

The Influence of Training Design on Training Transfer Performance among Support Staff of Higher Education Institution in Malaysia

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Abstract—Higher education institutions had conducted numerous studies to explore human resource management and professional development of staff personnel, however it neglects to investigate or adopt human resource development practices to their most important resource within their institutions that is their support staff. This paper is analyzed from the perspective of the low training transfer activities among the supporting staff of public higher learning institution in Malaysia. The question that underlies the entirety of the successful training transfer is the determinants of training inputs that will motivate the training to be transferred. From the results of this paper, training design, its content validity and transfer designs explain 65 percent of the training transfer. The paper confirms the robustness of the third evaluation level of Kirkpatrick's model.

Index Terms—Training, training transfer, training design, transfer design, higher education institutions, Malaysia

I. INTRODUCTION

Today's most progressive organizations have moved from treating selected human resource practices (e.g., incentive compensation, employee participation, flexible work arrangements, and training) as obligatory cost factors to regarding them as strategic weapons in the battle for competitive advantage [1]. It has become a widely held premise that people provide organizations with an important source of sustainable competitive advantage [2]. A review of the literature on human resource training in less-developed countries show that these countries have been keen to invest in their human capital and therefore, employee training has been looked upon with a great deal of enthusiasm by their government. This is in particular for the case of Malaysia, as noted by the Prime Minister of Malaysia;

“...the most important asset of a nation is its human capital and it is proven that a nation without natural resources but which effectively manages its human capital will achieve greater success than a nation that relies on natural resources”. [3]

[3] further urged that a quality, skilled, knowledgeable, creative and innovative human capital is a prerequisite towards achieving a developed and high-income nation. It is imperative that knowledge of the people be treated as an

important strategic resources and the management of knowledge is considered critical for long-term success and stability [4, 5]. In a quest for a long-term success and stability, training would be an important element in generating human capital. This argument, based on the theory of balance, is also defended by [6] who considers that investment in training can make employees feel indebted to the company.

Training alone, however, will do little to increase individual or organizational performance unless what is learned as a result of training is transferred into on-the-job behavior [7, 8]. As far as training is concerned, one of the greatest challenges is the transfer of the newly learned skills to the workplace [8]. A large number of researches have been generated regarding the effectiveness of training programs [9, 10, 11] and one major conclusion that emerges from a review of this research is that training transfer is paramount to the effectiveness of training and education programs. Over the years, researchers and practitioners have acknowledged that transfer of training that occurs before learning can lead to an improvement in an individual's job performance [12]. As such, great efforts must be channeled to support training transfer in organizations as the success factors lie in the result of oriented planned training where training transfer is made possible to the workplace.

II. LITERATURE REVIEW

Training Transfer

The terms “transfer of training”, “transfer of learning”, “training transfer”, “learning transfer” and “transfer” are perceived as interchangeable terms in the Human Resource Development (HRD) field. Transfer was originally defined as the extent to which learning of a response on one task or situation influences the response in another task or situation. Previous research on transfer emphasizes the fact that it is multi-faceted. A common thread of the research depicts transfer as comprising a three-step process: learning or mastering the knowledge and skills gained during a training program, using the new knowledge and skills on the job, and maintaining the change behaviour over time. However, [13] argued that transfer would occur as long as the aims, methods, and approaches used for the learning task were similar to the transfer task.

All too often training was seen as remote, a break from work and not necessarily applicable to the job at hand. One-day and a week-long course were the favoured options as

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this meant staff were not away from the job for too much time. The importance on transfer of training as critical factors for improving performance and gaining in a competitive advantage necessitate that both areas be further investigated. Any relationship between training inputs and transfer of training could lead to performance improvements and maximize the benefits gained and enable organizations to remain competitive in the face of global competition, a constantly changing environment and unstable economic conditions.

Emphasis has been placed on effective training and specifically on transfer of training as a strategy for competitive advantage. Research has shown that 40 percent of the skills acquired during the training process are immediately transferred at work, 25 percent remain for a time period of six months and only 15 percent for a year [14]. Others provide more dismal figures, estimating that as little as 10%-15% of what is learned in formal training programs is transferred or remained in use one year later [14].

