



PREDICTORS OF TRAINING TRANSFER: THE
MEDIATING ROLE OF SUPERVISOR AND PEER
SUPPORT AMONG FEMALE INDUSTRIAL
WORKERS IN MALAYSIA

BY

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the degree of Doctor of Philosophy in Industrial
Organizational Psychology

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ABSTRACT

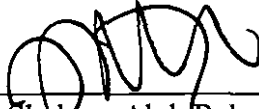
The purpose of this research is to assess the role of psychological variables and workplace related variables in predicting training transfer among female industrial workers in Malaysia. This study examines the relationships between trainee related variables, namely conscientiousness, motivation to transfer training and organizational commitment, and workplace related variables such as supervisor and peer support in predicting training transfer among participants. The variables selected are based on Baldwin and Ford's (1988) Training Transfer Model. Employing purposive sampling procedure, 198 participants completed the four waves of data collection to answer three research questions. The research questions were explored by using sets of questionnaire consisting of NEO-PI-R (conscientiousness items); Learning Transfer System Inventory (motivation to transfer items); Organizational Commitment Questionnaire (Affective, Continuance and Normative commitment); and Supervisor, Peer Support Questionnaire (SPSQ). The SPSQ, a newly-developed instrument adapted from LTSI (Holton, 2000) and GTCS (Tracey & Tews, 2005), was used to measure the level of supervisor and peer support in sustaining transfer of training at the workplace (factories). The questionnaire items successfully underwent face validation, content validation, criterion validation and construct validation. The perceived training transfer of the newly appointed workers furthermore was measured using Perceived Training Transfer (PTT). All the collected data were analysed using Statistical Package for the Social Sciences (SPSS) and AMOS 16.0. The findings supported the role of supervisor and peer support as mediators to the relationship between the exogenous and the endogenous variables. The result however reported mixed findings in relation to the direct correlation between (a) trainee related variables, and (b) workplace related variables and training transfer measured before and after training. The findings suggested a unique input to Baldwin and Ford's (1988) Transfer Process Model in relation to organizational commitment as a predictor.

خلاصة البحث

يهدف هذا البحث نحو فحص المتغيرات السيكولوجية والمتغيرات المتعلقة بأماكن العمل للحصول على تنبؤات نقل التدريب إلى مجال العمل لدى النساء العاملات في مصانع الإلكترونيات بماليزيا، فالبحث يحاول أن يستكشف العلاقة القائمة بين المتغيرات المتعلقة بالمتدربين (وبالتحديد: الشخصية، والمحفز لنقل التدريب، والالتزام التنظيمي) وبين المتغيرات ذات الصلة بأماكن العمل (كدعم مشرف العمل، ودعم الزملاء بالعمل) لمعرفة تنبؤات نقل التدريب لدى المشاركين. تلك المتغيرات المختارة تستند على نظرية بالدوين وفورد (Baldwin and Ford's) في نقل التدريب (1988م)، وكانت الإجراءات المتعلقة بعينات الهدف قد أخذت من 198 عينة للإجابة على أسئلة البحث الثلاثة وذلك من خلال أربع موجات من البيانات التي قد تم استكشافها باستخدام استبيانات تحتوي على مقياس الشخصية النيو بي (NEO-PI-R)، ونقل نظام التعلّم (محفزات النقل)، ومقياس الالتزام التنظيمي (العاطفي، والاستمراري، والالتزام المعياري)، واستبانة دعم الزملاء بالعمل وهو مقياس جديد مستمدّ من مقياس هولتون (Holton) (2000م)، ومقياس تريسي وتيوس (Tracey and Tews) (2005م) لقياس مستوى دعم المشرف على العمل ومستوى دعم الزملاء بالعمل مما يساعد على نقل التدريب إلى مكان العمل (المصانع). وقد خضع الاستبيان للمراجعة للتحقق من التوجّه والمحتوى، وتحليل المكون الرئيسي، ومؤكدة عامل تحليل. وكان المتصور من نقل التدريب لدى العاملين الجدد قد تمّ قياسه باستخدام قياس نقل التدريب المتوقع. كما تمّ إحصاء وتحليل كل البيانات التي جُمعت باستخدام برامج التحليل الإحصائي للعلوم الاجتماعية (SPSS)، ونموذج المعادلة الهيكلية. ويؤكد هذا البحث الدور الذي يؤديه المشرف والزميل بالعمل بمثابة الوسيط بين المتغيرات الخارجية والداخلية. واستنتج البحث بعدة نتائج مختلفة حول العلاقة المباشرة القائمة (أ) بين المتدرب والمتغيرات ذات الصلة، (ب) بين مكان العمل والمتغيرات ذات الصلة، وقياس نقل التدريب بين ما قبل التدريب وبعده. واستناداً إلى النتائج يقترح البحث بعض التعديلات على مقياس بالدوين وفورد في نقل التدريب (1988م)، فيما يتعلق بجانب الالتزام التنظيمي وكونه متغير التنبؤ.

