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Toward a Unified Model of Motivation for Training Transfer: A Phase Perspective

Carla Quesada-Pallarès[1*], Andreas Gegenfurtner[2]

[1]Departament de Pedagogia Aplicada, Universitat Autònoma de Barcelona, Spain

[2]Department of Educational Development and Research, Maastricht University, The Netherlands

Abstract

Understanding behaviour change after training is a complex endeavour in science. Although motivation theories provide avenues for understanding why individuals change their behaviour after training, training research has adopted those theories sporadically, resulting in a fragmented understanding of trainee motivation. This study aims to present a unified model for understanding behaviour change after training. The model integrates elements from prevailing motivation theories in three phases: (a) forming transfer intentions, influenced by attitudes, norms, and perceived transfer control, (b) actualizing implementation intentions for transfer, and (c) strengthening transfer commitment. Conceptual and instructional implications for training research are discussed.

Keywords: transfer of training; motivation to transfer; theory of planned behaviour; implementation intentions; adult education.

Zusammenfassung

Das Verstehen von Verhaltensänderung nach Fort- und Weiterbildungen ist ein komplexes wissenschaftliches Problem. Obwohl Motivationstheorien hilfreiche Erklärungsansätze liefern, warum Teilnehmende ihr Verhalten nach einer Weiterbildung ändern, hat die Weiterbildungsforschung diese motivationalen Theorien bislang nur sporadisch aufgegriffen: das hat zu einem fragmentarischen Verständnis von Weiterbildungsmotivation geführt. Dieser Artikel präsentiert ein integratives Modell zur Erklärung von Verhaltensänderung nach Weiterbildungen. Das Modell integriert Elemente validierter Motivationstheorien in drei Phasen: (a) das Bilden von Transferintentionen, beeinflusst von Einstellungen, Normen und wahrgenommener Transferkontrolle, (b) das Stärken von Transfercommitment, und (c) das Aktualisieren von Implementationsintentionen für Transfer. Konzeptionelle und instruktionale Implikationen fuer Weiterbildungsforschung werden diskutiert.

Schlüsselwörter: Transfer in Trainings; Transfermotivation; Theorie des geplanten Verhaltens; Implementationsintentionen; Erwachsenen- und Weiterbildung.

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1. Introduction

For decades, scientists searched for formulae that allow them to understand and predict human behaviour. In so doing, many theories were developed and tested in various scientific arenas, with human resource development being no exception. Although many approaches were developed and tested within the realms of motivation and emotion, training research has adopted those theories sporadically, resulting in a fragmented understanding of trainee motivation. This paper includes a theoretical review to discuss the necessity for creating a model aimed at understanding behaviour change after training, with a particular emphasis on transfer of training. A second aim is to present a unified model that integrates prevailing motivation theories in training research.

1.1.The importance to understand transfer of training

The European Centre for the Development of Vocational Training (CEDEFOP, 2011) stated that the investment in lifelong learning contributed to overcoming the current economic recession: in 2010, European companies funded 66% of training activities. However, the effectiveness of these training activities remains unknown. Among the reasons for the limited knowledge is that companies rarely assess the impact, transfer, and economic benefits of their investments in human resource development (Beech & Leather, 2006).

This scenario is not completely new. Already in 1996, Curry and Caplan indicated that for each US Dollar a company invests in training, 28 to 90 cents are lost because of limited transfer. Similarly, Burke (1997) stated that immediately after training programs trainees used 40% only of what they learned. Holton, Bates, and Ruona (2000) showed that only 10% to 30% of what is learned is actually transferred to the workplace; accordingly, the company loses 70% to 90% of its investments in training.