A study conducted by [15] on 110 executives undergone business writing skills indicated that the trainees transferred 42 per cent of the knowledge and skills learned in the training to their jobs. In addition, the research conducted by [16] argued that one reason for these low rates of transfer is the limited opportunities trainees have to use new skills on the job. [17], argued that common lack of integration between training and job performance makes it almost impossible to obtain any meaningful data on the business impact of training. There are other numerous researchers and practitioners alike speaking of wasted training resources [18] and provide many possible reasons for the waste.

Thus, a clear understanding of the factors which influence trainee's use of their learned skills and knowledge on the job would be valuable in determining trainee's motivating factors to use knowledge and skills so that the organization is benefited [19].

A. Motivation to Transfer

As training transfer is an important criterion of a training programme's success, a number of researchers have called for studies that analyze factors affecting training transfer. [20] found that the transfer of learning from training to the workplace is determined by participants who complete the training and then apply their new knowledge, skills or attitude on the job. Motivation to transfer is believed to be affected by, for example, trainees' perception of the relevance of training and their perceptions of opportunities to use learning on the job [21]. Motivation to transfer can be described as the trainee's desire to use on the job the knowledge and skills that have been learned in a training programme [22, 8]. Research on the effects of motivation to transfer on transfer is limited [22], but a study by [22] indicates motivation to transfer to be a key variable in predicting the levels of transfer that trainees felt they had achieved after training participation.

B. Training Design

To date, the extant literature [7, 11, 23] has identified three main determinants of training input: individual factors or trainee characteristics, transfer climate or work environment training design or enabling factors [7, 8,

24]. There are several individual factors that affect the transfer of training process, such as locus of control, conscientiousness, anxiety, performance self-efficacy, and valence [25, 26]. However, for the purpose of this paper, the individual factors will discover issues on performance self-efficacy, learner's readiness [12] and training retention; as this important variable seems to be neglected [7]. [7] further added training results can be defined as the amount of learning that occurs during the training and the retention of the principles and application of the skills. [7] argue that training retention outcomes are directly associated with the generalization and maintenance of training effects on the job.

Several studies have established that the transfer climate can significantly affect an individual's ability and motivation to transfer learning to job performance [23, 27, 28, 35]. Thus, even when learning occurs in training, it is increasingly clear that the transfer climate may either support or inhibit application of learning on the job [12, 26, 30]. For example, [30] suggests that environmental characteristics such as tools and equipment, time availability and financial support would influence individuals' motivation to learn and transfer. Consequently, less research has examined peer and supervisors' supports and opportunity to use as an important climate to stimulate the transfer motivation [7].

[31] claimed training design has been described as one of the most important influences on training transfer and one cause factor of failure to transfer training is that training design rarely provides for transfer to take place [11]. Thus, the relevance of the course has been seen as an especially important area of training design [35] and if the course is irrelevant, then individuals are unlikely to use the skills when they return to work, irrespective of trainee and work environment characteristics which are present

C. Training Transfer in Local Perspectives

In line with the local perspectives, the government benefits associated with transfer of training as identified by the Ministry of Human Resources are firstly, it offers a sum of RM45,149.1 million is allocated for training and development in Ninth Malaysia Plan (2006-2010) which is an increase of 6.6 per cent as compared to Eighth Malaysia Plan. Secondly, it involves the recognition training as an important development of human resource in implementing the quality of its human capital needs. Thirdly, there are better and up-to-date choice of trainings to be allocated as training serves as a very important indicator in the development of Malaysian human capital. Training appears to be an important agenda in developing a quality human capital both in the agenda of Tenth Malaysia Plan and the Second National Mission in enhancing the country's knowledge and innovative capacity of the workforce.

