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Article *in* Journal of European Industrial Training · August 2010

DOI: 10.1108/03090591011070770

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The role of individual and training design factors on training transfer

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Received 28 September 2009
Revised 20 November 2009
Accepted 8 April 2010

Abstract

Purpose – The purpose of this study is to highlight the role of individual and training design factors on training transfer.

Design/methodology/approach – A review of the literature is conducted, and this review highlights a dual role of perceived content validity in the form of increasing self-efficacy and the role of trainees' reaction. The study suggests that transfer design factors improve performance self-efficacy and reaction measures work as a bridge between content validity and transfer motivation. In addition, the role of transfer design in training transfer theory is explained.

Findings – A combination of variables is proposed, suggesting further investigation to build a strong training transfer theory. The study highlights the dual role of perceived content validity as a factor to develop positive trainee reaction and increase trainee performance self-efficacy. Furthermore, the study proposes that transfer design and perceived content validity increase trainee performance self-efficacy, which leads to maximizing training transfer through transfer motivation. The study also explains that perceived content validity influences transfer motivation through trainee reaction, and proposes a framework coupled with future research directions.

Research limitations/implications – The suggested framework provides a theoretical basis for researchers to build a strong training transfer theory. This conceptual paper elaborates the role of perceived content validity, transfer design, reaction, performance self-efficacy and transfer motivation to substantiate training transfer theory. Future researchers should test the proposed framework empirically and highlight other factors that could increase the efficacy and motivation levels of trainees in order to maximize training transfer.

Practical implications – Transfer design factors in this paper provide practical implications for training transfer in general and training professionals in particular. Thus, training transfer is maximized through positive trainee reaction, which is an important facet of training. Another factor, i.e. perceived content validity, not only develops positive reaction but also increases the efficacy level of trainees. Therefore, in order to increase the performance self-efficacy and motivation level of trainees, training professionals should focus on the content and transfer design factors to maximize training transfer.

Originality/value – This conceptual paper contributes to the existing training transfer literature by suggesting a combination of variables that provides a theoretical basis for building a strong training transfer theory.

Keywords Training, Self development, Individual behaviour

Paper type Conceptual paper

Journal of European Industrial Training
Vol. 34 No. 7, 2010
pp. 656-672

0309-0590
DOI 10.1108/03090591011070770

Training is one of the most important and reliable human resource techniques to enhance organizational and employee productivity (Bhatti and Kaur, 2009). To accomplish organizational tasks and improve employee performance, training programs should be designed in such a way that they create a win-win situation for

both organizations and employees. Organizations and employees can achieve their goals if learning skills are transferred effectively to the workplace. Acton (2003) argued that training and development of employees is essential for organizational operation and advancement. From the employee's perspective, these same factors are both crucial and critical for skills development and for career advancement. Kauffeld and Lehmann-Willenbrock (2010) argued that organizations invest considerable sums of money in human resource development and it is imperative for organizations facing global competition continuously to improve employees' knowledge, skills, abilities and attitudes. Thus, researchers and training professionals have focused on the factors affecting the transfer of training to the workplace, such as content validity, self-efficacy, transfer design, the employee's reaction towards training, and training transfer motivation.

Different researchers have identified varying factors that directly or indirectly affect the transfer of training. These factors are categorized as individual, situational, environmental or contextual and intervention design factors. This paper proposes a combination of variables coupled with the development of propositions based on the literature. However, the proposed model will need to be tested in future research (see Figure 1). Thus the purpose of this paper is to provide a clear insight about the factors that affect the transfer of training.

The central issue of training and development is to engage employees in effective learning. To maximize the utility of training, it is important that training deliverers actively promote such engagement (Robotham, 2004). The engagement of employees with training activities can be increased by motivating them and making them realize how training can help them improve their performance and organizational productivity. In addition, Nikandrou *et al.* (2009) argued that planning of the training program is very important for its total success, and therefore for training transfer at work. They further suggested that the goals and the extent of training, the training methods and means, as well as the training place and equipment, are important factors related to training program planning. All these help employees transfer training to the workplace.