Transfer of training can be understood as the change produced in an employee's behaviour due to training activities they attend in a workplace context (Segers & Gegenfurtner, 2013). Noe and Schmitt (1986) and Baldwin and Ford (1988) presented two seminal models to predict transfer of training. Since this time, various revisions and modifications of their models have been proposed (Blume et al., 2010; Colquitt, LePine, & Noe, 2000; Gegenfurtner, Veermans, Festner, & Gruber, 2009; Pineda, Quesada, & Ciraso, 2011). Although those models and their revisions are useful, they are limited in explaining enough variance of transfer measures. Saks and Burke (2012) observed that a majority of predictors and interventions show merely low or moderate effects on transfer. Accordingly, Saks and Burke (2012) speculated that other variables beyond those included in the classic models by Noe and Schmitt (1986) and Baldwin and Ford (1988) are likely to play an important role in the transfer process. We propose that motivation theories can prove very useful in identifying those variables.

1.2. Motivational theories adapted to transfer of training

Motivation theories can help identify alternative variables that explain more variance and thus result in a greater predictive capacity of transfer (Gegenfurtner, 2011a; Gegenfurtner, Gorges, & Kuper, 2014; Gegenfurtner & Vauras, 2012). We focus on three prevailing and well-validated motivation frameworks; these are Goal Setting Theory (GST; Locke & Latham, 1984), the Theory of Planned Behaviour (TPB; Ajzen, 1985), and Social Cognitive Theory (SCT; Bandura, 1986). These theories have been tentatively used in research on the transfer of training. GST was used as a theory on which to build intervention programs based on career and / or personal training goals (e.g., Latham & Frayne, 1989; Morin & Latham, 2000). SCT was used to study self-efficacy as a key predictor of transfer of training (Chiaburu & Marinova, 2005; Holladay & Quiñones, 2003). Finally, TPB was applied in transfer with an emphasis on intention as predictor of transfer (Gegenfurtner, et al., 2010; Quesada-Pallarès, 2012; Yamkovenko & Holton, 2010).

Although the theories offer useful strategies for predicting transfer, each theory adopts a specialized focus and thus affords snapshots only into the complex processes involved in transferring training. For example, TPB has been proposed as a viable framework for transfer evaluation, but to date, only a limited number of empirical studies have tested the hypothetical causal relationships between intention to transfer and transfer of training (Quesada-Pallarès, 2014). The studies of Gegenfurtner, Vauras, Gruber and Festner (2010), Pineda, Quesada, Espona, Ciraso and García (2012) and Gegenfurtner (2013) reported a statistically significant relationship between intention to transfer and transfer of training. By contrast, Pineda, Quesada, and Moreno (2011) indicated that intention of transfer has no significant predictive power on transfer. These estimates signal that TPB can be used to understand transfer. Still, those studies also demonstrate a low predictive validity, largely because one theory offers just one snapshot on the transfer process. Similar evidence exists also on Goal Setting Theory and Social Cognitive Theory (Chiaburu & Marinova, 2005; Morin & Latham, 2000), which are useful frameworks, but because they are focused on some mechanisms, these theories individually are also limited in their predictive validity for understanding transfer. Accordingly, as a remedy, it may be necessary to build a model that integrates the variables from these theories to help explain transfer of training.

Grounded in the assumption that "all [human] behaviours involve premeditation or planning, [and therefore] the only proximal antecedent of a particular action is the individual's intention to engage in that action" (Gibbons et al. 1998, p. 1164), the purpose of this paper is to present a unified model that can help us explain transfer of training by extending and integrating elements from prevailing motivation theories.

2. Generating a Model to Understand Transfer of Training

To create a model that helps us understand transfer of training more precisely, we integrated elements from the theory of planned behaviour, goal setting theory, and social cognitive theory and organized the variables in three phases: (a) forming transfer intentions, influenced by attitudes,

norms, and perceived transfer control, (b) actualizing implementation intentions for transfer, and (c) strengthening transfer commitment. Each phase is discussed in more detail below.

2.1. Phase 1: Forming transfer intentions

The original model of Ajzen (1985) was composed of three primary variables affecting behavioural intentions: attitudes, subjective norms and perceived behavioural control. We discuss the properties of these variables in their semantic network with related constructs.

