance, it was found that
	negative feedback could increase post-training
	computer anxiety which, in turn, may prevent
	trainees from improving their training outcomes.
	- (Velada et al. (2007).
	- In a similar manner, Letmathe et al. (2012)
	indicated that relevant feedback may contribute
	significantly to the effectiveness of training and
	thus feedback should be credible, correct and
	constructive.
 D 34 Section 2.4.2	Literature was undeted in this section (as a 26 27)
Literature needs	Enerature was updated in this section (see p. 30-37)
updating	- (Alvarez et al., 2004; Holton, 1996; Tannenbaum
	& Yukl, 1992),
	- Furthermore, according to a recommendation from
	Massenberg et al. (2015), significant relationships
	created by involved parties (including trainees,
	trainers and managers) before, during and after
	training may bring about a positive TOT.
	- Work system factors include items related to
	culture, namely trainees' organization culture,
	supervisory support and political powers (Dirani,
	2012),
	- Of these system factors, the opportunity to apply
	trained skills immediately to the job has been
	increasingly emphasized in several studies

	 (Baldwin & Ford, 1988; Clarke, 2002; Gregoire et al., 1998; Holton et al., 2000; Russ-Eft, 2002). - (Baldwin & Ford, 1988; Cheng & Ho, 2001; Cromwell & Kolb, 2004; Velada et al., 2007) - (Pham et al., 2013).
P.37 - Section opportunity to use training - literature needs updating	Literature was updated in this section (see p. 39) - The lack of opportunity to perform training on the job has been rated as the biggest impediment to successful TOT (Grossman & Salas, 2011) (Salas et al., 2012) According to the findings of Massenberg et al. (2015), employees' motivation to transfer was a key influencing factor in both short-term (after one month) and long-term (after one year) trained skill transfer (Grossman & Salas, 2011). As Salas et al. (2012) suggested, supervisors may provide a chance to use training by planning activities and assigning new duties that involve the content of training.
P.41 - Farmer and Richman (1965) – very dated reference	This reference was removed to add a new reference (see p. 44) - Describing the relationship between environment and organizational business, Khan et al. (2012) indicate that no enterprise exists entirely separately from its environment. According to these authors, a productive firm necessarily forms part of a complex educational-sociological-economic whole" and thus all activities of an enterprise are significantly impacted by the nature of the total environment.

P.47 - Basset and Fikkert (1996) – dated reference	This reference was replaced by (Nguyen, 2014)'s evidence (see p. 46) - In addition, during this period, the wage levels in Vietnamese SOEs were centrally controlled to capture profits for the national budget (Nguyen, 2014). An employee's salary depended significantly on their ''labour'' input to the organization. According to Lam (2014), seniority and loyalty were usually the two most vital elements to be applied as the standard for payment to employees.
P.47 - I would like to see some updated discussion regarding the development of Vietnam post the GFC of 2008 for more on- depth context and understanding of the present position	This also is a valid comment and the development of Vietnam post the GFC of 2008 was updated (see p. 49-50) - In 2008, FDI into Vietnam was focused on capital- intensive sectors, such as construction, industry and services, with the average investment being USD 52.0 million per project. This signified much stronger capital flows than in previous years (Makino & Tsang, 2011). After the 2007-2008 exponential growth, the FDI inflows into Vietnam reduced by approximately 2 billion USD in 2009. This was mainly caused by the global financial crisis of 2008. In 2010 - 2011, the stocks of Vietnamese FDI continued to fluctuate and did not experience the same growth pattern as the 2007- 2008 period (Van & Sudhipongpracha, 2015). By 2011, around US\$198 billion of total registered capital was from more than 13,600 FDI projects in the Vietnamese market. Although the Vietnamese economy was also affected by the global financial crisis of 2008, it experienced only a 0.8% decrease in economic growth (Leung, 2015). With an average GDP growth rate of 6.6 % between 2001