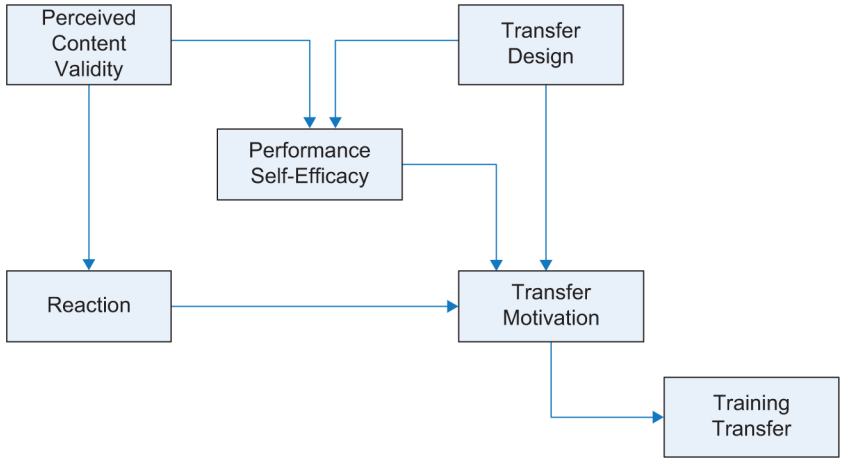

Figure 1.
Proposed conceptual framework for transfer of training

Among the training effectiveness criteria, the most vital impact is the transfer of training, which leads to improvements in employee and organizational performance. In this regard, Baldwin and Ford's (1988) work in examining the effects of training design, trainee and work environment factors on the condition of transfer is a way forward in advancing the learning transfer system. Colquitt *et al.* (2000) identified a number of situational and contextual factors that affect training outcomes, including organizational climate, organizational commitment and career planning. Besides situational and contextual factors, individual factors that affect training outcome have also been examined, such as general mental ability, self-efficacy, personality (Colquitt *et al.*, 2000) and goal orientation (Smith *et al.*, 2008). In addition, Holton (1996) also developed the Learning Transfer System Inventory (LTSI) model, which is another important contribution in the transfer of training literature.

Holton's (1996) LTSI model considered 16 factors likely to influence the transfer of training in the workplace. In this regard, the literature shows that researchers have been giving consideration towards the most important aspect of training outcomes, i.e. the transfer of training. Although other outcomes also play an important role in the training effectiveness criteria such as trainee reaction and level of learning, the transfer of training enables organizations to achieve their ultimate objectives. In addition, other researchers (Gist *et al.*, 1991; Tracey *et al.*, 2001; Liebermann and Hoffmann, 2008; Tai, 2006) also found many factors havong an effect on different training outcomes.

All those factors that affect transfer cannot be said to take place without some form of evidence. As such, many researchers have gathered evidence by proposing different evaluation models to measure the outcomes of training. Among them, Kirkpatrick's model is widely accepted (Al-Eisa *et al.*, 2009). Kirkpatrick (1976) came up with the training evaluation model and divided it into four levels:

(1) reaction;

(2) learning;

(3) transfer; and

(4) results.

Alliger *et al.* (1997) extended Kirkpatrick's work and divided the reaction outcomes into two categories:

(1) utility reaction; and

(2) affective reaction.

Kirkpatrick's measures are useful for evaluating training outcomes (Colquitt *et al.*, 2000; Kraiger *et al.*, 1993; Quinones and Ehrenstein, 1997), as it is simple, easy to understand and comprehensive.

Another extension of Kirkpatrick's model was Phillip and Phillips's (2001) addition of return on investment (ROI) as the fifth level, defined as "the conversion of benefits to monetary value which can then be compared to the fully loaded costs of the training (p. 242). However, Phillips and Phillips (2001) noted that it is not always appropriate to evaluate at the fourth (results) and fifth (ROI) levels as ROI is often characterized as a difficult and expensive process. Therefore, the first three levels of the Kirkpatrick model are important for the organization in order to see the results of their efforts.

Kirkpatrick's model of evaluation, which examines the after-training stage, and the evaluation of training effectiveness after the event by Chiaburu and Marinova (2005), comprise four distinct stages:

(1) Post-training declarative knowledge.
(2) Training transfer.
(3) Training generalization.
(4) Training maintenance.