In line with the above concern, ultimately, an important aspect related to the development of human capital in Malaysia is the transfer of training value on-the-job. According to the Public Service Department Circular (2006), as a public sector, public institutions of higher learning, it is the government policy to provide a minimum of seven training days per year for each employee. As for the University of Technology MARA (UiTM), it is the policy of the institution to have its employees attends a minimum of

42 hours of training per year. Consequently, a total of RM4.2 million is allocated on staff training and development (UiTM Human Resource Department, 2010). These levels of expenditure clearly reflect a changed perspective on the value of training interventions. With high investments in and allocation of resources in training, the need for justifying training effectiveness and documenting that employees can transfer and use the skills learnt to their work environment has accelerated [33].

This proposal is analyzed from the perspective of the low training transfer activities among the supporting staff of UiTM. It appears that since 2009, a situational analysis conducted by the researcher; majority of the supporting staff attending training had indicated that they had less successfully transferred the knowledge, skills and attitudes they have learnt and even further less changes in behavior in their job-related performance. Without greater insight into the complex relationships between training inputs and the application of learned KSAs in the workplace, the scenario of UiTM supporting staff transfer problems will continue to be an obstacle to the UiTM as an organization seeking superior performance. Even, most of the time, effort and money were invested and directed to address the potential need to increase knowledge, skill and change in attitude, but nonesoever to address the training transfer problem and issues among the these supporting staff. As such, the question that underlies the entirety of the successful training transfer is what are the determinants of training input that will motivate the training to be transferred and whether this motivation to transfer will mediate the relationship between training inputs and training transfer.

Training and development is considered an integral part of an organization's investment but little work has examined the extent to which trainees effectively apply knowledge, skills and attitudes acquired in training context once they are back to their respective workplaces [9, 23]. It appears that only a small percentage of training actually results in transfer to the job [7].

In the local setting, however, despite the government's spending on their training and development to improve performance, numerous grievances and complaints have been directed towards public sector employees for their effectiveness and inefficiency. For example, complaints on public sector employees in Malaysia in the year 2007 was 5,347 cases and an increase of 33.7% is reported in 2008 [15, 18]. The increase in complaints provides some evidence and important indicators relating to training transfer problems. This is further supported by Holton (2005) who is arguing that although HRD professionals are aware that training transfer improvement is needed in the organization; they are often puzzled and left with guesswork by the training transfer outcomes.

In addition, initial discussions with several supporting staff of UiTM revealed that the implementation of training transfer in the public services sector faced several problems and obstacles due to various factors. The first and the main factor is the lack of understanding of the supporting staff regarding the importance and impact of motivation to transfer on positive training transfer outcomes [12]. Furthermore, the employees also fail to see the success of themselves as person in a need of training, the transfer

climate issues and also on the design of the training itself [7, 12]. Many of them also have a narrow understanding pertaining to motivation of transfer; for them what they learn is just the same as training [34]. (Some of the supporting staffs even see training as a cost and a waste of time and it is only suitable and applicable for the private sector. Due to time constraint, it is very difficult to involve every supporting staff actively in the training program. Therefore, many supporting staff do not give serious attention, involvement, and support for training transfer issues in their units or departments or faculties.

Hence, it is crucial for the supporting staff to gain an insight of the problems and undertake effective measures to improve the training input issues which in turn affect training transfer outcomes [12]. As such, there is a now a need to address and explore why UiTM supporting staffs fail to fully transfer the knowledge, skills and attitude gathered from training. The mere question of successful training transfer has not overcome the very underlying problem in terms of the training design and motivation to transfer [7, 12]. Training transfer can be implemented or utilized, so that the benefits from it can be reaped at its best for the successful training program [30]. This necessitates the need for an investigation, and given these realizations, it is expected that this paper would help bridge the existing gap.

III. RESEARCH OBJECTIVES

The purpose of this paper is to examine and determine training design such as their content validity levels and transfer design had influenced the training transfer performance among the supporting staff of Malaysian higher education institutions. In addition, it is to empirically examine which predictors explain training transfer performance.

