

---

\* *Abdulfattah Yaghi*

\*\* *Elwood F. Holton*

\*\* *Reid Bates*

\* United Arab Emirates  
University

\*\* Louisiana State University

---

## UTILIZING PATH ANALYSIS TO EXAMINE THE EXPECT- TANCY MODEL IN TRAINING TRANSFER IN HUMAN RE- SOURCE MANAGEMENT

---

---

### Key Words

*Training Transfer;  
Managers; Human  
Resources;  
Organization; Civil  
Service - Path Analysis.*

---

### Abstract

*Training transfer is an organizational concept that refers to an organizational behavior in which trained employees put into practice the knowledge, skills, and abilities (KSA) they have learned during training. In order to identify factors that could improve training transfer, the present study tested the theoretical premise of the expectancy model, which suggested that training transfer depends on employees' own perception of three factors; how applying KSA is possible (efficacy), useful (utility) and rewarding (rewards). To this end, the Arabic version of Learning Transfer System Inventory (LTSI) was administered to a random sample of 361 managers in the public sector in Jordan. Utilizing Path Analysis to analyze the collected data by using the Statistical Package for Social Sciences (SPSS) revealed that managers' perceived utility and perceived efficacy were the strongest predictors of training transfer. Moreover, perceived rewards from transfer was the least important predictor of transfer. The study provided discussion of those results and their possible implications for practitioners and researchers.*

### Introduction

In human resource management (HRM), on-the-job training is an intervention to improve employees' performance (Kirwan & Birchall

2006; Bookter, 1999). Many public organizations face the challenge of training (learning) that often does not lead to improving employees' per-

formance because employees rarely apply what they learn. Therefore, and because organizations invest tremendously in HR training, there becomes a need to ensure that training provides equivalent payoff (Castonguay, 2005; Arvey & Cole, 1989). Hastings (1995) and Khasawneh (2004) reported that poor payoff might have resulted from inadequate training with ineffective training evaluation (also, see, Subedi, 2006; Sticht, 1995; Altonji, 1992; Drouin, 1990). Therefore, HR researchers stressed the need to assess the transferability of training; that is the organizational behavior of putting learned knowledge, skills, and abilities (KSA) into practice (Yaghi *et al.*, 2008; Chen, 2003; Bates, 2001; Bates & Holton, 1999). In other words, they wanted organizations to ensure that employees who join training programs return to work with sufficient retained KSA to apply on the job, with the aim of improving their own organizational performance. By assessing training transfer (learning transfer), decision-makers hope to identify major factors that improve transfer (Kirwan & Birchall, 2006).

The purpose of this study is to examine the expectancy model (EM) that Bates and Holton (1999) constructed based on the expectancy theory of Vroom (1964). The Model suggested that three factors could

predict employees' motivation to transfer training, namely perceived rewards, perceived utility, and perceived self-efficacy. This study examined this model by surveying supervisors (interchangeably, managers) in the public sector in Jordan. The following section highlights the major relevant literature about transfer of learning and expectancy theory.

## Relevant Literature

### Transfer of Learning

Learning transfer is a relatively new concept in HRM. It describes employees' capacity to retain and apply KSA which they learned during a particular training program. Chen *et al.* (2005), Holton *et al.* (2000), Rolfe (1989), and Mahmoud (2005) emphasized that evaluating the application of KSA could lead to designing training programs and activities that are relevant to what employees need in order for them to improve their performance. Tannenbaum and Yukl (1992) defined training transfer as the amount of specialized knowledge that trainees retain and use to improve their competencies. Fleishman (1972) and Yaghi (1998) defined 'knowledge' as any cognitive or behavioral exposure to new work-related ideas, beliefs, traditions, or ways of doing things. 'Skills' refers to practical activities performed at work. 'Abilities' refers to the general capacities related

to the performance of a set of tasks (Yaghi *et al.*, 2008; Holton *et al.*, 2000).

Senge (1990) argued that there was a paradigm shift in HRM exemplified in focusing on improving learning and learning attitudes within the organization as opposed to using economic incentives to alter organizational behavior. Therefore, the learning emphasis requires organizations to evaluate their training policies and maintain continuous feedback to improve performance. In other words, assessing training is a form of feedback that is essential to identify strengths and weaknesses of training policies and practices thus maintaining a positive learning environment in the organization.

Learning transfer requires human engagement, which occurs through socialization among members of the organization. Engagement and socialization facilitate exchange of experiences. Broad and Newstrom (1992) and Royer (1979) indicated that learning transfer is an engagement experience in itself because it cannot be achieved effectively without ongoing socialization among trainees, peers, supervisors, and other members of the organization. Similarly, Rouiller and Goldstein (1993), Rosenberg (2006), Ruona *et al.* (1999), and Brinkerhoff and Montesino (1995) reported that organizational factors,

such as relationships among employees could provide collective support for employees thus improving their chances of transferring the learned KSA. These factors combined by employees' personal characteristics can reduce the difficulty an employee may face when he/she attempts to apply something new at work or change the way they perform their job (Quinones *et al.*, 1995). Baldwin and Ford (1988) reported that employees' personal characteristics and emotional preparation, in addition to motivation to learn, were significant to improving one's performance (Tracy *et al.*, 1995; Fleishman, 1953).