The vast literature on the transfer of learning still lacks a firm theory behind it. Brown and McCracken (2009) argued that little of the program content actually gets transferred to the workplace. With the identification of many factors, researchers are still unable to develop strong training transfer theory and the organizations reported low rate of training transfer. Ford (2009) argued that trainees transfer only 20 percent of their learned skills to their workplace. In addition, Bhatti and Kaur (2009) stated that it remains a challenge to establish a theory on the transfer of training even with the identification of many influencing factors. In addition, Kauffeld and Lehmann-Willenbrock (2010) advocated that transfer is insufficiently considered in both practice and academic research. Nevertheless, organizations would reap huge benefits if employees were able to transfer training to the workplace (Thompson *et al.*, 2010). On the basis of previous studies, those factors that are closely related to the transfer of training are identified. A combination of those variables is built and propositions are developed based on the past literature, but the model will need to be tested in future research (see Figure 1). Hence, the purpose of this paper is to provide a clear insight about the factors that affect the transfer of training. This conceptual paper prompts researchers to look again at the important ingredients of training programs. The factors that make up this combination are explained individually in the following sections.

Transfer design

In the past, researchers found many training design factors (such as identical elements, general principles, stimulus variability and conditions of practices) that influence the transfer of training in the workplace. Thorndike and Woodworth (1901) highlighted the concept of identical elements and argued that the transfer can be maximized if training has more identical elements. With regards to general principles, McGhee and Thayer (1961) argued that transfer is facilitated when trainees are taught not just applicable skills, but also the general rules and theoretical principles that underline the training content. With reference to stimulus variability, Ellis (1965) argued that transfer is maximized when a variety of relevant training stimuli are employed. The concept of conditions of practice include a number of specific design issues, including massed or distributed training, whole or part training, feedback and over learning (Baldwin and Ford, 1988). Recently, Nikandrou *et al.* (2009) suggested that training design and the specific method used, which are trainee-centered, play an important role in training transfer, but studies have seldom examined the impact of training design and method on training transfer. Lim and Johnson (2002) suggest that training design, content and instructional strategies must be related to the objective of transfer, whether near or far transfer, for learning transfer to be realized.

Holton developed the Learning Transfer System Inventory (LTSI) in which he introduced the transfer design factor (Holton, 1996). Transfer design develops understanding about the training program and shows a practical way in which training can be best used on the job. Transfer design can also be defined as the degree to which training has been designed and delivered to give trainees the ability to transfer learning to the job, and to which the training instruction matches the job requirements (Holton *et al.*, 2000, p. 345). Trainees are more likely to transfer training content to the work context when they perceive that the training program was designed and delivered in such a way as to maximize the trainee's ability to transfer the training to the job (Holton, 1996, 2007). Holton *et al.* (2000) argued that part of the transfer design is the degree to which the training instruction matches the job requirements. When trainees have previous knowledge and practice of how to apply the newly learned knowledge and skills to the job, and when training instructions are congruent with job requirements, an increased likelihood of transfer should exist (Velada *et al.*, 2007). In the same study, Velada *et al.* (2007) found that transfer design positively relates to transfer of training. They suggested that in order for organizations to ensure that training is effective, it should be designed to match employees' ability to learn the training material and to utilize the knowledge and skills accrued by employees during training outside of the learning environment. According to May and Kahnweiler (2000) trainers should provide opportunities to practice, in order to show the trainee the practical relevance of the training contents and to ensure transfer. Furthermore, Kirwan and Birchall (2006) tested the Holton model and found a significant correlation between transfer design and performance self-efficacy.

The transfer design factor requires trainers to include some practical example regarding the training transfer process. It may not be sufficient for the learner to learn the skills; there is a need to learn how to transfer the learned skill to the workplace. Moreover, when the learner understands how he/she can use the learned skills in the workplace, the confidence level of the learner may increase (Bhatti and Kaur, 2009). The transfer design factor not only shows the learner how to transfer the learned skills to the workplace, but it also helps to increase indirectly the performance self-efficacy level of the learner. Hence, the role of the transfer design factor is two-fold. The transfer design factor is either a source of increase in the self-efficacy of the learner, or it directly influences the transfer motivation factor. The clarity of the transfer design factor can enhance the productivity of the training program, thus making it a focus for the trainer. It is recommended that researchers test empirically the effects of transfer design factor on performance self-efficacy and highlight other factors in training design that can improve the trainee efficacy level. Therefore, testing this relationship empirically will uncover new insight and will highlight the importance of training design factors in the training transfer theory. Thus, the following proposition is suggested:

P1. Transfer design has a positive relationship with performance self-efficacy.

