

The relationship between work environment factors and transfer of training among plantation workers

Ooi Ang Ling¹, Phuah Hui Woon² and Koh Huei Ven³

*Faculty of Management
and Human Resource Development*

ABSTRACT

Training transfer is an essential aspect in determining the effectiveness of a training program. It is a lost to an organization if there is a failure of transfer training to the job since the organization had invested considerable time and money on HRD programs. This study focused on identifying the relationship between work environment factors and transfer of training among plantation workers. Fifty respondents were involved in the research. Questionnaire was used as the instrument to collect the data. Data were analyzed by using Statistical Package for Social Science (SPSS) through Descriptive Statistic, Spearman correlation and Regression. The findings showed that there was a weak but significantly relationship between opportunity to perform and transfer of training. Besides that, supervisor support also illustrated a low and significant relationship with transfer of training. However, the findings revealed that peer support did not significantly affect the transfer of training. On the other hand, the research also showed that the dominant work environment factor which affected transfer of training among the employees was opportunity to perform. It is suggested that the future research should be focused on the peer support factor to identify whether the different level of peer support will affect the transfer of training.

Keywords: *work environment; transfer of training; plantation workers; relationship; training effectiveness*

Introduction

In this new era of global competition, the varying marketplace and rapid technological advances require a more flexible and competent workforce (Nikandrou et al., 2009). Business today goes globally and it requires more educating and training workers to meet the new challenges (Werner and DeSimone, 2009). Training is necessary to the healthy functioning of an organization in order to generate high quality and competitive workforce in the global market. Many organizations provide training and development programs to its employees for the purpose of developing their knowledge, skills and abilities in order to produce high-quality workforce which are outstanding and competitive in the global industry.

The financial crisis of 2007- 2010 hit the whole world economy hard. However, the 2010 American Society for Training and Development (ASTD) State of the Industry Report showed that U.S. organizations spent USD 125.88 billion on employee learning and development in year 2009. Many organizations spent significant time and billions of dollars on training program and it is crucial to ensure transfer of training occurs within the organization. According to Nijman et al. (2006), transfer of training is the essential element for training programs to be effective and efficient, besides intended return on investments in training programs will only be attained to the

extent where the training is transferred. Werner and DeSimone (2009) supported that the transfer of training to the job is critically important to the success of Human Resource Development (HRD) efforts.

Transfer of training occurs when trainees apply the knowledge, skills, behaviors and attitudes they gained in training and continually practice of them over a period of time to their jobs (Baldwin and Ford, 1988). There are three different forms for transfer of training. They are known as positive transfer, zero transfer and negative transfer. Positive transfer of training is the extent which the trainees effectively apply the knowledge, skills and attitudes gained in a training context to the job (Baldwin and Ford 1988). Zero transfer occurs when there is no change in job performance as a result of training meanwhile, negative transfer occurs when job performance worsens as a result of training. The training effort and time are wasted if there is no transfer of training to the workplace (Albrecht, 2008).

Nga Pham et al. (2010) states that transfer training effects decrease almost 50% one year after training; it is estimated about 62% of trainees transferred their training instantly after attending a training programme and it will be reduced to 44% after six months and only 34% after one year. There was an improvement of transfer training if compared to past two decades, which Baldwin and Ford (1988) states that there were not more than 10 percent of the expenditures actually result in transfer to the job. However, there is an issue triggered why there is no effective transfer of training occurs and maintenance over a period of time?

There are several factors that cause the failure or unsuccessful training transfer. According to Baldwin and Ford Model of Training Transfer, there are three factors that affect the effectiveness of transfer training. There are trainees' characteristics, workplace environment and instructional design. On the other hand, the model of Elangovan and Karakowsky (1999) explains that trainee-related and environmental-related factors affect transfer of training. Muhammad (2008) stated that training transfer will not occur if there is no positive organization culture and psychology climate.

Previously, plenty of researches were carried out in investigating what are the factors that affect transfer of training. According to Cheng and Ho (2001), there were many researches which study the effects of individuals' factors (such as trainee ability, personality, and motivation); however, researches on studying work environment on transfer of training are very few. On the other hand, investigating the various factors in the workplace environment will assist the organizations in enhancing their understanding of the problems underlying transfer of training (Elangovan and Karakowsky, 1999).