2.1.1. Attitudes. Attitudes form a latent theoretical construct which cannot be observed directly. It is thus important to establish indicators that can infer the overall predisposition of the individual to a particular behaviour (Arnau, 2009; Gegenfurtner, Fetsner, Gallenberger, Lehtinen, & Gruber, 2009; Ibáñez, 2003). A three-dimensional model of attitudes proved to have a good impact to represent components of attitudes (Albarracín, Johnson, & Zanna, 2005; Fazio & Olson, 2003; López-Zafra et al., 2008; Montané, Jariot & Rodríguez, 2007). According to this model, measuring attitudes requires three levels: (a) cognitive, (b) emotional, and (c) behaviour-related. That is, attitudes represent the beliefs, feelings, and habits that a person has in relation to the object of the study. First, *beliefs* are defined as an estimate of subjective probability or, alternatively, of doubt that an assumption is true (Fishbein & Ajzen, 1975). Therefore, a person's perception about being wrong or right about an event or assumption can determine the type of attitude associated with the object of study. Second, *feelings* or emotions, on the other hand, are "the result of evaluative patterns, fruit of cognitive processing (both conscious and unconscious) in the presence of relevant stimuli" (Palmero et al., 2002, p. 308). There is no a unique model for conceptualizing the components of emotions or feelings (Limonero, 2003). However, and based on the conception of Petersen and Dutton (1975), the simplest model to use is the one based on the first dimension of pleasing-displeasing proposed by Wundt (1896), which conceptualizes emotions with a bipolar or opposition nature, such as love-hate, joy-sadness, etc. Third, *habits* or customs make sense when you pay attention to past acts or behavioural tendencies; that is, how a person behaviourally

responded facing a similar situation to the object of study. Ouellette and Wood (1998) defined them as “tendencies to repeat responses given a stable supporting context" (p. 55). However, Ajzen’s (1991) definition of attitudes focused only on the emotional aspect of them; specifically, to Ajzen (p. 188) attitudes were "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" informed by the individual’s beliefs, feelings, and habits associated with a certain object or event. In the context of human resource development programs and training evaluation, we define *attitudes towards transfer* as trainees’ attitudes to transfer learning, which are determined by cognitive (beliefs), affective (feelings) and behavioural (habits) elements of the trainee.

2.1.2. Subjective norms. The second primary variable of Ajzen (1985) is subjective norms or "behavioural rules dictated by the society" (Gerber, Green & Larimer, 2008, p. 34). In Ajzen’s (1991) words, subjective norms "refer to the perceived social pressure to perform or not to perform the behaviour" (p. 188). Wallace et al. (2005) stated that strong subjective norms—or a lot of social pressure—create a situation in which people are more influenced by how others want them to act than by their own attitudes towards that behaviour. In the context of transfer, *subjective norms towards transfer* refer to trainee’s perception regarding the social pressure s/he feels to transfer or not the trained knowledge and skills to their workplace. Taking into account whose norms could be perceived by the trainee, we included seven different agents as sources of normative influence; these are: (a) colleagues and peers, (b) supervisors, (c) subordinates who they may have to supervise, (d) the management team of the organisation, (e) costumers or clients, (f) the trainer, and (g) other people that may be important for the worker in their daily work.

2.1.3. Perceived behavioural control. The remaining variable of Ajzen (1985) is the perceived behavioural control, which refers to "to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (1991, p. 188). To Ajzen, this variable is associated with behavioural intentions and