Another factor that affects training transfer is the content validity perceived by the learner, which is described in the following section.

Perceived content validity

Perceived content validity refers to the extent to which trainees judge the training content to reflect the job requirement accurately (Devos *et al.*, 2007). The concept of

perceived content reveals that when trainees perceive the contents of the training are similar with the actual job, they maximize the transfer. Nikandrou *et al.* (2009) argued that content of the training influence the training transfer. Laker (1990) found two types of transfer:

(1) far transfer; and

(2) near transfer.

Far transfer indicates that the learned knowledge is applied in dissimilar working situations, whereas near transfer refers to working situations which are similar to the training program. According to Clark and Voogel (1985), near transfer is more likely to occur when trainers emphasize the practical relevance of the training content. In other words, if contents of the training are similar to the actual job, or the training activities are relevant to the actual job activities, the level of transfer can be at a maximum. Lim and Johnson (2002) suggest that training design, content and instructional strategies must be related to the objective of the transfer, whether near or far transfer, for learning transfer to be realized. Nikandrou *et al.* (2009) viewed near and far transfer as direct and indirect transfer, and explained that in direct transfer the trained employee is able to apply the knowledge and skills acquired to their work, while indirect transfer means that the trained employee may apply in the workplace the skills or attitude that were developed in training. Baumgartel *et al.* (1984) found that managers who believe in the training utility are more likely to apply the skills learned in the training. Axtell *et al.* (1997) also found that trainees who perceived training as relevant had higher levels of immediate skills transfer. In addition, if trainees perceive that the new knowledge and skills will improve relevant aspects of their work performance, they will maximize transfer (Baldwin and Ford, 1988; Clark *et al.*, 1993). In addition, Kauffeld and Lehmann-Willenbrock (2010) found that training transfer can be improved by trying out training content in real work situations. Furthermore, Kirwan and Birchall (2006) tested the Holton model and proposed that transfer design and perceived content validity separately and collectively influenced participants' performance self-efficacy.

However, the focus on the reaction measure in relation to content validity was not so clear in past studies. Reaction to content validity refers to the trainee's perception of the job's relatedness to the training program (Holton, 1996). Some researchers focused on the reaction of trainees to the organization and the training content (Baldwin *et al.*, 1991; Noe and Schmitt, 1986; Russell *et al.*, 1985) while others focused on trainees' satisfaction with the usefulness of the training at work (Latham and Saari, 1979; Wexley and Baldwin, 1986). Liebermann and Hoffmann (2008) argued that if the perceived practical relevance of the training were to match or exceed the trainee's expectations, he/she would be satisfied. Hence, when practical relevance matches or exceeds the trainee's expectations, he/she will react more positively. If the training is less relevant, the trainee will be less satisfied or may show a negative reaction.

Clement (1982) found that trainees' reaction to the relevance of the training material increased learning. The study found that reaction through content validity predicted a significant correlation with transfer motivation. Garavaglia (1993) proposed that the two most likely reasons that learning does not transfer to the job are that the work environment is not supportive of the learned behavior, and that trainees think that the training was irrelevant.

In our proposed framework, we highlight the multidimensional role of the perceived content validity factor. The first dimension exposes the role of perceived content validity as a factor to increase the learner performance self-efficacy level, which would ultimately affect transfer motivation. It would be helpful to develop a positive reaction in the learner, which would lead to influencing the learner's transfer motivation. Bhatti and Kaur (2009) argued that when learners perceive that the content of the training is similar to actual job tasks, they believe more strongly in their capabilities to perform given tasks. In addition, the learner's perception that "training contents are similar with the actual job tasks" also leads to a positive reaction. In summary, a suggested proposition is as follows:

P2. There is a positive relationship between perceived content validity and performance self-efficacy, or, performance self-efficacy mediates the relationship between perceived content validity and affective reaction.