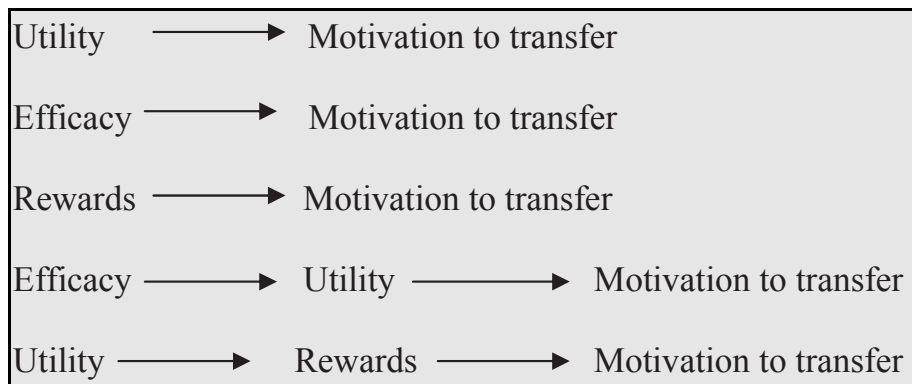
Vroom (1964) argued that organizational behavior is shaped by employees' expectations and their frustration or satisfaction with the level these expectations are met. In addition, employees compare what they get with what others get thus they build their subsequent expectations based on that comparison. Therefore, transferring KSA is more likely to occur if things go the way employees expect in terms of ensuring equality, fairness, rewards, relevant training, and openness with subordinates, colleagues' and bosses' encouragement to apply KSA (Bond & Prottas, 2002; Devi, 2002; Philips & Gully, 1997; Facticeau *et al.*, 1995; Rouiller & Goldstein, 1993; Newton, 1993; Hirschfeld, 1990). Many empirical studies con-

firming the significant correlation between employees' expectations and their motivation to transfer KSA (Bates & Holton, 1999; Hucznski & Lewis, 1980).

**The Expectancy Model (EM)**

Vroom's theory about expectations, as mentioned earlier, appealed to many researchers who wanted to validate its assumptions. For example, Forman (1977) found a relationship between employees' expectations and their motivation to apply new KSA. Similarly, Waxley (1989) emphasized the role of expectations in shaping post-training organizational behavior. Therefore, if employees get what they perceive proper, they are more likely to show motivation to transfer training. Bates and Holton (1999) represented this dynamic between motivation and expectations in the EM (see, Figure 1).

By surveying 705 employees in USA, using Learning Transfer System Inventory (LTSI), Bates and Holton (1999) reported that utility was a significant and direct predictor of learning transfer (p.1-36, 1977). Hence, lack of perceived utility from training would produce poor motivation to transfer KSA, because employees would have no incentive to change the way they perform their job. They added that rewards were not a strong predictor of the motivation to transfer because employees did not necessarily connect their applying of new KSA with receiving rewards (financial or non-financial). Furthermore, the study confirmed that performance self-efficacy was associated with utility, which meant that employees who had confidence in their ability to benefit from training were more likely to perceive utility from learning transfer thus to transfer KSA. Lastly, efficacy



**Figure 1: The Expectancy Model of Motivation to Transfer Training  
(Bates and Holton, 1999, P. 1-36)**

was also directly associated with motivation, which meant that employees who were knowledgeable about a particular training were better motivated to transfer training (see, Table 1, about composition of the aforementioned factors).

Expectation, therefore, is a psychological illustration of cognitive, rational calculations of gains and losses,

according to which employees improve their performance or apply KSA when they receive what they have expected. Bates and Holton (1999) explained that employees choose to act upon, and to do things based on their rational judgment that transferring KSA would satisfy all or some of their expectations of such behavior. Employees make such judgment before, during, and

**Table 1**  
**Description of LTSI Factors**

Factors	Definition	# items	Cronbach Alpha, $\alpha$ *	Question's Number in Survey
Motivation to transfer	The direction, intensity, and persistence of efforts toward utilizing in a work setting skills and knowledge learned	4	.776	2 3 4 5
Performance self-efficacy	An individual's general belief that they are able to change their performance when they want to	4	.798	82 83 84 85
Utility Scale ( $\alpha = .706$ ):- (a) Personal capacity to transfer	The extent to which individuals have the time, energy, and mental space in their work lives to make changes required to transfer learning to the job	7	.68	19 25 26 27 11 12 20
(b) Opportunity to use learning	The extent to which trainees are provided with or obtain resources and tasks on the job enabling them to use training on the job	8	.783	56 60 61 63 50 51 57 62
Rewards Scale ( $\alpha = .773$ ):- (a) Personal outcomes-positive	The degree to which applying training on the job leads to outcomes that are positive for the individual	8	.69	6 16 17 7 8 15 18 22
(b) Performance outcomes expectations	The expectation that changes in job performance will lead to valued outcomes	5	.83	64 67 68 70 72
(c) Transfer expectations-Reward	The expectations that effort devoted to transferring learning will lead to changes in job performance	4	.81	65 66 69 71

\* Reliability of each Variable

after they receive training. The researchers continued their explanation of EM by asserting that employees' perception of utility, rewards, and efficacy were all interrelated leading to better motivation to apply KSA. Bates and Holton (1999) and Holton (1996) defined employees' motivation to transfer training as employees' motivation to utilize learning to bettering the way they perform their jobs. Perceived self-efficacy is a level of trainees' self-confidence that training has the capacity to benefit them and improve their performance. It also refers to an individual's ability to mobilize personal resources such as education and expertise to meet specific requirements in a particular situation (Durfee *et al.*, 2003; Gist, 1987). Perceived utility is the expectation that a certain training program is useful and has a worthy impact on employees' life in the organization. Similarly, 'perceived rewards' refers to the expectation that applying KSA would result in receiving financial and non-financial rewards (Yaghi *et al.*, 2008; Yaghi, 2007).