	and 2011, Vietnam has become Southeast Asia's best-performing economy.
P.49 - I am confused by the statement that going from 109 th in the world to 128 th is an improvement? – please clarify	I have corrected this statement (see p. 52) - As a result of the continued efforts in educational development, the Human Development Index ranking of Vietnam in the report of the United Nations Development Programme (UNDP) has improved from 128th (out of 177) in 2005 to 109th (out of 187) in 2011 (UNDP, 2011).
P.53 - Truong & Ha (1998), a dated reference - this needs updating	A new evidence was addressed to support this (see p. 57) - For example, according to Nguyen et al. (2011), Vietnamese SOEs provided training for 96% of incumbent employees and 62% of new employees to improve their skills.
P.55 - No reference to this paragraph	 Reference of (Hamano, 2008) was addressed this paragraph (see p. 59) There were no institutions in which to train vocational teachers in Vietnam prior to 1970. Before 1970, vocational schools employed some technical experts as vocational teachers (Hamano, 2008).
P.58 - This program has now been completed – you need to provide some evidence of it outcome	The program's outcome was added in this section (see p. 62) - According to The Report of Ministry of Education and Training (2014), after 14 years completing this project, there were 12.000 Vietnamese teachers who were sponsored by this project to study post- graduation in oversea (including 2000 students of PhD course and 10.000 students of master course)
P.63 - Opportunity here	RBV/or HCT were integrated in this section (see p.

	to integrate	RBV/or	67-68)
	HCT		- According to Unger et al. (2011), human capital
			attributes (such as training, experience, knowledge
			and skills) have been argued to be a important
			resource for success in enterprises. This capital
			plays an even greater role in the future because of
			the constantly rising knowledge-intensive activities
			in most job conditions (Sclafani, 2008). Individuals
			will try to maximize their economic profits given
			their human capital. Therefore, highly trained
			individuals could not choose to become managers
			as entrepreneurship very well lead to reduced
			returns compared to other employment chances
			(Unger et al., 2011).
			According to Sclafani (2008) the uniqueness of a
			worker's capabilities and skills is a significant
			requirement for achieving competitive advantage.
			Those holding the resource based view argue that
			sources are valuable when they facilitate an
			enterprise to perform strategies that improve exploit
			market opportunities and effectiveness.
			Consequently, the value of human capital is
			essentially dependent upon its potential to
			contribute to the core competence or competitive
			advantage of the enterprise.
			- Only 62% of the respondents have a little budget
			for training (Nguyen, 2011). The result of this is a
			mismatch of skill with enterprise demand. In fact,
			about 25-40% of Vietnam's 168,000 public
			servants, many of them working in SOEs, meet
			some "standard requirements" (Ngo, 2008).
	P.64 - Dated re	eferences	Some references were updated (see p. 68-69)
needs updating		- A study of Hakkala and Kokko (2007) indicate	

	that SOEs undertook training to provide skilled labour in the same activity field and HRD is considered a means to provide employees with some kind of compensation.
P.65 - Section needs updating – post GFC	Information of Post GFC was addressed in this section (see p. 69) - A recent analysis based on official statistics indicated that in 2006-2010, the SOE sector accounted for 45% of total investment, generating only 28% of GDP, while private enterprises only accounted for 28% investment, generating 46% of
	GDP; similarly, the contribution of the SOE sector to GDP growth has fallen rapidly from33% in 2001- 2005 to just 19% during 2006-2010, Vietnam's entry period (Vu, 2012a). According to Phan (2015), the FDI of Vietnam at November 2014 was USD 17.33 billion and this investing number just accounted for 83.3% of FDI at the same period in 2013.
P.67 - Integrate RBV/HCT	 RBV/HCT were added (see p. 71) The investments in human capital/or resource based view should be completed to increase entrepreneurial success (Unger et al., 2011).
P.104 - It would be useful to put the training expense as a percentage of revenue or other measure to allow a comparison	 This is a valid comment and I have added a comparison of the training expense in this (see p. 108) The total cost of the technical training programs in each of the eight selected enterprises run in 2012 varied significantly. For example, while E5 spent VND 8 billion for technical training in 2012, E3 spent only VND 500 (see Appendix 8).

	P.109 - Response to talent loss needs more depth, insight and academic support evidence	The response to talent loss was detailed more (see p. 113) - This finding supports a suggestion of (Nguyen et al. 2011)
		Many participants confirmed that they are facing a situation where many staff are leaving due to the competitive labor market. After developing advanced technical skills, many trained employees in SOEs find that they now have the opportunity to meet the higher requirements from other enterprises that offer better benefits. - Similarly, a female training director (9F) recognized that " <i>Our enterprise lost about 20% of technically, a billed, employees about 20% of technically, a billed, and the second state about 20% of technically, a billed, and the second state about 20% of technically, a billed, and the second state about 20% of technically, a billed, and the second state about 20% of technically, a billed, and the second state about 20% of technical state about 20% of technic</i>
	technically skilled employees because these employees sought the higher wages offered by other companies". Those SOEs lacking technically skilled labor need to develop solutions to attract and retain highly skilled employees in their enterprise.	
	P.173 - Can you link this statement to research?	This was done (see p. 178) - (Nguyen and Truong (2007)
	P.174 - Useful here to link this statement back to theoretical framework of HCT/or RBV	This comment is also a valid one and I have linked this statement back to theoretical framework of HCT (see p. 179) - This finding supports suggestions from human capital theory and its implications for educational development (Olaniyan & Okemakinde, 2008). These authors indicated that the contribution of training to economic development occurs through its ability to raise the productivity of an existing labour force in different ways. According to them, education is an option to "consumption, for it transfers to round about production the resources
		transfers to round-about production the resources