IV. RESEARCH FRAMEWORK

The subsequent section briefly describes the variables to be examined. The variables are represented in the framework shown in Figure 1. In meeting these objectives, a theoretical framework which also serves as a research framework of these relationships has been developed as below:

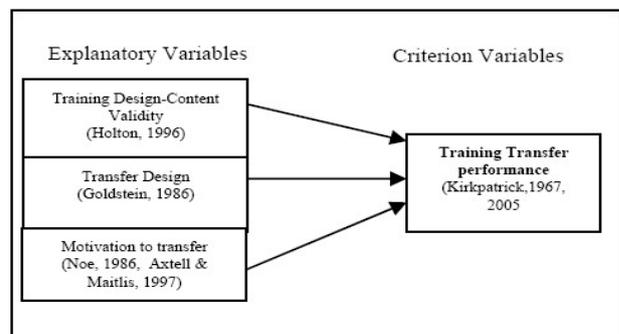


Fig. 1. Research Framework

V. RESEARCH DESIGN

A list of target population was obtained from the Strategic

Planning Centre UiTM Malaysia. UiTM Malaysia has a total number of 17,698 employees (8,400 academic staff and 9,298 support staff) (Strategic Planning Centre, UiTM Malaysia, 2010). However, 1,670 employees of support staff with the job titles of clerks, senior clerks, executive officers, senior executive officer, assistant office secretary, assistant senior office secretary, office secretary and senior office secretary, executive officer (1240 females and 430 males) have been identified for this paper which comprises of those who work in the main campus (Shah Alam), Puncak Perdana, Puncak Alam, faculties, departments, centres, units and branch campuses in Peninsular Malaysia, Sabah and Sarawak. They are chosen because they support almost all the strategic and important posts of the universities--support the vice chancellors, campus director, deans, deputy deans, and heads of programme, units, centres and departments within the administrative setting. The sample size is governed by the extent of precision and confidence desired [36]. Since the population of this paper is around 1,670 supporting staff, hence based on the table provided by [37] the suitable sample size needed is at least 357 supporting staff. This sample size is more than the sample size calculated using the G*Power package, which is 119 only.

The sampling frame for the paper was acquired from the Strategic Planning Centre UiTM Malaysia. For this paper, the sampling frame is the name list of all supporting staff who work in UiTM Malaysia. The first step is to number each element in the sampling frame. A author calculates the sampling interval and the interval for this systematic sampling is 9. The sampling interval tells the author how to select elements in the frame before selecting one for the sample. Simple random selection was done among the sampling interval (1 to 9) and the number 3 was selected. The sample was chosen by taking the third unit of analysis and every ninth unit after that until the sample of 500 is selected. Instruments used in this paper are training content validity and transfer design [35], motivation to transfer [8, 22] and training transfer performance [30]. The 7-point Likert scale was used ranging from strongly disagree (1) to strongly agree (7). Exploratory Data Analysis (EDA) was conducted on the data and the results met the basic assumptions of normality and linearity. Cronbach Alpha and Confirmatory Factor Analysis (CFA) were used to test the reliability and validity of the instruments respectively and they indicated acceptable results. The Pearson correlation and regression analysis were employed to obtain the answers for the research questions to achieve the objectives of the paper.

VI. DATA ANALYSIS AND RESULTS

The population of the study is around 1,670 employees of support staff with the job titles of clerks, senior clerks, executive officers, senior executive officer, assistant office secretary, assistant senior office secretary, office secretary and senior office secretary, executive officer working in UiTM Malaysia. Since the population of this study is around 1,670 supporting staff, hence based on the table provided by [37] the suitable sample size needed is at least 357

supporting staff. The collection of primary data was through the distribution of personally administered questionnaires to the respondents who were chosen by systematic sampling procedure. A total of 135 (38%) answered questionnaires were returned and used in the final analysis. The following hypothesis was made:

H1 There is a positive, linear, and significant relationship between variance impacting training transfer performance and the factors: (a) content validity, (b) transfer design, and (c) motivation to transfer