## Research Design

The major purpose of this study was to test the expectancy model in the realm of training transfer in the public sector in Jordan. Therefore, the study aimed to answer the following research question: could EM describe

managers' motivation to transfer KSA in Jordanian organizations?

In order to answer the research question, this study surveyed managers (interchangeably, supervisors) in the public sectors in Jordan. The assumption behind surveying managers was that consecutive Jordanian governments had always emphasized the role of managers in energizing employees within their organization and their role to provide a workplace environment that enhances learning and learning transfer. Surveying managers was compatible with the governmental emphasis on the role of managers as leaders who are capable of motivating subordinates to better improve organizational performance. In addition, managers themselves were expected to improve their performance, especially that the government has enforced policies which required them to periodically complete leadership trainings. The study broadly defined "supervisor or manager" as any employee who headed an organizational unit and to whom at least ten employees reported. Since supervisors could be office managers, field controller, inspectors, physicians, or else, and for the purpose of this study, a population of 800 supervisors regardless of the nature of their duties were surveyed.

A simple random sample of 500 supervisors was drawn from lists that HR departments have prepared in

various agencies. Each list included all supervisors' names ordered alphabetically (800 names). A total of 361 questionnaires was collected and returned, making 45.1 percent of the study population. Surveys were distributed in several mail waves according to the standard research protocol. Time constraints and research assistants available to help in distribution and collection of surveys made it difficult to survey a larger number of subjects.

The Arabic version of the Learning Transfer System Inventory for Supervisors (SLTSI) was used. SLTSI was the only comprehensive and validated instrument to assess training transfer. While LTSI was developed by Holton and Bates (1998) and Holton et al. (2000) to assess learning transfer in the American environment, SLTSI was the translated and validated version of LTSI by Yaghi et al. (2008) and Khasawneh (2004).

Because reliability and validity of LTSI and SLTSI were tested in the aforementioned published studies, this study did not focus on validation, reliability, or translation. Yaghi *et al.*, (2008) reported that Cronbach coefficient Alpha ( $\alpha$ ) for all 89 items in SLTSI was .927, which indicated that the overall SLTSI instrument was reliable (see, Borg & Gall, 1989; Cronbach & Meehl, 1955; Cronbach,

1951). In addition, the individual indexes of rewards, utility, efficacy, and motivation to transfer training were individually reliable (see, Table 1) because ( $\alpha$ ) ranged within the acceptable levels, which were .68 and .83 (for detail discussion of the processes of reliability testing of the instrument, see, Yaghi *et al.*, 2008). Accepting those Alpha values relied on the assertions of Cronbach (1951), Vogt (1999), Walsh (1990), Mueller (1986), Borg and Gall (1989), and Cronbach and Meehl (1955) who explained that internal consistency would be considered reliable if  $\alpha$  value for the overall items in the index (all variables) was 0.90 or above, moderate if it ranged between 0.79 and 0.89, and weak if it was 0.6 or below. Vogt (1999), however, explained that 0.70 should be an acceptable level of internal reliability.

SLTSI has 89 items using five-point Likert scale that measure learning transfer from (a) specific training and (b) general training. The first 63 questions measure training transfer from the last training employees completed (i.e., specific training in the past twelve months). This section measures transfer through 11 factors: learner readiness, motivation, personal positive outcomes, personal negative outcomes, capacity, peer support, supervisor support, supervisor sanctions, content validity of training, transfer design, and opportunity to

use learning at work. The second section of the instrument measures general learning through 26 questions that measure five factors: transfer effort-performance expectations, performance-outcomes expectations, resistance or openness to transfer, self-efficacy, and feedback. A third section was added to the original LTSI so that respondents' demographical data were gathered; gender, age, experience, education, number of training programs completed in the past five years, and nature of work performed.

The dependent variable in this study was the motivation to transfer training measured by four questions. The independent variables were rewards, efficacy, and utility (see, Table 1). Utility was measured by an index of two variables (15 items), namely personal capacity to transfer and opportunity to use learning. Rewards was measured by an index of three variables (17 items), namely transfer effort-performance expectations, performance outcomes expectations, and personal outcomes-positive. Lastly, self-efficacy was measured by four items.