It is a lost to an organization if there is a failure of transfer training to the job since the organization had invested considerable time and money on HRD programs. Thus, it is vital to examine the relationship between environmental factors and transfer of training. New arrangements can be applied in the organization such as creating a supportive work environment for the effectiveness of transfer training if there is relationship between the two variables. The need for transfer of training is an important aspect to an organization (Mohamad et al., 2008). Therefore, this research focuses on identifying what are the relationships between the work environment factors that affect transfer of training. The objectives of the research are stated as follows:

The Relationship between Work Environment Factors
and Transfer of Training among Plantation Workers

- i. To identify the level of transfer of training among plantation workers who had attended the PPE training.
- ii. To identify the relationship between the work environment factors (such as supervisor support, peer support and opportunity to perform) and transfer of training.
- iii. To determine the dominant work environment factor that affects transfer of training.

Methodology

Respondents

The research was carried out in a plantation organization, which involved three batches of plantation workers who had attended the 'Personal Protective Equipment' safety training program on 11-12 October, 13-14 October and 21-22 October in year 2010. The respondents of the study were only 50 persons.

Data Collection

Questionnaire was used as the instrument to collect the data. The questionnaire measures the items of level of transfer of training and work environment factors (supervisor support, peer support and opportunity to perform) that affect transfer of training. For this research, two categories of variables were being investigated; they were known as the independent variable and dependent variable. The independent variable was the work environment factors which further divided into supervisor support, peer support and opportunity to perform. Meanwhile, transfer of training was known as the dependent variable in the research.

Data Analysis

Descriptive statistic was used in the research. Mean was used to analyze and measure the level of training transfer and the work environment factors (such as supervisor support, peer support and opportunity to perform). Spearman rank correlation coefficient '2 tailed' was used to identify the relationship between work environment factors (management support, peer support and opportunity to perform) and the level of transfer training. Based on the research result, correlation is significant at the 0.01 level (two-tailed) and Guilford's Rule of Thumbs was used to interpret the correlation coefficient between the work environment factors and transfer of training. Furthermore, multiple linear Regressions were used to determine the dominant work environment factor which affects transfer of training. The interpretation of R square (R^2) is the percentage of the variation in dependent variable that is accounted for by the independent variables. The beta coefficient with the highest value along with the p value less than 0.05 is considered as the dominant work environment that affects transfer of training.

Data analysis and findings

Table 1 shows the demographic background of the respondents. All of the respondents are male (100%). Majority of them are: aged between 41-45 years old (24%), Malay (84%), SPM holders (58%), possess working experience less than 6 years (42%) and in supervisor position (54%).

Table 1: Demographic of the Respondents (n=50)

Note: SRP : Sijil Rendah Pelajaran
 PMR : Penilaian Menengah Rendah
 SPM : Sijil Pelajaran Malaysia
 STPM : Sijil Tinggi Persekolahan Malaysia

Demographic	Sub-Profile	Percentage
Gender	Male	100
	Female	0
Age	< 26 years old	20
	26-30 years old	16
	31-35 years old	16
	36-40 years old	6
	41-45 years old	24
	> 45 years old	18
Race	Malay	84
	Indian	8
	Others	8
Academic Qualification	SRP /PMR	10
	SPM	58
	STPM	8
	Certification	4
	Diploma	8
	Bachelor	2
	Others	10
Working Experience	< 6 years	42
	6-10 years	18
	11-15 years	16
	16-20 years	10
	21-25 years	6
	> 26 years	8
Position	Supervisor	54
	Mandor	46

Table 2 shows the mean score and standard deviation of the variables. The result indicated that the mean score for all the variables were high. The mean score for the respondents' transfer of training level was 4.60 (SD=0.34), supervisor support was 4.20 (SD=0.43), peer support was 3.92 (SD=0.57) and opportunity to perform was 4.08 with the standard deviation (SD) of 0.44.

Table 2: Mean Score and Standard Deviation of the Variables

Variables	Mean Score	Std. Deviation
Level of Transfer of Training	4.60	0.34
Supervisor Support	4.20	0.43
Peer Support	3.92	0.57
The Opportunity to Perform	4.08	0.44

n= 50

Table 3 shows the relationship between work environment factors (supervisor support, peer support and the opportunity to perform) and transfer of training. The finding shows that the relationship between supervisor support and transfer of training is weak and significant ($r=0.49$, $p=0.00$). The relationship between peer support and transfer of training is weak and no significant ($r=0.14$, $p=0.36$). Besides that, the relationship between the opportunity to perform and transfer of training is low and significant ($r=0.50$, $p=0.00$).