	1	
		that would otherwise be consumed now" (Olaniyan & Okemakinde, 2008).
	P.178 - Ford (1992) dated key reference	 A new reference was replaced in this page (see p. 183) This finding is not entirely surprising, as employees with high levels of self-efficacy and cognitive ability have been found to be more likely to complete more difficult and complex tasks (Simosi (2012)
	P.180 - Useful here to link this statement back to theoretical framework of HCT/or RBV	I have linked this statement back to theoretical framework of HCT (see p. 185) - This supports the theoretical framework of human capital investment that noted that employers fund the employee training in hope of attaining a return on this investment in terms of being a more competitive, productive and profitable enterprise in the future (Unger et al., 2011).
Allen D. Engle, Sr	P.14 - A few sentences on Donald Kirkpatrick's evaluation model, level 2, "Behavior" would ground your discussion of the transferability issue in a conceptual model	This comment is a valid one and I have added a discussion of the transferability issue in the evaluation model of Donald Kirkpatrick (see p. 15) - In Donald Kirkpatrick's (2009) evaluation model, Level 3, behavioural level, measures whether attitudes, knowledge and skills learned during training will be transferred to the job to reflect improvements in behaviour and performance.
	P.20 - Citation from the book "Management Training and Development in China: Educating Managers in a Global Economy" (2009) by Malcolm Warner and Keith Good all (Routledge) is	 I have added these references on the review of literature (see p. 20, 54) P20. but no studies have examined activities of training in SOEs in transitional economics (Warner & Goodall, 2009). P54. According to Warner (2013), Vietnamese

germane to any complete review of the literature on Chinese and Asia training issue. Another recent article you may wish to add in this section of your very good review of the literature might be "Comparing Human Resource management in China and Vietnam: An Overview" by Malcolm Warner (2013)	enterprises (including both state-owned and private enterprises) have started to design and conduct many training courses for their employees. Training programmes begin with the very basics of business training in their curriculum.
P.27 - Paragraph 2, How can discuss the construct of "self- efficacy" without citing Albert Bandure's 1977 book?	This is a valid point and I have supported the construct of "self-efficacy" by adding citation of Albert Bandure's 1977 (see p. 29) - Bandura (1977) indicated that self-efficacy not only may have direct the choice of activities, but self-efficacy may affect expectations of final success, thus it may influence coping efforts once activities are initiated. Expectations of efficacy determine how much effort individuals need to expend and how long they need to persist in the face of difficulties and aversive experiences.
P.78 - Rewrite to clarify the sentence "However, the demographics of the interviewees are a reasonable criteria estimate that had primarily in the researcher's idea	 the sentence has been rewritten while correcting the error (see p. 82) Although this study did not try to create a sample selection with exact pre-determined characteristics, the demographics of the interviewees are a reasonable match to the criteria established by the researcher.
Erratum-Spacing errors around parentheses: p.1, line 11	These Spacing errors were corrected (see as below): p.1, line 11

P.6, line 2	P.6, line 8
p.21, line 6	p.21, line 18, line 23
<pre>line 11 - no opening quotation mark p.44, line 29 p.55, line 31- capitalize City in Ho Chi Minh City</pre>	 p.47, line 31 p.59, line 8 - "City" was capitalize P. 66, line 1 - it was corrected to be "1 billion USD" P.86, line 7
P. 62, line 22 - I assume you mean one billion USD	P. 174 - the sord Supported in last column of Figure6.16 was corrected
 P.82, line 4 P.169 - inconsistent capitalization of the sord Supported in last column of Figure 6.16 	P. 215 - word "UK" in title of citation by Collins, Zhu and Warner, 2012 was capitalized
P.209 - capitalize Resource in title of citation by Collins, Zhu and Warner, 2012 as well as the K in UK	
P.210 - in the citation Dowling, Festing and Engle, Engle should be Engle, A, not Engle, S	I have corrected Engle, S as Engle, A (Please see p. 215)