This could be a future research direction to test the role of perceived content validity in training transfer theory as a factor to improve performance self-efficacy and to develop a positive reaction. The reaction of the learner and the content validity of the training are pertinent to the transfer process when it affects the performance self-efficacy of the learner, which is described at length in the following section.

Performance self-efficacy

The concept of self-efficacy is based on social learning theory. According to this theory, people learn by observing other people (models) who they believe to be credible and knowledgeable (Bandura, 1986). The theory relates to a belief in one's capabilities to organize and perform the courses of action needed to achieve given goals (Bandura, 1997). In the past, researchers found that self-efficacy increases the motivation to learn and is positively associated with training motivation (Colquitt *et al.*, 2000; Tracey *et al.*, 2001). The definition of performance self-efficacy given by Holton (1996) describes it as "an individual's general belief that he/she is able to change his/her performance when he/she wants to". Moreover, research found that performance self-efficacy is strongly related to both the outcome of training, (Gist *et al.*, 1991; Quinones, 1995) and transfer of training (Ford *et al.* 1998; Velada *et al.*, 2007).

Al-Eisa *et al.* (2009) argued that a trainee who has high confidence in his or her capability to learn the content of training is more likely to have high confidence in his or her capability to apply newly gained knowledge and skills on the job after the completion of training. Researchers have focused on the relationship between self-efficacy and other variables like transfer motivation and training transfer. They confirmed that self-efficacy can increase the level of training transfer (Chiaburu and Marinova, 2005; Gaudine and Saks, 2004; Ford *et al.*, 1998; Kirwan and Birchall, 2006; Latham and Frayne, 1989; Stevens and Gist, 1997; Saks, 1995; Mathieu *et al.*, 1992; Tannenbaum *et al.*, 1991; Velada *et al.*, 2007), but there has been less focus on the concept of performance self-efficacy improvement. Hence, there is a need to highlight which factors can improve the performance self-efficacy of the learner. Moreover, Bhatti and Kaur (2009) suggested that if trainers focus on transfer design, which can improve learners' self-efficacy, they might be able to increase the level of transfer. In this paper, it is proposed that transfer design and perceived content validity increase the learner's performance self-efficacy. This paper's framework also proposes a

mediating role of performance self-efficacy between transfer design, perceived content validity and transfer motivation. Therefore, it is suggested that future researchers should test this relationship and highlight other factors that can improve the efficacy level of trainees to develop a strong training transfer theory. As a result, the recommended propositions are as follows:

P3. Performance self-efficacy mediates the relationship between perceived content validity and transfer motivation.

P4. Performance self-efficacy mediates the relationship between transfer design and transfer motivation.

As well as performance self-efficacy, reaction also plays an important role in the transfer of training, as is elaborated below.

Reaction

Upon completion of the training program, evaluation design and reaction are the focus; they represent the first stage in the evaluation process. Reaction is one of the important factors in the evaluation stage. The American Society for Training and Development (ASTD) found that 77 percent of organizations collected learner reaction information and 38 percent measured learning, while only 14 percent evaluated behavior change and a mere 7 percent measured results from training (Van Buren, 2001). It seems that many organizations persist in believing that learner reactions are valid and reliable indicators to assess the effectiveness of training, and are also able to demonstrate its impact on organizations (Ruona *et al.*, 2002). A positive reaction on the part of the trainee enhances learning. In other words, if the trainee reacts positively, the learning level of the trainee is higher and transfer of training will be maximized. In contrast, a negative reaction leads to low interest in training activities, a low learning level, and a lower transfer rate. However, Wang and Wang (2006) consider reaction a short-term evaluation of the training outcomes; the other three levels of evaluation belong to the long-term evaluation of training outcomes. They argued that a more realistic way of evaluating reaction is to obtain the learner's feedback on the interest in, attention to and motivation towards the learning object (Wang and Wang, 2006). In addition, if the training satisfies the learning needs of the trainee and the reaction is positive, the other evaluation levels like learning, transfer and results should show a more productive output. In the long term, transfer can lead to improved organizational and individual performance.