Table 3: Relationship between Work Environment Factors (Supervisor Support, Peer Support and the Opportunity to Perform) and Transfer of Training

Work Environment factors	Correlation Coefficient (r)	Significant (p)
Supervisor support	0.49	0.00
Peer support	0.14	0.36
Opportunity to perform	0.50	0.00

Table 4 shows the model summary in variation of dependent variable (transfer of training level) by the independent variables (work environment factors such as supervisor support, peer support and the opportunity to perform). R Square equal to 0.32, which indicates that 32.0 percentage of the variation of the level of training transfer is affected by the work environment factors such as supervisor support, peer support and the opportunity to perform.

Table 4: Model Summary of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.57 ^a	0.32	0.28	0.29

Predictors: (Constant), The Opportunity to Perform, Peer Support, Supervisor Support

Based on the standardized coefficients of Table 5, the opportunity to perform factor ($\beta = 0.41$) is the dominant factor that significantly influences transfer of training. Supervisor support with β

value of 0.34 shows it is the second dominant factor that significantly affect transfer of training while the least affected factor is known as peer support with the β value of -2.05 and the significant value indicated that it did not affect the transfer of training.

Table 5: Coefficients for Work Environment Factors that Influence Transfer of Training

Model	Standardized	T	Sig.
	Coefficients		
Supervisor Support	Beta 0.34	2.17	0.04
Peer Support	-0.25	-1.69	0.10
The Opportunity to Perform	0.41	2.60	0.01

Dependent Variable: Transfer of Training

Discussions

Level of transfer of training

Generally, the level of transfer training among the plantation workers is high. They were able to practice what they have learned from the training program to the workplace. The finding indicates that positive of transfer training has taken place as expected by the organization. According to Baldwin and Ford (1988), the positive transfer of training occurred when the trainees effectively apply the knowledge, skills and attitudes gained in a training context to the job. In addition, Nijman et al. (2006) expressed that transfer of training is the essential element for training programs to be effective. It can be said that the PPE training program is effective as the workers learned and gained safety and health knowledge from the training program as well as practice the wearing of personal protection equipment (PPE) at the workplace. On the other hand, the workers are likely to transfer training because what they learned from training is similar to what he or she performs on the job. Identical elements theory is particularly relevant in making sure that near transfer occurs (Noe, 2010). The PPE training content, equipment and tasks are similar with the actual workplace such as wearing mask protector in dusty, gas and vapor area, usage of gloves when lifting any loads and etc.

The relationship between the work environment factors (such as supervisor support, peer support and opportunity to perform) and transfer of training

The results of study demonstrate that there is low, but significantly relationship between supervisor support and transfer of training. The results showed may be derived that different level of supervisory support affects the transfer of training level (Noe, 2010). The effective transfer of training occurs when supervisor always assist the employees when they are facing the problem in practicing what they have learned from training as well as they are provided feedback regarding their progress on transfer of training. Clarke (2002) also agreed that the way trainees' supervisor

responds will promote or inhibit them to transfer new learned capability back to their work. Supervisor support is relevant in determining the transfer of training among the employees (Al-Eisa et al., 2009). The level of supervisor support affects the employees' motivation to learn and practice new knowledge and skills to the workplace.

From the findings, there is no significant relationship between peer support and transfer of training. The result is inconsistent with the studies of Chiaburu (2010), (Martin, 2010) and Elavongan and Karakowsky (1999). Chiaburu (2010) demonstrated that peer support is the most important factor in work environment factors for training transfer by group networking; motivation and encouragement for them to continue apply learned new capability on the job. Basically, plantation workers work independently and individually in the estates or mills. Elangovan and Karakowsky (1999) portrayed that an organizational culture will encourage or prohibit the transfer training to be occurred. An organization's culture includes domain culture and subcultures. Robbins and Judge (2007) explained subculture is likely to be defined by geographical separation, divisions and departments. The plantation workers work apart by the geographical separation from one estate to another and their job nature is individualism. It can be said that they possess subculture of individualistic society and group networking, encouragement and group support among colleagues and peers are less effective among the plantation workers in transfer of training. Individualistic society underlines on the importance of individual consciousness, autonomy, emotional independence and individual initiative (Chen & West, 2008).