## Findings

### General Description of the Sample

Although demographics of respondents were not part of the EM, which the researcher attempted to test

in this study, Table 2 aims to just provide a general description of the sample. Per Table 1, supervisors' average age was around 37 years and they spent an average of 11 years in the same organization. So, managers were relatively young and they spent a good number of years working in the same organization, which may indicate their commitment to their careers and organizations. Table 2 also shows that the average number of schooling years was 16 years, which may mean that supervisors completed a masters degree or post-bachelor studies. The average number of training programs that supervisors have completed in the past five years was about three programs. In terms of nature of work, most respondents indicated they worked from office (as supposed to field work). Table 2 indicates that most respondents were males (75.2%). Although females comprise about 50% of the workforce in all jobs in the civil service system in Jordan, they were underrepresented in supervisory jobs. Women representation in Jordan seemed compatible with a global trend of lacking equal representation of women in top-level jobs (Dung & Thi, 2004). However, discussing this topic is beyond the scope of the present study.

**Table 2**  
**Summary for the Demographical Variables**

Variable	Mean Value
Age	37.5
Work Experience (# years)	11.12
Education (# years)	16.06
Number of Training Programs	2.95
Male	75.2%
Females	24.8%
N	(324)

### Path Analysis

Path analysis is a series of multiple regression analyses with an additional advantage to the simple regression, which is its ability to enable us to examine the tentative causality among a group of independent variables and a dependent variable (Babbie, 2004; Walsh, 1990). Although some computer software could be used to calculate path values (e.g., Lisrel), the researcher aimed at explaining the process of path analysis by using the traditional method. Per Walsh (1990) one condition that ought to be satisfied prior to using path analysis, which was to have a solid theory that supports the tentative model. EM satisfied this requirement because it relied on strong theoretical foundations vested, basically, in the expectancy theory and training transfer (see, for example, Yaghi *et al.*, 2008; Khasawneh, 2004; Bates & Holton, 1999; Vroom, 1964). The following section describes the four steps of testing the EM model using path analysis:

- 1- In order to get the direct effects between rewards, utility, and efficacy and the dependent variable, multiple regression models were ran and included three variables in the expectancy model (efficacy, rewards, and utility) and reported Betas (standardized coefficients). Beta values indicated the emergence of causal effects. Figure 2 shows that performance self-efficacy had a positive and significant direct effect on motivation (Beta = .188), expected utility had a positive and significant direct effect on motivation (Beta = .290), and expected rewards had a positive and significant direct effect on motivation (Beta = .138). All independent variables explained about 23% of the variance in supervisors' motivation to apply new skills (adjusted  $R^2 = .227$ ).
- 2- Additional multiple regression models were ran to investigate indirect effects that utility and effi-

cacy had on motivation. Figure 2 shows that efficacy was positively correlated with utility ( $R = .401$ ). Since there were only two variables,  $R$  was the same as the standardized coefficient. In addition, utility was positively correlated with rewards ( $R = .423$ ).

3- In order to know how much variance in the dependent variables remained unexplained, three  $R^2$  values were:

- (1) Model-1 for the entire model (efficacy, utility, rewards, and motivation)
- (2) Model-2 for efficacy and utility, and
- (3) Model-3 for utility and rewards

$R^2$  values indicated the proportion of variance explained. Walsh (1990) explained that in order to get the proportion of variance left unexplained, researchers should "simply take the  $R$  squared value away from 1 to get the coefficient of alienation [unexplained portion]" (Walsh, 1990: 320). Therefore,  $R^2$  was subtracted from 1 to get the residuals (the unexplained variance):

- (1) Model-1:  $R^2 = .227$   $1 - R^2 = .773$
- (2) Model-2:  $R^2 = .161$   $1 - R^2 = .839$
- (3) Model-3:  $R^2 = .179$   $1 - R^2 = .821$

Because the unexplained variance in the dependent variable (e) was

relatively large for all independent variables, variables other than utility, efficacy and rewards might also have influence over supervisors' motivation to transfer.

4- Walsh (1990: 321) explained that before calculating direct and indirect effects in path models three conditions must be met (1) no path may pass through the same variable twice (2) no path may go against the direction of an arrow after the path has been traced forward on a different arrow, and (3) no path may be traced through a double-headed arrow more than once in a single path. In order to determine the estimated direct and indirect effects of the independent variables on motivation to transfer, the following estimates were checked (see, Figure 2):

- (a) Direct effects (direct causal arrows in Figure 2): .188, .290, and .138 for efficacy, utility, and rewards respectively.
- (b) Indirect causal effects (mediating a third variable between the dependent and independent variables): the researchers traced and multiplied the paths from:

- Indirect effects of efficacy on motivation:

- (1) efficacy to utility to motivation:  $(.401)(.290) = .116$
- (2) efficacy to utility to rewards to motivation:  $(.401)(.423)(.138) = .023$
- Total effects of efficacy on motivation:  $.188 + .116 + .023 = .327$
- Indirect effects of utility on motivation (utility to rewards to motivation):  $(.423)(.138) = .058$
- Total effects of utility on motivation:  $.290 + .058 = .348$
- Total effects of rewards on motivation:  $.138$  (while direct effect was zero, indirect effects was zero).

dicator of transferring KSA (the total effect of utility on motivation to transfer was .348). Self-efficacy was the second strongest predictor of motivation (total effects was .327). Rewards variable was the weakest predictor of the dependent variable (total effects was .138). The relationship between supervisors' efficacy and utility was relatively strong (Beta = .401), which might indicate that efficacious supervisors were more likely to expect a higher level of utility from applying new KSA. All variables, however, explained about 23% of the variance in the learning transfer. Although the adjusted  $R^2$  was only .227, the model was significant ( $F = .000$ ).