In this proposed framework, it is suggested that reaction (utility or affective) may affect other training outcomes through motivation, whereby a person is motivated to show a specific behavior when the person expects this behavior to help him/her achieve his/her goals, as proposed by Vroom (1964). Noe (1986) expanded this notion towards transfer motivation and found that the fulfillment of training needs for personal development influences the transfer motivation. Tannenbaum *et al.* (1991) also explained that the fulfillment of expectations promotes the trainee's motivation. They also found that trainees who have more positive reaction to training have more post training motivation. Additionally, Liebermann and Hoffmann (2008) found a significant correlation between affective reaction and transfer motivation. These findings are consistent with the study of Ruona *et al.* (2002), in which they found that utility reactions added minimal power as a predictor of motivation to transfer and argued instead that perceptions of the utility of training provide nominal value in predicting transfer.

Although reaction measures or measures of trainee satisfaction remain one of the most over-used methods of evaluation in the field of human resource development (Ruona *et al.*, 2002), research has shown no correlation between reaction measures with the other training outcomes (Alliger and Janak, 1989; Dixon, 1990; Noe, 1986; Warr and Bunce, 1995). Hence, the focus on the reaction measure was not so clear in past studies. Some researchers were have focused on the reaction of trainees to the organization and the content of the training program (Russell *et al.*, 1985; Noe and Schmitt, 1986; Baldwin *et al.*, 1991) whereas others have focused on trainees' satisfaction with the usefulness of the training at work (Latham and Saari, 1979; Wexley and Baldwin, 1986). However, after the work of Alliger *et al.* (1997) on the reaction measure, researchers found different results. Alliger *et al.* (1997) distinguished the reaction measure into two categories:

(1) affective reaction (general satisfaction with the training); and

(2) utility reaction (utility of the training content for the work situation).

In other words, if the trainee perceives that the content of the training is similar to the actual job, the reaction of the trainee (utility reaction) would be positive. Alliger *et al.* (1997) found that utility reaction was more strongly related to transfer than was affective reaction. Using Alliger *et al.*' classification of reactions, a few researchers found significant but weak correlations between reaction (utility and affective) and other training outcomes (Warr *et al.*, 1999; Morgan and Casper, 2000). Ruona *et al.* (2002) also confirmed that there was no significant relationship between reaction and behavior change. In addition, they also proposed that if reaction measures are to be used at all, utility reactions might be of greater value in evaluating outcomes than traditional affective reactions.

Therefore, it is recommended that future research tests empirically the mediating role of the affective reaction between perceived content validity and transfer motivation. It would be interesting to establish, the kind of relationship, if any, that can explain the importance of affective reaction in the training transfer process. Hence, the suggested proposition as a result of the above explanation is as follows: affective reaction mediates the perceived content validity and transfer motivation relationship. The final factor in the training transfer process of this proposed framework is explained in the following section.

Transfer motivation

Transfer motivation is a key element in the training transfer process. It may be difficult to transfer learning effectively without motivation. Bates *et al.* (2007) defined transfer motivation as the direction, intensity and persistence of effort towards utilizing in a work setting the skills and knowledge learned. In other words, motivation to transfer is the trainee's desire to use on the job the knowledge and skills that have been learned in training programs (Axtell *et al.*, 1997; Noe, 1986). Furthermore, recent research (Nikandrou *et al.*, 2009) suggested that in order to transfer the skills learned, trainees must have transfer motivation. In a training context, motivation can influence the willingness of employees to transfer what they learn in the program onto the job (Baldwin and Ford, 1988). Furthermore, Axtell *et al.* (1997) found that trainee transfer motivation was positively associated with short- and long-term transfer after employees returned to their work sites. However, there are many factors affecting

trainees' motivation to transfer, such as learner readiness, supervisor and peer support, training design, and perceived content validity. Holton (1996) proposed that transfer motivation is the most crucial precondition for the trainee to apply training content to the workplace. However, most of the evaluation studies have not included transfer motivation (Colquitt *et al.*, 2000), except Kirwan and Birchall (2006) and Liebermann and Hoffmann (2008), who found that a significant relationship exists between transfer motivation and transfer. In addition, Bhatti and Kaur (2009) proposed that transfer motivation is an important factor in the training transfer process that leads to maximizing training. While inserting a new group of variables affecting transfer motivation, there is a need to further investigate the effects of transfer motivation on training transfer. This paper proposes that researchers could consider the mediating role of the transfer motivation between performance self-efficacy and transfer in other training transfer models. To further explain and highlight the importance of the transfer motivation factor, future empirical tests could be conducted to establish the relationship between transfer motivation and other proposed factors. Furthermore, highlighting other factors that influence trainee transfer motivation would be helpful to build a basis for a training transfer theory. After identifying the elements or factors of training design and supporting this identification with past studies, as well as establishing some gaps in the preceding paragraphs, a discussion and the future direction of transfer of training will be described in the next section. The outcome of this discussion leads to the following proposition:

P5. Transfer motivation mediates the relationship between performance self-efficacy and transfer.