Additionally, there is a low and significant relationship between opportunity to perform and transfer of training. It is consistent with the studies of Muhammad (2008), Clarke (2002) and Ford et al. (1992). Transfer of training is prone to occur if the trainees are given the opportunity to perform (Aamodt 2007). Werner and DeSimone (2009) expressed that both the organization and individual will affect the opportunity to perform in transfer of training. The organization aspects may include managerial support, resources available such as tools and facilities provided and etc. Besides that, Foxon (1993) explained that favorable organizational climate will be the supporting factor for the employees to transfer training.

The dominant work environment factor that affects transfer of training

The finding R Square indicates that 32 percent of the variation of the level of training transfer is affected by the work environment factors. It is supported by the previous studies (such as Brown and McCracken, 2009; Elangovan and Karakowsky, 1999; Baldwin and Ford, 1988) which examine the importance of work environment factors in affecting transfer of training. Based on Cromwell and Kolb (2004), the trainees' good perception on work environment factors will promote the application of newly learned behavior or knowledge to the job.

The finding shows that the dominant work environment factor that influences transfer of training is opportunity to perform. Brown and McCracken (2009) explain that trainees are likely to transfer training if the time gap for practicing the knowledge and skills learned from the training to the workplace is short. Based on Cognitive Theory of transfer, a successful of training transfer occurs when the trainee is able to retain the training content for a period of time. It can be said that the time gap for practicing the new skills learn from the training to the workplace is short, the trainees are able to retain the new knowledge and skills and more likely to apply them to the job. In

addition, transfer of training is expected to be occurred if the trainees are given the opportunity to perform new knowledge and skills to his job right after he attended the training program.

Based on Ford et al. (1992), he states that transfer of training takes place in the stipulation that the opportunity to use the newly trained knowledge and skills is provided within the work environment. For this study, the trainees are encouraged to transfer training as they are given time and freedom to practice the knowledge and skills learned to the workplace. It is supported by Clarke (2002) that time pressure given will affect the opportunity to use the new knowledge and skills learned.

Ford et al. (1992) describe that the opportunity to perform includes the aspects of the number of trained task performed, the frequent of performed task and the difficulty of the task. The findings also illustrate that the trainees are likely to transfer training if there is opportunity to perform where there are more job tasks assigned by the supervisor to the trainee. However, it is contrast to the study of Clarke (2002), which stated that the workload pressures will provide less opportunity to perform the new knowledge and skills learned.

The plantation workers are provided with personal protective equipments and facilities at the workplace and they are required to use the knowledge and skills that are relevant for which they had been trained to the workplace. Noe (2010) supported that the opportunity to perform is related to the facilities, equipment, material and time which given to the trainees to practice what they have learned from the training program.

Conclusions and recommendations

Transfer of training is very essential in determining the effectiveness of a training program as well as the trainees able to practice what they have learned to the workplace. It can be concluded that the research is supported by the Baldwin and Ford (1988) Model which stated that transfer of training is affected by the work environment factors. The work environment factors such as supervisor support and the opportunity to perform are significantly affect the transfer training among plantation workers. However, the study revealed that peer support does not significantly affect transfer of training. The work environment factors such as opportunity to perform and supervisor support are the key factors that affect transfer of training.

It is proposed that further studies should be carried out on other trainees who attended the other field of training to determine the similarity of the research. Furthermore, it is suggested that the future research should be focused on the peer support factor to identify whether the different level of peer support will affect the transfer of training. It is also recommended that future research shall determine the other work environment factors, including the individual factor and training design factor which promote the transfer of training in order to have a complete picture of transfer of training.