actual behaviour; not only does it influence the intention to perform a behaviour, but through actual behavioural control it also influences the actual behaviour of a person. Compared with the Theory of Reasoned Action (Fishbein, 1967), Ajzen included perceived behavioural control to account for behaviours that were not fully conscious or volitionally performed by the individual (Bamberg, 2002). Based on the definition of Azjen (1991), the construct is formed by controllability and self-efficacy. First, perceived controllability of the trainee is defined specifically as how much control the person has on their own behaviour (Francis et al., 2004), and includes aspects such as autonomy in the decision process of behaviour. Second, self-efficacy of the trainee—a concept originally provided by Bandura's SCT—is defined as "people's beliefs in their capabilities to produce given attainments" (2006, p. 307). Research indicated that self-efficacy predicts transfer robustly across a range of training contexts (Eitmann & Gegenfurtner, 2014; Gegenfurtner, Quesada-Pallarès, & Knogler, 2014; Gegenfurtner, Veermans, & Vauras, 2013; Knogler, Gegenfurtner, & Quesada-Pallarès, 2013). Self-efficacy is measured through (a) magnitude: level of behavioural demand, and (b) strength: how much people believe in their own abilities to overcome obstacles they encounter in the course of development of a behaviour. When we apply this new concept to transfer, we observe that *perceived transfer control* is based on trainees' perception regarding how difficult it is to transfer learning to the workplace, how much it will cost to overcome any obstacles or impediments appeared during transfer, and how much control they think they have in steering the transfer process.

2.2. Phase 2: Actualizing implementation intentions for transfer

The second phase after forming transfer intentions concerns actualizing implementation intentions for transfer. Orbell, Hodgkins, and Sheeran (1997), as well as Sheeran and Orbell (1999) highlighted that most people do not remember if they executed their intended actions. This evidence suggests that intentions do not always result in subsequent behaviour. Fishbein and Ajzen (2005) and Locke and Latham (2012) suggested that implementation intentions proposed by

Gollwitzer (1999) would close the intention-behaviour gap. We describe in turn how implementation intentions can be useful to understand how transfer intentions translate into transfer of training.

2.2.1. Temporal distinction in the decision making process. After noticing that intention is not immediately transformed into behaviour, it seems important to establish a temporary difference on the decision making process. Heckhausen and Gollwitzer (1987), whose theoretical proposal was supported by empirical evidence (Milne, Orbell, & Sheeran, 2002; Orbell, Hodgkins, & Sheeran, 1997; Sheeran & Orbell, 2000), suggested that the intention-behaviour relationship was not only based on motivational constructs (Ajzen, 1991), but required a volitional phase to implement behaviour (Orbell & Sheeran, 2000).

Heckhausen and Gollwitzer (1987) developed the Mindset Model of Action Phases, which starts with a temporal perspective on the action course. The model describes a decision-making process performed during an action process. In the decision-making process, Heckhausen and Gollwitzer formulate two phases: a first *deliberative or pre-decisional phase*, in which a person weighs the costs and benefits of pursuing a goal, culminating in the decision of whether or not to perform a behaviour (which corresponds theoretically with behavioural intentions from the theory of planned behaviour and with goal intentions in goal setting theory); and a second *implemental or post-decisional phase*, which is the antecedent of the action and includes the preparation and implementation of action plans, which culminates with the onset of the behaviour. In both decision phases, the commitment has a very important role: in the pre-decisional stage, the individual commits to behavioural intentions to achieve the proposed goal; and in the post-decisional phase, the commitment is made with action plans to ensure its implementation.

After these two phases in the decision-making process, Heckhausen and Gollwitzer (1987) propose an *action phase*, in which the individual is focused on attaining the intended results. In

concert with their conceptualization, trainees in the action phase are focused on attaining transfer, that is: on implementing and using the newly trained knowledge and skills in the workplace.