## Discussion

The analysis provided a positive answer to the research question by confirming that EM could describe training transfer in Jordan's public sector. Specifically, expected utility from transfer was the strongest pre-

Those findings have practical and theoretical implications. The EM Model produced useful results as the total direct and indirect effect of the independent variables on employees' motivation was adequate and con-

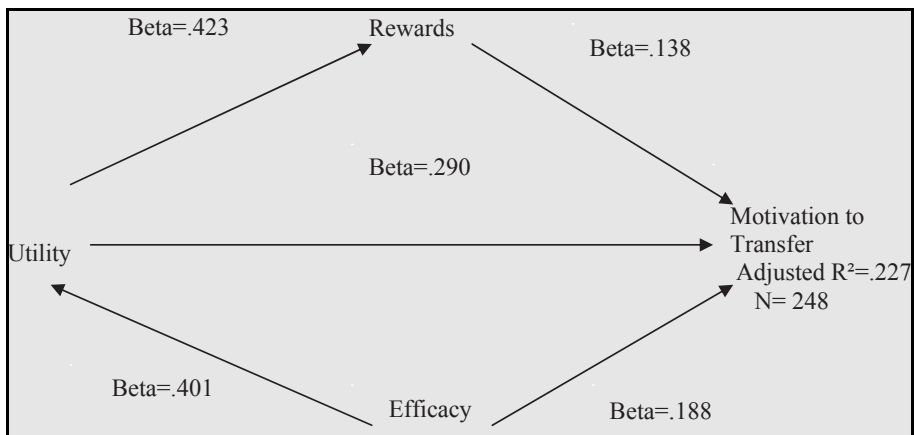


Figure 2: Path Analysis of EM

formed to theoretical expectations in which motivation was described as a factor of utility, rewards, and efficacy (see, Bates & Holton, 1999).

The study asserted that managers were better motivated when they perceived training as relevant intervention to their work assignments. Therefore, this relationship, between transfer and utility, partially supported the expectancy theory in training as discussed in the present study. Hence, organizations should be aware that designing any training must be relevant to trainees' needs to performing tasks (see, Yaghi *et al.*, 2008). Training could be transferred if leaders in the organization played a mentor role and shared information with others (Lakshman, 2007) so that trainees could develop ownership of training design and training content (Wickrmasinghe, 2006). In other words, when employees feel they are part of the decisions about what to train for and when to train, they become better motivated to apply what they learn (see, Yaghi *et al.*, 2008, and Khasawneh, 2004).

The study found self-efficacy a strong predictor of managers' motivation to transfer training. This means that managers who feel confident in their ability to apply KSA are motivated to actually apply what they learned. Contrary to what Bates and

Holton (1999) reported, self-efficacy was a significant predictor of motivation, efficacy was also significant through utility. Specifically, employees' expectations and beliefs that they have an ability to learn, retain, and apply new knowledge have influenced their motivation directly and indirectly (through their perception of training relevance). These two correlations provided support to the expectancy theory as applied in this study.

Practically, this finding suggests that decision makers and organization leadership should empower employees and instill in them self-confidence and should allow them to try new methods at work or even to be innovative (Yaghi, 2007; Lingham *et al.*, 2006; Bates & Khasawneh, 2005; Durfee *et al.*, 2003).

A little similar to the findings reported by Bates and Holton (1999), "rewards" variable was a significant factor in the expectancy model but it was the weakest predictor of motivation. However, rewards did predict motivation, which was not the case in Bates and Holton's study (1999). One possible explanation to having a positive influence, yet weak, can be that training is not connected, at least directly, with monetary or non-monetary rewards. Therefore, supervisors in this study reflected an expectation that self-confidence (i.e., efficacy) and relevance

of training could be more important for them than salary increase or verbal recognition by their superiors. This finding suggests that working in an environment where employees are partners with their leadership in decision-making can surpass the importance of rewards, thus it can drive better application of new KSA (Yaghi *et al.*, 2008). This finding asserts with what has been previously reported that organizational environment was essential to transferring learning (see, Bates & Khasawneh, 2005).

The last important finding was that rewards and utility were strongly related, which validates the expectancy theory. One can argue that employees' perception of rewards from learning was viewed as part of the relevance of training to one's work. In other words, to believe that applying new KSA is possible and that organizational culture, colleagues, and superiors are supportive would be perceived as "reward" on their own (Yaghi *et al.*, 2007). Similar inter-relationship between efficacy and utility were significant. One explanation is that trainees' belief in one's ability to apply new KSA can be seen as part of one's assessment of the entire organizational culture or even of the relevance of training itself. However, future studies should examine the relationship between efficacy and utility, as well as between utility and rewards.

## Conclusion

The aim of the study was to examine the expectancy theory by assessing the impact of employees' perceived efficacy, perceived utility, and perceived rewards on employees' motivation to transfer training. To this end, a learning transfer questionnaire (SLTSI) was administered to a random sample of managers in the public sector in Jordan. By using path analysis to make sense of managers' feedback on the survey, the study found that managers were more likely to apply new knowledge, skills, and abilities they gained from training when they recognize the usefulness of the training in which they were engaged and also when their workplace provided them with suitable conditions that enhanced their application of new methods of performing their daily tasks. Receiving rewards (e.g., monetary or non-monetary) had the least impact on motivating managers to apply new KSA.