In the proposed model (see Figure 1), this paper suggests that transfer design influences performance self-efficacy. In other words, when the trainer explains how to transfer the learned skills practically, this will increase the efficacy level of the trainee. On the other hand, when the trainee perceives the content of the training to be similar to the actual job, the efficacy level of the trainee will be higher. Kirwan and Birchall (2006) suggest that transfer design and perceived content validity work together and separately influence trainee efficacy level. In addition, perceived content validity influences trainee reaction (Liebermann and Hoffmann, 2008). When the trainee perceives that the content of the training is similar to the actual job, they react more positively. Furthermore, when trainees have a high level of performance self-efficacy, they are more motivated to transfer the skills learned and influence training transfer (Liebermann and Hoffmann, 2008; Nikandrou *et al.*, 2009). The role of content validity and transfer design has never been highlighted in this way in past research. Here we have taken into account affective reaction and explained that when trainee perceives the content of the training to be similar to the actual job, they enjoy the training activities and react positively. As proposed in this model, researchers could test empirically the dual role of content validity as a factor to influence trainee efficacy level and develop a positive reaction. In addition, empirical results will highlight the effects of content validity and transfer design on performance self-efficacy. However, when content validity and transfer design increase the trainee efficacy level, the transfer motivation of trainee will be increased. The higher level of trainee self-efficacy leads to a higher level of transfer motivation (Velada *et al.*, 2007; Kirwan and Birchall, 2006; Chiaburu and Marinova, 2005; Gaudine and Saks, 2004). Finally, when the trainee is

motivated to transfer the leaned skills, training transfer will be higher (Kirwan and Birchall, 2006; Liebermann and Hoffmann, 2008; Bhatti and Kaur, 2009; Nikandrou *et al.*, 2009). Therefore, the proposed model needs to bed tested empirically to develop a strong training transfer theory.

Discussion and future research direction

The proposed model of this paper is centered on factors that influence the transfer of training. The purpose of this paper is to highlight the effects of individual and training design factors on the transfer of training. This paper suggests a proposed framework for the effective transfer of training to the workplace, which – more importantly – will improve employee and organizational performance. Transfer of training is a critical issue and researchers have focused on the different factors affecting it to provide substantial feedback to trainers and managers.

Among the different factors affecting the transfer of training, researchers should not ignore the importance of training design factors such as transfer design. Transfer design shows learners in a practical way how they can apply the skills learned to the workplace. In previous studies, a few researchers have included transfer design factors in their training transfer models, while most have underestimated the importance of these factors. In addition, Nikandrou *et al.* (2009) suggested that training design and the specific method used, which was trainee-centered, play an important role in training transfer, but studies have seldom examined the impact of training design and method on training transfer. Lim and Johnson (2002) suggest that training design, content and instructional strategies must be related to the objective of the transfer, whether it is near or far transfer, for learning transfer to be realized. However, the role of the transfer design factor is twofold – either as a source of increasing the self-efficacy of the learner or directly influencing the transfer motivation factor. Kirwan and Birchall (2006) suggested that transfer design influences trainee performance self-efficacy. On the other hand, Holton *et al.* (2000) found that transfer design influences transfer motivation. Therefore, there is a need to understand, transfer design work as either a factor improving trainee self-efficacy or a factor influencing the trainee's level of transfer motivation. This paper proposes that transfer design is a source of increasing the performance self-efficacy levels of learners, but at the same time we suggest that researchers should test both relationships to empirically confirm that transfer design either works as a source of increasing learners' self-efficacy levels or directly influences the transfer motivation. The main reason behind this empirical suggestion is to confirm the exact position of the transfer design factor in the training transfer model. If the training design factor relates more strongly with performance self-efficacy (Kirwan and Birchall, 2006) then future researchers and trainers should analyze thoroughly the different dimensions of training design that can improve the efficacy level of trainees. In addition, if a higher correlation exists between transfer design and transfer motivation (Holton *et al.*, 2002; Velada *et al.*, 2007), then attention should be given to highlight the elements in training design that can increase the motivational level of the trainee. When learners see how they can transfer training to the workplace their confidence level will increase and they will believe in their capabilities to perform given tasks. Therefore, in this study, we suggest that transfer design is an important factor for the training transfer process, and not only explains how to transfer the skills learned, but also increases the efficacy level of the learner.