In order to determine how much variance impacts training transfer activities can be explained by scores on training content validity, transfer design and motivation to transfer; a three predictor multiple linear regression model was proposed. The three predictor variables are training content validity (X_1), transfer design (X_2), and motivation to transfer (X_3). Based on this method, all the three predictor variables were found to be of significance in explaining training transfer performance. As depicted in the coefficients table (see Table 1), the estimated model is as below:

$$Y (TTP) = .2446 + .324(X_1) + .306(X_2) + .121(X_3) + e$$

Where:

Y = Training Transfer Performance

b0 = Constant (Intercept)

b1-3= Estimates (Regression coefficients)

X1 = content validity

X2 = transfer design and

X3 = motivation to transfer

e = Error.

The R-squared of 0.650 implies that these predictor variables explain about 65% of the variance/variation in training transfer performance. This is quite a good result. The ANOVA table revealed that the F-statistics (234.72) and the corresponding p-value is highly significant (0.0001) or lower than the alpha value of 0.05. This indicates that the slope of the estimated linear regression model line is not equal to zero confirming that there is a linear relationship between variables.

TABLE 1. ESTIMATES OF COEFFICIENTS FOR THE MODEL

Entrepreneurial University dimension	B (Unstandardized Coefficient)	Std. Error	Beta (Standardized Coefficients)	T	p-value
Constant	2.446	.435		5.617	0.000
Content Validity (X_1)	.324	.096	.418	3.296	0.002
Transfer design (X_2)	.306	.102	.382	3.013	0.004
Motivation to transfer (X_3)	.485	.121	.500	3.994	0.000

Notes: R = 0.806; R² = 0.650; Adj. R² = 0.631

The dominant literature suggests that when trainees perceive that their supervisors support the application of newly developed knowledge and skills, they are motivated to transfer newly developed knowledge and skills back to the job [25, 31]. However, contrary to expectation, a study on 182 employees in a large grocery organization conducted by [38] found that supervisory support was not significantly related to transfer of training. [38] also reported conflicting findings variables such as transfer climate, social support (e.g., supervisors, peers and subordinates) and opportunity

to use in a relationship with training transfer. Therefore, this paper incorporates the issue of these mixed findings in an attempt to highlight the influence of supervisory support among UiTM support staff. Although the literature generally claims that situational variables (e.g. supervisor support) and transfer motivation are very important in explaining training transfer, the issue has not been addressed with empirical evidence to any great extent. Empirical results of research on the relationship between supervisor support and transfer outcomes provide no clear picture of the relationship, with some results even being contradictory [33].

VII. IMPLICATIONS TO THE THEORY AND BODY OF KNOWLEDGE

The following discussion outlines the contribution this paper can make in two interdisciplinary areas of entrepreneurship and higher education.

Implications for Policy and Practice

The majority of research on transfer of training has been conducted in developed countries for example, USA, United Kingdom, Australia and Canada but there is a lack of empirical evidence to support this in Malaysian context. According to [18, 19] found that there has been scarce investigation addresses Malaysian employees training. In particular, added that universities conduct numerous studies to explore human resource management and professional development of staff personnel but neglect to investigate or adopt human resource development practices to their most important resource within their institutions that is their support staff [18]. Clearly, this paper indicates its significance as it focuses on support staff of a public higher learning institution in Malaysia.

In addition, the uniqueness of this paper lies on its attempts to gain better insights towards an understanding of the variables associated with transfer of training from an educational point of view. In this sense, this paper tries to overcome the limitations encountered in previous researches by including the construct of training retention as one of the independent variables.

Numerous similarities of published researches are identified in the international literature but there was no theoretical or empirical studies have been conducted on mediating effects of motivation to transfer in the relationship between training inputs and training transfer among support staff. A tested conceptual frame to be derived from this paper would be an advantage to a variety of stakeholders, including learning and development professionals, human resources practitioners, educational researchers and organizational in investing in training.