2.2.2. Incorporation of implementation intentions. Smith et al. (2008) and Weisweiler et al. (2013) stated that transfer intentions are necessary but not sufficient for transfer to occur. These authors point out that the union of Ajzen's theory of planned behaviour and Gollwitzer's implementation intentions has the potential to reduce the gap between intention formation and actual transfer behaviour. When adopting a phase perspective on transfer, it thus seems reasonable to include implementation intentions into the theoretical framework as a specific part of the post-decisional phase. These transfer implementation intentions highlight the role of a conscious choice to adopt goals, and the role of a conscious direction or guidance in achieving the desired objectives (Aarts, Gollwitzer, & Hassin, 2004). According to Gollwitzer and Sheeran (2006), implementation intentions are a highly effective self-regulation strategy that not only helps overcome situational constraints, but also helps deal with goals that are conflicting with the set goal or with impairments that can emerge during the process of goal attainment. Implementation intentions allow creating mental links between specific situational contexts and goal-directed behaviour (Gollwitzer & Brandstätter, 1997). Therefore, this embodiment aims to provide a strategy by which to increase trainees' transfer level once they completed the training activity.

The more important a behavioural intention is perceived by the trainee, the more likely it is that a person forms implementation intentions to achieve the target behaviour, and ultimately performs the intended behaviour (Geen 1995; Gollwitzer, 1996; Gollwitzer & Brandstätter, 1997 cited in Rise, Thompson, & Verplanken, 2003). This mechanism was tested in numerous studies, including use of mobile devices (Lin, Chan, & Xu, 2012), traffic behaviours (Armitage, Reid, & Spencer, 2011), food consumption (Gratton, Povey, & Clark-Carter, 2007; Kothe, Mullan, & Amaratunga, 2011), sports (Armitage & Sprigg, 2010), ethics consumer (Carrington, Neville, & Whitwell, 2010), breast cancer (Browne & Chan, 2012), smoking cessation (Armitage, 2007;

Armitage & Arden, 2008), and condom use (Arden & Armitage, 2008). A majority of these studies resulted in implementation intentions with empirical evidence related to an improvement in the experimental group—where action plans were formed—compared with a control group which did not form plans. Specifically, Verplanken and Faes (1999) showed that the effect of implementation intentions was added to the predictive value of the intention to eat healthy on the behaviour of following a healthy diet.

An important aspect of implementation intentions are if-then plans (Gollwitzer, 1993). If-then plans combine a specific situation in the future with a specific goal related to a particular behaviour, indicating when, where and how a person will follow the steps that will lead them to their goal. In the context of professional training, it is believed that implementation intentions can stimulate trainees to create detailed transfer plans; these plans explain in which situations they exhibit which elements of training. Machin and Fogarty (2003) showed the predictive potential of factors related to training and trainee's personal variables, in relation to implementation intentions. Still, despite its potential, implementation intentions have a great potential to scaffold trainees in the transfer process and to explain greater levels of variance in transfer assessments.

2.3. Phase 3: Strengthening transfer commitment

The last aspect that constitutes the proposed transfer model refers to an individual's commitment to behavioural intentions and implementation intentions. Therefore, we introduce commitment as an anchoring mechanism for both transfer intentions and implementation intentions.

Locke, Latham and Erez (1988) noted that if there is no commitment to goals, then goal setting itself does not work. Goal commitment is an essential part of any theory of goals (Klein et al., 1999). In fact, the meta-analysis by Klein et al. demonstrated that goal commitment has positive effects on subsequent behaviour. In some cases this commitment is linked with intentions, as indicated by Ajzen, Czasch, and Flood (2009, p. 1359) who stated that "favourable intentions may be accompanied by different degrees of commitment to the intended action, and a heightened sense