The findings of the study came from a scientific examination of training transfer. Because the sampling technique relied on random selection of respondents, findings of the study can be generalized to the study population, which is managers working the public sector in Jordan. However, generalizing those findings beyond the study population should be done cautiously because managers or em-

ployees working in the private sector and/or in other countries may experience different workplace environment, thus their expectations of training and motivation to apply new KSA could differ from those experienced by managers in the Jordanian public sector. Researchers are advised to replicate this study in the private sector in Jordan as well as in other countries. While the sample size in this study was adequate, researchers can administer the survey to a larger sample from the public and private sectors so that a comparative examination can be produced.

This study provided practitioners and policy makers with fact-based knowledge about the impact of post-training work conditions on transfer of learning by identifying the utility of training and efficacy of trainees as significantly correlated with the motivation to transfer training. Such knowledge can guide future human resource planning and management practices. Specifically, assessing training as a planning mechanism should benefit from this study's findings, which suggest that trainees' perception pre and post-training is critical for making training successful. Planners should pay attention to the organizational culture (e.g., values, patterns of communication, norms, attitudes, supervisory roles, and peer relations) as another important factor

that shapes employees attitudes in the workplace (Yaghi *et al.*, 2007). In other words, superiors need to encourage subordinates to improve performance by making use of KSA learned in training. Because utility was the most important factor that predicted motivation to transfer, organizations should design trainings that are relevant to trainees' work and create supportive environments that encourage employees to apply new KSA. Moreover, trainees should be prepared to improve the status quo before they actually start or complete training. Trainees' conviction that training is useful for their performance, can be enhanced by inviting them to participate in decision-making, and by giving them a stake in evaluating training and training policies. This means that engaging employees in selecting, designing, and evaluating training programs can be essential to the success of training transfer.

As some studies reported, rewards, economic, or professional incentives were not as important for transfer as were trainees' expectations about the relevance and usefulness of training. For practitioners, this finding could mean that organizational management might not need to overemphasize promotions and salary increases as motivational tools. Instead, the management should enhance supervision by inviting more employees to

freely participate in making important decisions that affect their life at the workplace, such as decisions about changing or modifying methods of doing daily tasks. If participation succeeded in engaging employees in designing their own work (e.g., job description), employees would have better chances to apply new KSA, thus making training transferable.

## References

- Altonji, J.G. 1992. *The Effects of High School Curriculum on Education and Labor Market Outcomes*, NBER Working Paper No. 4142, Cambridge, MA: National Bureau of Economic Research.
- Arvey, R. D., & Cole, D. A. 1989. "Evaluating Change due to Training," in Irwin L. Goldstein & Associates (eds.), *Training and Development in Organizations* (pp. 89-117), San Francisco, CA: Jossey-Bass Publishers.
- Babbie, E. 2004. *The Practice of Social Research*. CA: Wadsworth/Thomson Learning.
- Baldwin, T., & Ford, J. 1988, "Transfer of training: A Review and Directions for Future Research," *Personnel Psychology*, 4: 63-105.
- Bates, R. 2001. "Public Sector Training Participation: An Empirical Investigation," *International Journal of Training and Development*, 5(2): 134-150.
- Bates, R. A. & Holton III., E. F. 1999. "Test of a Causal Model of Learning Transfer in a Social Service Agency," Proceedings of the "1999 Academy of Human Resource Development Annual Meeting, Arlington, VA."
- Bates, R., & Khasawneh, S. 2005. "Organizational Learning Culture, Learning Transfer Climate, and Perceived Innovation in Jordanian Organizations," *International Journal of Training and Development*, 9(2): 96-109.
- Bond, J.T., Thompson, C., and D. Protas. 2002. *Highlights of the National Study of the*
- Changing Workforce, New York City, NY: Families and Work Institute.
- Bookter, A. I. 1999. *Convergent and Divergent Validity of the Learning Transfer Questionnaire*, Unpublished Doctoral Dissertation, Louisiana State University.

## Acknowledgment

"The first author would like to thank the second and third authors who own the copy right of the questionnaire used in the study. Using this copy righted instrument mandates that a note of limited responsibility of the two authors should be recognized in the manuscript."

The authors would like to thank Dr. Samer Khasawneh for his valuable input and support.