APPROVAL PAGE

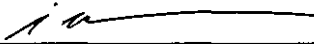
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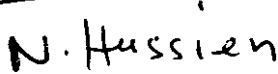


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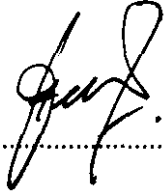
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DECLARATION

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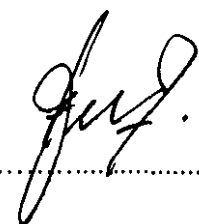
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*This study is dedicated in the loving memory of my mother (Ummi)
and in honour of my father (Etta)*

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LIST OF ABBREVIATIONS

AC	Affective commitment
Af1	Affective commitment measured before training
Af2	Affective commitment measured immediately after training
AMOS	Data fitting programme
CC	Continuance commitment
CFA	Confirmatory Factor Analysis
CFI	Comparative fit index
Co1	Continuance commitment measured before the training
Co2	Continuance commitment measured immediately after training
CVR	Content validity ration
F1	Factory No1, located in Negeri Sembilan
F2	Factory No.2, located in Kedah
F3	Factory No3, located in Pahang
GTCSG	General Training Climate Scale
HR	Human Resource
HRDF	Human Resource Development Fund
KSAs	Knowledge, Skills, Abilities
LTSI	Learning Transfer System Inventory
ML	Maximum likelihood
Mo1	Motivation to transfer measured before training
Mo2	Motivation to transfer measured immediately after training
Motive	Motivation
NC	Normative commitment
NEO-PI-R	Revised Neo Personality Inventory
Neo4	Conscientiousness
No.1	Normative commitment measured before training
No2	Normative commitment measured immediately after training
ns	Not significant
OCQ	Organisational Commitment Questionnaire
PCA	Principal Component analyses
Perso	Personality (conscientiousness)
Pf1	Peer feedback measured before training
Pf2	Peer feedback measurement immediately after training
Pf3	Peer feedback measured three months after training
Pg1	peer guidance measured before training
Pg2	Peer Guidance measured immediately after training
Pg3	Peer guidance measured three months after training
PS	Peer support
PS (T1)	Peer support measured before training
PS (T2)	Peer support measured immediately after training
PS (T3)	Peer support measured three months after training
Psy (T1)	Psychological variables measured before training
Psy (T2)	Psychological variables measured immediately after training
PTT	Perceived training transfer

RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
Sf1	Supervisor feedback measured before training
Sf2	Supervisor feedback measured immediately after training
Sf3	Supervisor feedback measured three months after training
SMC	Squared multiple correlation
SPSQ	Supervisor, Peer Support Questionnaire
SPSS	Statistical program for Social Sciences
SS (T1)	Supervisor support measured before training
SS (T2)	Supervisor support measured immediately after training
SS (T3)	Supervisor support measured three months after training
Si1	Supervisor involvement measured before training
Si2	Supervisor involvement measured immediately after training
Si3	Supervisor involvement measured three months after training
Support T1	Support variables measured before training
Support T2	Support variables measured immediately after training
T1	Time one or first wave
T2	Time two or second wave
T3	Time three or third wave
T4	Time four or fourth wave
TLI	Tucker-Lewis index
TT3	Perceived training transfer measured three months after training
TT4	Perceived training transfer measured six months after training

CHAPTER ONE

INTRODUCTION

Chapter One provides a general overview of this research. The chapter introduces training transfer as a significant issue in human resource development in Malaysia generally, and in the Malaysian industrial setting in particular. This chapter then proceeds with an introduction to the psychosocial predictors of training transfer, comprising demographic variables, personal psychological variables (conscientiousness, motivation and organizational commitment), and workplace-related variables (supervisor support and peer support). The chapter also presents the research problems, questions, justification as well as definition of terms.

BACKGROUND OF RESEARCH

Malaysia is committed in its quest to become a fully developed nation by the year 2020. In order to achieve this vision, the government considers human resource development (HRD) as a major focal point. The seriousness of the government regarding the role of HRD is reflected in its policies, programmes and strategies; one such strategy is the promotion of training, re-training and workplace learning.

Training has always been a key factor in workforce development (Rashid Esoofi Manjawalla, 1992; Saks & Haccoun, 2004; Svensons & Rinderer, 1992) as it promotes improvement and positive hope for people entering the occupational world as well as individuals facing challenges within the workplace due to rapid technological changes. Goldstein (1989) and Spector (2000) suggested that effective

training opens up opportunities for workers to enhance both their performance and position.