of commitment increases the likelihood that the behaviour will be carried out". Indeed, Gibbons et al. (1998, p. 1164) proposed that “a central tenet [of the decision to commit to a particular behaviour] is that because all behaviours involve premeditation or planning, [and] the only proximal antecedent of a particular action is the individual’s intention to engage in that action”. Nenkov and Gollwitzer (2012) argued that commitment can be a valuable tool for the individual to establish a sense of responsibility towards their goals. These authors defined the construct of commitment as “a strong sense of determination, unwillingness to abandon or lower the original goal, willingness to invest effort, and effortful striving for goal implementation” (p. 108). Following this rationale from goal setting theory, we add commitment in the new model of transfer, specifically in the pre-decisional and in the post-decisional phases. First, in the pre-decisional phase, we talk about *commitment to transfer*: how important it is for employees to transfer learning from the training to their workplace. A commitment to transfer emphasizes the strength of trainee’s intentions to transfer. As Sheeran, Webb, and Gollwitzer (2005 cited in Gollwitzer, et al., 2009) said, a weak commitment with respect to a behavioural intention limits the effectiveness of implementation intentions. Second, in the post-decisional phase, we talk about *commitment to implement plans:* how important it is for employees to implement the formed intentions. Klein et al.’s (1999) meta-analysis articulated that by requesting a person to commits to their implementation goals increases the likelihood to undertake the intended action. In summary, the new transfer model incorporates commitment in two key moments of the transfer process: formation of intentions to transfer and creation of implementation plans.

3. The Unified Model of Motivation for Training Transfer

Gibbons et al. (1998, p. 1164) indicated that "the decision to engage in a particular behaviour is the result of a rational process that is goal-oriented and that follows a logical sequence". We integrated elements of Ajzen’s (1985) theory of planned behaviour, Bandura’s (1986) social cognitive theory, and Locke and Latham’s (1984) goal setting theory in a phase

perspective that follows Gollwitzer's (1993) and Heckhausen and Gollwitzer's (1987) theorizing. In the previous sections of this paper, we presented the theoretical rationale for including motivational aspects in a transfer model. We mentioned four key aspects: specific constructs of attitudes, subjective norms and perceived behavioural control; temporal distinction in the decision making process; implementation intentions as an intervention strategy; and commitment as an anchoring mechanism. The resulting model is presented in Figure 1, and is called Unified Model of Motivation for Training Transfer. Its primary goal is to explain and, therefore, understand transfer of training and those factors that may play an important role during this process.

Insert Figure 1 here

As shown in the figure, the model includes attitudes in a cognitive (beliefs), emotional (feelings) and behavioural (habits) level; different subjective norms of a variety of agents; perceived behavioural control specified in trainee's self-efficacy (magnitude and strength) and its controllability. The model also includes two types of behavioural intentions (Bratman, 1984) concretized in intention to transfer in a pre-decisional stage and in implementation intention in a post-decisional phase, particularly in specific plans of transfer. The model includes commitment to transfer in a pre-decisional phase, and commitment to implement specific plans of transfer in a post-decisional phase. Finally, the model temporarily distinguishes between a pre-decisional phase, a post-decisional phase, and an action phase.

It is important to emphasize the relevance of the model for the study of training transfer. First, it provides greater understanding of motivational processes involved in transfer of learning in the workplace. Second, it allows organizing an intervention during the transfer process supported by specific plans of transfer and commitment, in order to increase employees' level of transfer. And finally, it enables the measurement, and even the prediction, of variables that determine transfer.

4. Discussion

More and better professional development of people is among the main reasons why organisations invest in training and human resource development. Thus, the impact of continuing training in employees' tasks might result in more competitive organisations.

A key outcome of training is transfer. Different explanatory models were developed to assist those engaging in transfer evaluation. These models focused on transfer determinants; but to test the models' adequacy, research reported that their explanatory power is moderately low (Blume et al., 2010). Recent studies (Hutchins et al., 2013; Weisweiler et al., 2013; Young, 2013) suggested combining Ajzen's Theory of Planned Behaviour (1985) with Gollwitzer's Implementation Intentions model (1993) in order to increase the predictive ability of behavioural intentions and increase the levels of transfer. Therefore, we propose the Unified Model of Motivation for Training Transfer as a combination of different theories and models with a high motivational and goal-setting perspective.