- Borg, W. R., & Gall, M. D. 1989. *Educational Research*, New York: Longman.
- Brinkerhoff, R. O., & Montesino, M. U. 1995. "Partnerships for Training Transfer: Lessons from a Corporate Study," *Human Resource Development Quarterly*, 6(3): 263-274.
- Broad, M. L., & Newstrom, J. 1992. *Transfer of Training*, Reading, MA: Addison-Wesley.
- Castonguay, S. 2005. *The Transfer of Training in the Workplace*, M. A. thesis, Royal Roads University (Canada).
- Chen, H. 2003. *Cross Cultural Validation of Learning Transfer System Inventory in Taiwan*, Unpublished Doctoral Dissertation, Louisiana State University.
- Chen, H., Holton, E. F., & Bates, R. Spring. 2005. "Development and Validation of the Learning Transfer System Inventory in Taiwan," *Human Resource Development Quarterly*, 16 (1): 55-84.
- Cronbach, L. J. 1951. "Coefficient Alpha and the Internal structure of Tests," *Psychometrika*, 16: 297-334.
- Cronbach, L. J., & Meehl, P. E. 1955. "Construct Validity in Psychological Tests," *Psychological Bulletin*, 52 (4): 281-302.
- Devi, L. 2002. *Education, Employment, and Job Preference of Women in Kerala*. India: Kerala Research Programme on Local Level Development, Center for Development Studies.
- Drouin, M. J. 1990. *Workforce Literacy: An Economic Challenge for Canada*, Montreal, Canada: Hudson Institute of Canada.
- Dung, N. T. 2004. *Changes in Women's Employment under Conditions of Rapid Urbanization*, Hochiminh, Vietnam: Center of Sociology and Development.
- Durfee, A., M. Haydock, and N. Simmons. 2003. *Setting Standards for American Working Families*, Washington, DC: Wider Opportunities for Women, p.3-60.
- Facteau, J.D., Dobbins, G. H., Russell, J. E., Ladd, R. T., & Kudisch, J.D. 1995. "The Influence of General Perceptions on the Training Environment on Pre-training Motivation and Perceived Training Transfer," *Journal of Management*, 21: 1-15.
- Fayol, H. 1916. *General and Industrial Management*, Translated by Constance Storrs, London: Pitman Publishing (1949): 19-42.
- Fleishman, E. A. 1972. "On the Relation Between Abilities, Learning, and Human performance," *American Psychologist*, 1017-1032.
- Forman, L. 1977. *Some Motivational Determinants of Trainee Effort and Performance: An Investigation of Expectancy Theory*, Dissertation Abstract International. (UMI No. 7723975).
- Gist, M. E. 1987. "Self-efficacy: Implications for Organizational Behavior and Human Resource Management," *Academy of Management Review*, 12: 472-485.
- Hastings, S. L. 1995. "Strategic quality training: The Transformation of the Connecticut Department of La-

- bour,' in Elwood F. Holton III. (ed.), *Proceedings of Academy of Human Resources Development Conference* (pp. 12-14), Minneapolis, MN: Academy of Human Resource Development.
- Hirschfeld, J. L. 1990. *Value and Self-efficacy Mechanisms: Implications for Transfer of Training from the Academic Environment to the Job*. Unpublished Doctoral Dissertation, Peabody College for Teachers of Vanderbilt University.
- Holton III, E. F., Bates, R. A., & Ruona, W. E. A. 2000. "Development of a generalized Learning Transfer System Inventory," *Human Resource Development Quarterly*, 11(4): 333-360.
- Holton III., E. F. 1996. "The Flawed four-level evaluation model," *Human Resource Quarterly*, 7(1): 5-25.
- Holton III., E. F., & Bates, Reid. 1998. *Learning Transfer Climate Assessment, Department of Social Services, Louisiana Rehabilitation Services, Technical Report*, Published by the School of Vocational Education, LSU, Baton Rouge, LA.
- Huczynski, A. A., & Lewis, J. W. 1980. "An Empirical Study into the Learning Transfer Process in Management Training," *The Journal of Management Studies*, 17(2): 227-240.
- Khasawneh, S. A. 2004. Construct Validation of an Arabic Version of the Learning Transfer System Inventory for Use in Jordan. Unpublished Doctoral Dissertation, Louisiana State University.
- Kirwan, C., & Birchall, D. 2006. "Transfer Learning from Management Development Programmes: Testing the Holton Model," *International Journal of Training and Development*, 10(4): 252-268.
- Lakshman, C. 2007. "Organizational Knowledge Leadership: A Grounded Theory Approach," *Leadership & Organization Development Journal*, 28(1): 51-73.
- Lingham, T., Richley, B., & Rezania, D. 2006. "An Evaluation System for Training Programs: A Case Study Using a four-Phase Approach," *Career Development International*, 11(4): 334-351.
- Mahmoud, T. E. 2005. "Factors Affecting Training Transfer in the Egyptian Pharmaceutical Industry," Thesis, University of Louisville.
- Mueller, D. J 1986. *Measuring Social Attitudes*, New York: Teachers College Press.
- National Center for Human Resource Development (NCHRD) (2001). Human resources data and research. <http://www.nchrd.gov.jo>.
- Newton, K. A. 1993. *Development of Trainee Self-efficacy, Motivation to Learn, and Motivation to Transfer Learning*. Unpublished Doctoral Dissertation, Texas A& M University.
- Philips, J. M., & Gully, S. M. 1997. "Role of Goal Orientation, Ability, Need for Achievement, and Locus of Control in the Self-Efficacy and Goal Setting Process," *Journal of Applied Psychology*, 82, 792-802.
- Quinones, M. A., Ford, J., Sego, D. J., & Smith, E. 1995. "The Effects of Individual and Transfer Characteristics on the Opportunity to Perform Trained Tasks," *Training Research Journal*. 1, 29-48.