References

- Albrecht, V. L. (2008). *Determining the Role of Transfer Implementation Intent in Predicting Training Transfer*. Doctor of Philosophy, Capella University.
- Al-Eisa, A.S., Furayyan, M.A., and Alhemoud, A.M. (2009). An Empirical Examination of the Effects of Self-Efficacy, Supervisor Support and Motivation to Learn on Transfer Intention. *Management Decision*, 47(8), 1221-1244.
- American Society for Training & Development (2010). 2010 State of the Industry Report. *Investment in Learning Remains Stable*. http://www.astd.org/TD/Archives/2010/Nov/Free/1110_2010+State+of+the+Industry.htm (Retrieved on January 24, 2011)
- Aamodt, M.G. (2007). *Industrial/ Organizational Psychology: An Applied Approach*. Fifth Edition. United State of America: Thomson Wadsworth.
- Baldwin, T.T. and Ford, J.K. (1988). Transfer of Training: A Review and Directions for Future Research. *Personnel Psychology*, 41(1), 63-105.
- Brown, T.C and McCracken, M. (2009). Building a Bridge of Understanding How Barriers to Training Participation Become Barriers to Training Transfer. *Journal of European Industrial Training*, 33(6), 492-512.
- Chen, F.F. and West, S.G. (2008). Measuring Individualism and Collectivism: The Importance of Considering Differential Components, Reference groups and Measurement Invariance. *Journal of Research in Personality*, 42, 259-294.
- Cheng, E.W.L., & Ho, D.C.K. (2001). A Review of transfer of Training Studies in the Past Decade. *Personnel Review*, 30(1), 102-118.
- Chiaburu, D.S. (2010). The Social Context of Training: Coworker, Supervisor, or Organizational Support? *Industrial and Commercial Training*, 42(1), 53-56.
- Clarke, N. (2002). Job/Work Environment Factors Influencing Training Transfer within a Human Service Agency: Some Indicative Support for Baldwin and Ford's Transfer Climate Construct. *International Journal of Training and Development*, 6(3), 146-215.
- Crombell, S.E and Kolb, J.A. (2004). An Examination of Work-Environment Support Factors Affecting Transfer of Supervisory Skills Training to the Workplace. *Human Resource Development Quarterly*, 15(4), 449-471.
- Elangovan, A.R., & Karakowsky, L. (1999). The Role of Trainee and Environmental Factors in Transfer of Training: An Exploratory Framework. *Leadership & Organization Development Journal*. 20(5), 268-275.
- Ford, J.K., Quinones, M.A., Segó, D.J., and Sorra, J.S. (1992). Factors Affecting The Opportunity to Perform Trained Tasks on The Job. *Personnel Psychology*, 45(3), 511-527.

- Foxon, M. (1993). A process approach to the transfer of training. Part 1: The impact of motivation and supervisor support on transfer maintenance. *Australian Journal of Educational Technology*, 9(2), 130-143. <http://www.ascilite.org.au/ajet/ajet9/foxon.html>. (Retrieved on January 8, 2011)
- Martin, H. J. (2010). Improving Training Impact Through Effective Follow-up: Techniques and Their Application. *Journal of Management Development*, 29(6), 520-534.
- Mohamad Abozed, Yassine Melaine, & Karima Saci (2008). *The Influence of Work Environmental Factors on Motivation to Transfer Management Training: Case Study of The Libyan Oil Industry*. Doctor of Philosophy, Liverpool John Moores University.
- Mohamad Saprin (2008). *The Relationship among Trainees Characteristics, Training Design and Work Environamnt with Training Transfer*. Doctor of Philosophy, Universiti Teknologi Malaysia.
- Muhammad K. Alawnah (2008). *Factors Affecting Training Transfer: Participants' Motivation to Transfer Training*. Thesis: Penn State University.
- Nga Pham, Mien Segers & Wim Gijsselaers (2010). *Understanding Training Transfer Effects from a Motivational Perspective: A Test of MBA Programmes*. Business Leadership review VII:III.
- Nijman, D.J.M., Nijhof, W.J., Wognum, A.A.M., & Veldkamp, B.P. (2006). Exploring Differential Effects of Supervisor Support on Transfer of Training. *Journal of European Industrial Training*, 30(7), 529-549.
- Nikandrou, I., Brinia, V., & Bereri, E. (2009). Trainee Perceptions of Training Transfer: An Empirical Analysis. *Journal of European Industrial Training*, 33(3), 255-270.
- Noe, R. A. (2010). *Employee Training and Development*. Fourth Edition. New York: McGraw-Hill.
- Robbins, S.P. and Judge, T.A. (2007). *Organizational Behavior*. Twelfth Edition. New Jersey: Pearson Prentice Hall.
- Werner, J.M., & DeSimone, R.L. (2009). *Human Resource Development*. United States of America: South-Western Cengage Learning.