The Unified Model of Motivation for Training Transfer attempts to offer a more accurate explanation of motivational processes involved in trainees' transfer process, compared with other relevant models that focuses on trainees' motivation to transfer. Baldwin and Ford's (1988) work offered a model built from a literature review on transfer; the Model of the Transfer Process based the trainee characteristics on ability, personality and motivation. Nevertheless their great contribution to the scientific community, Baldwin and Ford's model was not empirically tested. More developed models, such as the systemic model of Kontoghiorghes (2002), maintained Baldwin and Ford's trainee characteristics but expanded training transfer climate with motivational features, e.g. organisational commitment. In 2005, Holton proposed the Revised HRD Evaluation and Research Model adding factors and relations empirically validated. Holton's model was a step-forward not only for the complexity of the model, but for the creation of the LTSI tool as a realization of the model. The variables more related to motivational theories are: personality, self-

efficacy, expectancies, and motivation to improve work through learning dimension, behavioural intentions, among others. Holton's model limitation is related with the fact that it has not been tested the predictive capacity of the model on transfer of training; therefore, the motivational factors were not actually tested in relation with actual performance. Gegenfurtner, Veermans, Festner, and Gruber (2009) summarized the most relevant contributions on transfer of training focused on motivation to transfer. The Integrative Model of Motivation to Transfer Training establishes that not only individual traits affect motivation to transfer but it is necessary to take into account training-related factors as well as organizational factors. Moreover, the authors question the use of the variable "motivation to transfer" as an one-dimensional concept, urging the scientific community to use it as a complex multidimensional variable. However, Gegenfurnter et al.'s model did not provide empirically evidence that confirms it. Beier and Kanfer (2010) suggested a phase perspective with the Stage Model of Motivation in Training and Learning Activities. They conceptualized motivation as a relevant variable in three successive stages: motivation to participate in training, motivation during learning and training, and motivation for transfer. Finally, Pineda-Herrero, Quesada-Pallarès, and Ciraso-Calí (2014) present the Factors to Evaluate Transfer of training model as an integration and contextualization of various transfer models to the Spanish context. Motivation theories are represented by motivation to transfer, self-efficacy and intention to transfer factors. However, the contextualization of the model, as well as the tool written in Spanish, limits the use of this model to other contexts. In summary, even if transfer models include motivational variables, these are not as developed as the Unified Model of Motivation for Training Transfer, which is focused only on motivational variables that affect trainees' transfer process. Still, although an attempt was made in grounding the model in theories reflecting motivational and emotional dynamics, more variables exist that would warrant inclusion, such as goal orientations (Gegenfurtner & Hagenauer, 2013; Laine & Gegenfurtner, 2013) or motivation to learn (Chiaburu & Marinova, 2005; Gegenfurtner, 2011b). Along these lines, future research may test the model in

different training settings, including, but not limited to, game-based (Siewiorek & Gegenfurtner, 2010; Siewiorek et al., 2013), simulation-based (Knogler et al., 2013), and visual training conditions (Gegenfurtner & Seppänen, 2013; Seppänen & Gegenfurtner, 2012). These efforts into testing the stability of the model across modal conditions can be informative for training designers and human resource personnel when creating effective development programs within their organizations and institutions.

In a more general perspective, the Unified Model of Motivation for Training Transfer is significant because it can provide new avenues into a deepened understanding of the motivational processes involved when transferring training to the workplace. Although a limitation of the model is that it involves so many variables that its realization in evaluation tools is complex, the next step consists on testing the hypothesized relationships in the model and its overall effectiveness in facilitating the complex endeavour of in science to understand or predict human behaviour. The first application of the Unified Model of Motivation for Training Transfer (Quesada-Pallarès, 2014) required several measurement times because it needed to prove the relationship between intention to transfer and transfer. Besides, it needed long questionnaires to include all variables, specified in items that formed factors. Moreover, it demanded complex statistical analysis to analyze the model's adequacy as well as the relation between variables, some of them acting as mediators between intention to transfer and transfer. Finally, after questionnaires' validation, it was needed to develop an intervention to test the effectiveness of specific transfer plans as a strategy to increase transfer. Although challenging, these avenues can prove very useful in improving our understanding of the motivational mechanisms involved in the transfer of training; in fact, the first application of the Unified Model of Motivation for Training Transfer confirmed the main structure of the model as well as the factors through an exploratory factors analysis.