- Rolfe, E. 1989. "Corporate Testing for the Three R's.," *Management Review*, April: 56-58.
- Rosenberg, J. I. 2006. "Real-Time Training: Transfer of Knowledge Through Computer-Mediated, Real-Time Feedback," *Professional Psychology: Research and Practice*, October, 37(5): 539-550.
- Rouillier, J. Z., & Goldstein, I. L. 1993. "The Relationship Between Organizational Transfer Climate and Positive Transfer of Training," *Human Resource Development Quarterly*, 4, 377-390.
- Royer, J. M. 1979. "Theories of the Transfer of Learning," *Educational Psychologist*, 14(1-3): 53-61.
- Senge, P. M. 1990 [2001]. "The Fifth Discipline: A Shift of Mind," in Jay M. Shafritz, & J. Steven Ott (eds.), *Classics of Organization Theory*, (pp451-459), Orlando, FL: Harcourt College.
- Sticht, T. 1995. *The military experience and workplace literacy: A review and synthesis for policy and practice*, NCAL Report TR94-01. Philadelphia, PA: National Center on Adult Literacy.
- Subedi, B. S. 2006. "Cultural factors and beliefs influencing transfer of training," *International Journal of Training and Development*, 10(2): 88-97.
- Tannenbaum, S. I., & Yukl, G. 1992. "Training and development in work organizations," *Annual Review of Psychology*, 43. 399-441.
- Tracey, J. B., Tannenbaum, S. I., & Kavanagh, M. J. 1995. "Applying Trained Skills on the job: The Importance of the Work Environment," *Journal of Applied Psychology*, 80: 239-252.
- Vogt, W. P. 1999. *Dictionary of Statistics and Methodology*, Thousand Oaks, CA: Sage.
- Vroom, V. H. 1964. *Work and Motivation*, New York: John Wiley & Sons.
- Walsh, A. 1990. *Statistics for the Social Sciences, with Computer Application*, NY: Harper & Row.
- Wexley, K. N. 1989. "Contributions to the Practice Training," in I. Goldstein & Associates (eds.), *Training and Development in Organizations*, San Francisco, CA: Jossey-Bass.
- Wickramasinghe, V. 2006. "Training Objectives, Transfer, Validation and Evaluation: A Sri Lankan Study," *International Journal of Training and Development*, 10(3): 227-247.
- Yaghi, A., Goodman, D., Holton, E., and Bates, R. 2008. "Validation of the Learning Transfer System Inventory in the Civil Service System," *Human Resource Development Quarterly*, 19(3): 241-262.
- Yaghi, A. 2007. "Decision Making in a Faith-based Environment: Organizational Culture Versus Decision Content," *Journal of Muslim Minority Affairs*, 27:3, 355-370.
- Yaghi, A., Gibson, P., & Morris, J. 2007. "Identifying Organizational Culture," *Dirasat Journal*, December, 35(4): 871-884.
- Yaghi, A. 1998. *Influence of Organizational Environment on Employee Satisfaction in Jordanian Public Enterprises*. Unpublished Master thesis, Al al-Bayt University, Jordan.

## الملخص

# استخدام أسلوب تحليل المسار لاختبار نظرية التوقع في مجال تطبيق المهارات المكتسبة من تدريب القوى البشرية

ريد بيتس  
جامعة ولاية لويزيانا

الوود هولتون  
جامعة ولاية لويزيانا

عبدالفتاح ياغي  
جامعة الإمارات العربية المتحدة

يُشيرُ مصطلحُ نقل التدريب، أو تطبيق المهارات المكتسبة من التدريب، إلى السلوك التنظيمي الذي يقوم فيه الموظفون في المنظمة بالتطبيق العملي للمعارف والمهارات والقدرات التي اكتسبوها خلال اشتراكهم في برامج تدريبية. ومن أجل تحديد العوامل التي قد تؤثر على حافزية الموظفين لنقل التدريب، قامت الدراسة الحالية باختبار نظرية التوقع التي تفترض أن نقل التدريب يعتمد على إدراك الموظفين لثلاثة عوامل هي: إمكانية تطبيق المعارف والمهارات والقدرات التي تعلموها، وإدراكهم لفائدتها، وإدراكهم للمكاسب التي قد ينالونها نتيجة تطبيقها. لقد تم توزيع استبانة خاصة بنقل التدريب على عينة عشوائية من ٣٦١ مديراً في القطاع العام في الأردن. وتشير نتائج الدراسة إلى أن إدراك فائدة النقل هو أهم العوامل في التنبؤ بنقل التدريب، يليه إدراك إمكانية تطبيق ما تمّ تعلمه. وكانت المكاسب المادية والمعنوية هي أضعف ما يؤثر على نقل التدريب.

**Abdulfattah Yaghi** has a Ph.D. from Mississippi State University, USA (2005). He is an assistant professor of public administration and public policy at the UAE University. His research interests include human resources management, organizational behavior, civil service, policy analysis, pedagogical development, and nonprofit management.

**Elwood F. Holton, III, Ed.D.** is a professor of Human Resource, Leadership and Organization Development in the School of Human Resource Education and Workforce Development at Louisiana State University. His research interests include human resource development and training. He is engaged in establishing center for workforce studies.

**Reid Bates** has a Ph.D. in Human Resource and Leadership Development from Louisiana State University, USA. He is a

professor of human resource at Louisiana State University. He is engaged in active partnerships with researchers in the U.S., Romania, Germany, and South Korea to study and improve learning transfer systems. His research interests include human resource development and training.