The significant role of training and re-training to achieve the national agenda encourages the setting up of numerous public training institutions, such as public technical schools and polytechnics. Training and re-training strategies have also promoted collaborative efforts between the Malaysian government and the industrial sectors, public and private enterprises, and foreign governments. This has resulted in the establishment of several advanced skills training institutions, such as the German Malaysia Institute and the Malaysian Japanese Institute (Ministry of Human Resources Malaysia, 2004). Malaysia's realisation of the importance of training to strengthen HRD has made it an emerging Asian economic force moving towards a technology-driven and high-tech production-based pattern of development following the steps of the newly industrialized economies of Asia such as Singapore, Taiwan, and the Republic of Korea (Lai & Yap, 2004). The Malaysian Government has spent a great deal in training and preparing sufficient trainees to satisfy the needs of the nation. From 2001-2005, for example, the government spent RM4,450.9 million and in 2006, the government announced an allocation of RM4,792.6 million to further strengthen the training system (Ninth Malaysian Plan, 2006). For such a huge budget positive returns were definitely expected. The key to the success of training programme initiatives is the extent to which trainees apply their training on the job and ultimately contributes to organization's performances. Researchers and practitioners have long acknowledged that transfer of training must occur before learning can lead to an improvement in individual job performance (Holton, Bates & Ruona, 1996, 2000). Hence, the issue of training transfer is seen as one of the most important aspects in the HRD research agenda (Holton & Baldwin, 2002). Transfer of

training has to take place (Baldwin & Ford, 1988; Kontoghiorghes, 2001) and training sessions must justify their existence to ensure investments bring returns (Kirkpatrick, 1998). Training practitioners agree that the acquisition of knowledge, skills and abilities during training is of little value if the newly acquired characteristics are not transferred to the job setting, or are not maintained (Baldwin & Ford, 1988; Garavaglia, 1993; Holton, Bates & Ruona, 2000; Kozłowski & Sales, 1997).

In light of the above, investigating training transfer in the Malaysian context is a necessity. Hence, based on Baldwin and Ford's (1988) Transfer Process Model, the present study will examine two of the three main factors, namely trainee-related factors and work-environment factors, and their relation to training transfer in the Malaysian industrial context. These two factors are expected to be significant in promoting the transfer of training in Malaysia's factories. In conjunction with that, the term 'training transfer' in the current study, refers to the application of skills and knowledge gained through a one-month training programme (a compulsory training programme to newly appointed operators) on the job, as well as their maintenance over a period of time (six months). In addition, 'trainee related factors' refers to conscientiousness, motivation to transfer, and organizational commitment of workers, while 'work-environment factors' are defined as supervisor and peer support in promoting the training transfer at the workplace.

STATEMENT OF PROBLEM

Global industrialization has brought technological innovations to Malaysia and this inevitably means industrialists and employers need to assume a greater responsibility in upgrading the competencies of employees to meet the requirements of new technology (Shukran, 2005; Seventh Malaysia Plan, 1996). As a result, the training

delivery system of Malaysia is nationally reoriented to keep pace with human capital growth and needs (Eighth Malaysia Plan, 2001). To encourage the involvement of private organizations and industries in the training and re-training of their workers, the Human Resource Development Fund (HRDF) was established. Under the HRD Act 1992, certain categories of employees are liable to pay the HRD levy at the rate of 1% of the monthly wages of the employee. Nevertheless, the minister of HRD may from time to time (by order in the Gazettes) reduce or increase the rate of the levy specified by the body that manage the HRD or the PSNB. Through the HRDF, the manufacturing sectors which contribute to this fund can apply for grants to subsidize the costs incurred in the training and re-training of their workforce (Ministry of Human Resources Malaysia, 2004). The development allocation for training alone increased each year and thereby indicates the importance of training development of human resources in Malaysia. However, despite the huge budget allocated for training programme few studies have been conducted to study the effectiveness of such effort, especially the effect of training on workers' productivity (Zulkarnain & Mazanah, 1998). Even though training has been singled out as a necessity in the uplifting of productivity in the public and private sectors, very little information is available with reference to the training transfer (Razali & Farhad, 1999), particularly within the industrial context. The available research mostly emphasizes the need for training activities organized by the Malaysian public sector i.e., the research conducted by Abu Hassan (1997), Kamarul Zaman and Raida (2003), and Mohamad Saprin (2007). In relation to this, Razali and Farhad (1999, p.65) stated that "most organizations seemed to be more preoccupied with providing training rather than evaluating the effectiveness or the transferability of the learnt skills, values and beliefs to the actual