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Figures

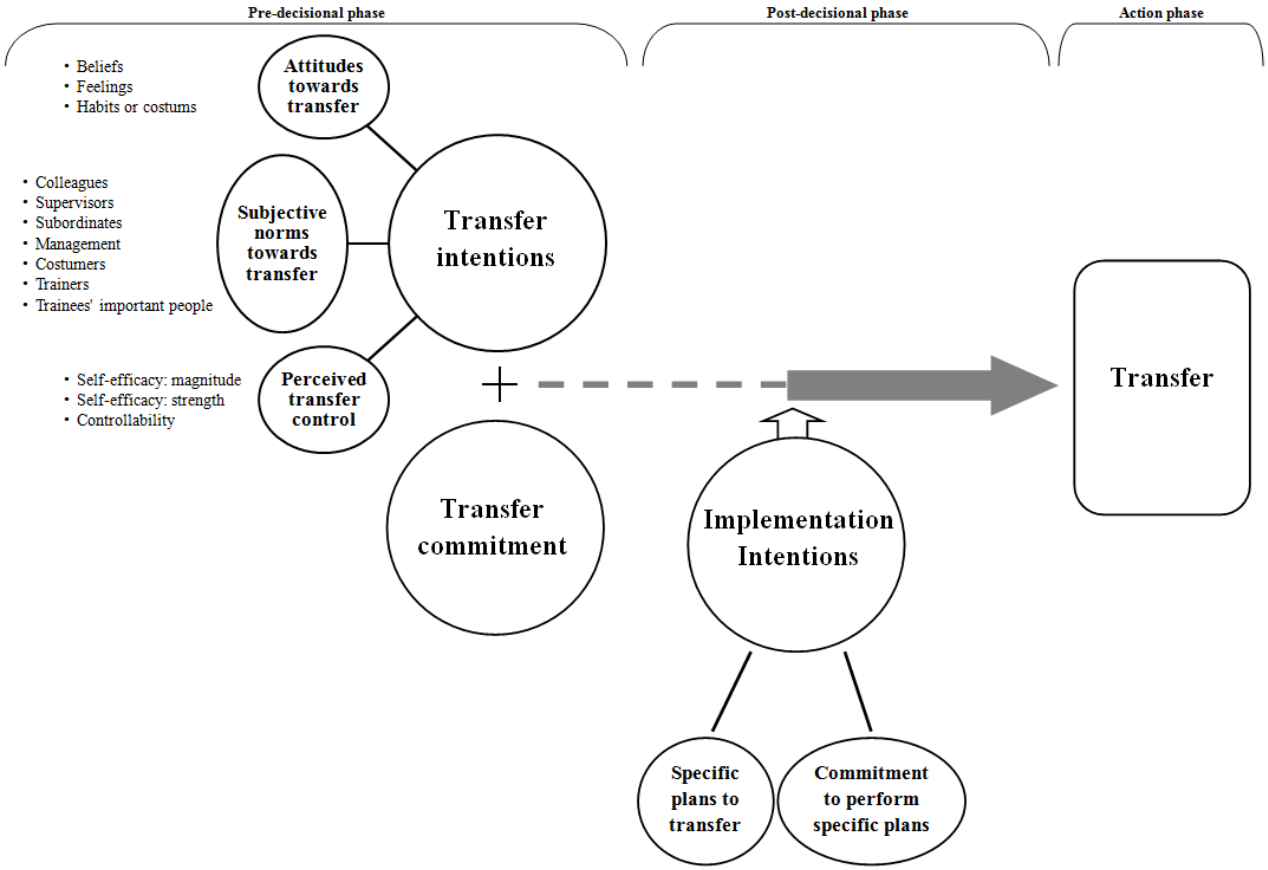

Figure 1. Unified Model of Motivation for Training Transfer.