From practical point of view, for HRD practitioners in public universities, the study results will provide guidelines for investigating the transfer of training within a local context. Studies of this nature will help program designers within the local organizations develop training programs that better meet organizational and individual needs. Clearly the success with which individuals apply new skills in the workplace is of importance both to those attending training programmes and to employing organization who

continue to invest heavily in such development activities.

VIII. CONCLUSION

This paper will facilitate in adding new knowledge to existing literature related with the training transfer particularly in the University of Technology MARA. Information obtained could be practical when management decides to analyze the transfer of training elements to be addressed in this paper as to get management support and create conducive environment to apply related skills and knowledge on the job. It is important to note how HRD professionals in Malaysia and elsewhere might use the findings of this paper to improve transfer of training and perhaps contribute to a greater return on investment for the training effort. The assessment and improvement of transfer, which is the link between individual learning and organizational growth, is therefore becoming a top priority for many human resource managers.

REFERENCES

- [1] B. D. Blume, J. K. Ford, T. T. Badwin, and J. L. Huang, "Transfer of training: A meta-analytic review," *Journal of Management*, vol. 36, no. 4, pp. 1065-1105, 2009.
- [2] E. Soltani, and Ying-Y Liao, "Training interventions: fulfilling managerial ends or proliferating invaluable means for employees," *European Business Review*, vol. 22, no. 2, pp. 125-52, 2009.
- [3] Abdul Razak, Najib, (2009), Budget Speech 2010, Government of Malaysia.
- [4] R.S.R Kasim, Moderating effect of knowledge management practices in the relationship between corporate strategies and organizational performance. PhD Dissertation. Graduate School of Management, Universiti Putra Malaysia, Malaysia. 2008.
- [5] R.S.R Kasim, "The commercialization of knowledge management practices among public-listed organizations to K-based development in Malaysia", *Proceedings at the Knowledge Management and International Conference Exhibition*. University Utara Malaysia, Langkawi, Malaysia, June 10-12, 2008.
- [6] R.S.R Kasim, "Knowledge management practices amongst MSC status organizations: a survey," presented at the Fifth International Conference on Knowledge, Culture and Change in Organizations, University of Aegean, Rhodes, Greece. July 19-22, 2005.
- [7] T. T. Baldwin, and J. K. Ford, "Training of training: A review and directions for future research," *Personnel Psychology*, vol. 41, pp. 63-105, 1988.
- [8] R. A. Noe, "Trainee attributes and attitudes: neglected influences on training effectiveness," *Academy of Management Review*, vol. 11, pp. 736-49, 1986.
- [9] S. I., Tannenbaum, and G. Yukl, Training and Development in Work Organizations. 1992.
- [10] E. Salas, J. A. Cannon-Browsers, "The Science of Training: A Decade of Progress," *Annual Review of Psychology*, vol. 52, pp. 471-99, 2001.
- [11] E. F. III. Holton, "The flawed four-level evaluation model," *Human Resource Development Quarterly*, vol. 7, pp. 5-21, 1996.
- [12] E. F. III. Holton, "Holton's evaluation model: new evidence and construct elaborations," *Advances in Developing Human Resources*, vol. 7, no. 37, pp. 37-54, 2005.
- [13] E. L. Thorndike, and R. S. Woodworth, "The influence of improvement is one mental function upon the efficiency of other functions," *Psychological Review*, vol. 8, pp. 247-61, 1901.
- [14] S. E. Cromwell, and J. A. Kolb, "An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace," *Human Resource Development Quarterly*, vol. 15, no. 4, pp. 449-71, 2004.
- [15] J. Wahidin, Transfer of learning of business writing skills in a private organization in Malaysia. Doctoral thesis. Universiti Putra Malaysia. 2007.
- [16] J. K. Ford, M. A. Quinones, D. J. Segoe, and J. S. Sorra, "Factors affecting the opportunity to perform trained tasks on the job," *Personnel Psychology*, vol. 45, pp. 511-27, 1992.
- [17] J. Bersin, Companies still struggle to tie training to business goals. *Training Magazine*. 2006.