In this paper, a multidimensional role of perceived content validity is proposed. When the learner perceives that the content of the training is similar to actual job tasks, the efficacy level of the learner increases (Kirwan and Birchall, 2006). When learners perceive that the content of the training is similar to actual job tasks, they tend to react in a positive way (Liebermann and Hoffmann, 2008). Thus, perceived content validity affects the learner's performance self-efficacy, develops a positive reaction in the learner, and affects transfer motivation. Therefore, researchers should include perceived content validity in training transfer models and test the role of perceived content validity in training transfer process.

A survey by ASTD found that majority of organizations were concerned with learners' reaction to training, while only a small percentage of organizations measured the results of training (Van Buren, 2001). It seems that many organizations persist in believing that learner reactions are valid and reliable indicators to assess the effectiveness of training, and are able to demonstrate the impact of training on organizations (Ruona *et al.*, 2002). Furthermore, the ASTD findings suggest that the transfer of skills learned in training is not a priority for organizations, as very few organizations actually measure this. Although it is important for organizations to assess the impact training has on employees and organizational performance, many internal and external factors act to influence these organizational indicators. Hence, it is a challenge to determine whether training alone has contributed significantly to organizational gains. Therefore, the proposed framework in this paper aims to establish the link of probable variables that help to determine the transfer of training.

According to Kirkpatrick's (1994) evaluation model, reaction measures lead to changes in behavior and bring about the desired results. In contrast, Liebermann and Hoffmann (2008) found that affective reaction only explained 25 percent of the variance in transfer. Furthermore, Ruona *et al.* (2002) found that participant utility reactions are more closely associated with ability and motivational constructs than with environmental constructs. Therefore, we conclude that the reaction measure affects transfer motivation to influence training transfer. This paper suggests a mediating role of affective reaction between perceived content validity and transfer motivation. In the past, researchers have ignored the reaction of the learner towards training activities. Although reaction does not exert significant correlation on other training outcomes like learning, if researchers focus on those factors that can build positive reactions, like perceived content validity, instrumentality and job assignment, these factors can play an important role in establishing a training transfer theory. Therefore, in this paper, we recommend that researchers test empirically the effect of perceived content validity on reaction and highlight the mediating role of reaction between perceived content validity and transfer motivation.

In prevuious studies, researchers have explained the factors that can affect the efficacy level of the learner. Kirwan and Birchall (2006) argued that transfer design and perceived content validity work together and influence performance self-efficacy in this way. Therefore, researchers should test this relationship empirically and highlight other factors that increase the level of trainee efficacy level. This paper highlights the importance of transfer design and perceived content validity and proposes the mediating role of performance self-efficacy between transfer design, perceived content validity and transfer motivation.

In future, researchers should test empirically the proposed model to confirm the relationship between the variables. In addition, research should highlight those factors that can develop a positive reaction and increase the performance self-efficacy of trainees. These factors could be instrumental (intrinsic and extrinsic rewards). Furthermore, researchers should highlight the role of learner readiness and training retention in the training transfer process to develop a strong training transfer theory.

This research will help human resource development professionals to understand the role of content validity, transfer design, reaction, performance self-efficacy and transfer motivation in the training transfer process. HRD professionals should develop training content that is similar to the actual job and explain practically to trainees how to transfer the skills learned to the workplace. In addition, HRD professionals should develop positive trainee reactions by making them realize that the content of the training is similar to the actual job, and that training will improve their job performance. By developing training content that is similar to the actual job and explaining how to transfer the skills learned, HRD professionals will be able to increase trainees' self-efficacy and develop positive reactions, which will maximize training transfer.

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