- [18] A. Rasli, IT competencies and the conditions for training effectiveness: A study on Malaysian universities clerical workers. Doctoral thesis. Roskilde University, Denmark. 2005.
- [19] S. B. Baharim, The influence of knowledge sharing in motivation to transfer training: A Malaysian public sector. Doctoral thesis, Department of Management, University of Victoria, Melbourne, Australia. 2008. [21] M. J. Foxon, "A process approach to the transfer of training Part 2: Using action planning to facilitate the transfer of training," *The Australian Journal of Educational Technology*, vol. 10, no. 1, pp. 1-18, 1994.
- [20] C. M. Axtell, and S. Maitlis, "Predicting immediate and longer-term transfer of training," *Personnel Review*, vol. 26, no. 3, pp. 201, 1977.
- [21] J. B. Tracey, S. I. Tannenbaum, and M. J. Kavanagh, "Applying trained skills on the job: The importance of the work environment," *Journal of Applied Psychology*, vol. 80, pp. 239-52, 1995.
- [22] K. N. Wexley, and T. T Baldwin, "Post-training strategies for facilitating positive transfer: an empirical exploration," *Academy of Management Journal*, vol. 29, no. 503-20, 1986.
- [23] J. A., Colquitt, J. A. LePine, and R. A. Noe, "Toward an integrative theory of training motivation: a meta analytic path analysis of 20 years of research," *Journal of Applied Psychology*, vol. 8, no. 5, pp. 679-707, 2001.
- [24] J. E., Mathieu, S. I. Tannenbaum, and E. Salas, "Influences of individual and situational characteristics on measure of training effectiveness," *Academy of Management Journal*, vol. 35, no. 4, pp. 828-47, 1992.
- [25] A. A. Huczynski, and J.W. Lewis, "An empirical study into the learning transfer process in management training," *Journal of Management Studies*, vol. 17, no. 3, pp. 227-40, 1980.
- [26] J. Z. Rouiller, and I. L. Goldstein, "The relationship between organizational transfer climate and positive transfer of training," *Human Resource Development Quarterly*, vol. 4, pp. 377-90, 1993.
- [27] J. Xiao, "The relationship between organizational factors and the transfer of training in the electronics industry in Shenzhen, China," *Human Resource Development Quarterly*, vol. 7, pp. 55-73, 1996.
- [28] J. E. Mathieu, and J. W. Martineau, "Individual and situational influences in training motivation," *Personnel Psychology*, vol. 46, no. 1, pp. 125-48, 1993.
- [29] R. O. Brinkerhoff, and M. U. Montesino, "Partnerships for training transfer: lessons from a corporate study," *Human Resource Development Quarterly*, vol. 6, no. 3, pp. 263-74, 1995.
- [30] Government of Malaysia (2006). *Ninth Malaysia Plan 2006-2010*. Planning Economy Unit. Prime Minister Department, Putrajaya, 2006.
- [31] D. J. Nijman, Nijhof, W. J. Wognum, and B. P. Veldkamp, "Exploring differential effects of supervisor support on transfer of training," *Journal of European Industrial Training*, vol. 30, pp. 529-49, 2006.
- [32] J. D. Facticeau, G. H. Dobbins, J. E. A. Russell, R. T. Ladd, & J. D. Kudisch, "The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer," *Journal of Management*, vol. 21, pp. 1-25, 1995.
- [33] I. Goldstein, and J. K. Ford, *Training in organizations*. 4th ed. Belmont, CA: Wadsworth. 2002.
- [34] U. Sekaran, *Research methods for business: a skill building approach* (4th ed.). India: John Willey and Son, 2004.
- [35] J. C. Nunally, *Psychometric Theory*. New York: McGraw-Hill, 1978.
- [36] R. Velada, A. Caetano, J. W. Michel, B. D. Lyons, and M. J. Kavanagh, "The effects of training design, individual characteristics and work environment on transfer of training," *International Journal of Training and Development*, vol. 11, no. 4, pp. 282-94.



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