

WCES 2012

Training transfer evaluation in the Public Administration of Catalonia: the MEVIT factors model

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Abstract

The current research highlights the need to find alternative ways to measure learning transfer by means of diagnosis of barriers and facilitators of training effectiveness (Baldwin & Ford, 1988 [1]; Noe, 1988 [2]; Pineda, et al., 2010 [3]; Quesada, et al., 2011 [4]). We developed the MEVIT model, a 40 items, 5-point Likert scale questionnaire measuring the factors affecting learning transfer. Our sample consisted of 458 employees of the Public Administration of Catalonia –PAC-. After an exploratory factor analysis, the results showed "motivational elements" as being the most valued factor by participants in training, with an average of 4.49 out of 5s. The least significant factors are related to the "work context" (3.73), followed by the "elements of control over transfer opportunities" (3.74). The study provides a reliable tool to measure what facilitates and what hinders learning transfer and, therefore, the areas of improvement for an efficient and cost-effective training in the PAC.

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Keywords: factors of training transfer, training effectiveness, training transfer model, training evaluation.

1. Introduction

Over the recent years, the labor market has undergone numerous changes that affect both employers and workers, resulting in increased unemployment rates and an increase in business shutdown. The update is the advantage of the professional to provide added value that differentiates them from other workers and, therefore, draw attention to their profile. The "be updated" skill is not innate, and requires a great effort by the practitioner based on constant and continuous training. The knowledge and skills acquired can be directly related to the job, or can be transferable skills that according to circumstances, will allow greater and more rapid adaptation to the context.

However, we know very little about how this competitive advantage –training- unfolds in the workplace. There are numerous references, starting with Kirkpatrick's evaluation model in 1958 (Kirkpatrick, 2000 [5]), which indicates the need to evaluate both participant satisfaction, as its results. More authors have developed this idea by introducing other variables and providing assessment tools for practitioners to implement a rigorous evaluation in their companies, but with the common goal of prioritizing transfer as a necessary result of training. According to Baldwin & Ford (1988:63) [6] training is "the degree to which participants apply the knowledge, skills and attitudes acquired in the context of job training".

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Unfortunately, measuring learning transfer learning directly – by creating specific tools to measure the actual transfer of learning in the workplace (Pineda, Quesada and Ciraso, 2011) [7]- is very expensive, both in terms of human and economic resources, and depending on the characteristics of the organization, almost impossible. Some authors have suggested the need to seek alternative ways to measure learning transfer learning indirectly, by means of diagnosing the factors that facilitate or impede training effectiveness (Baldwin & Ford, 1988 [8]; Noe, 1988 [9]; Holton, 1996 [10], 2005 [11]; Pineda, Quesada & Moreno, 2010 [12]; Quesada, Pineda & Espona, 2011 [13]; Pineda, Quesada & Ciraso, 2011 [14], among others). In addition, another method is being studied and it includes the variable "intent to transfer" as a highly predictive variable of transfer. According to Ajzen's Theory of Planned Behavior of (1991) [15], this method could be a surrogate variable for transfer (Griffeth, Hom, & Gaertner, 2000 [16]; Kirschenbaum & Weisberg, 2002 [17]; Machin & Fogarty, 2004 [18]; Combs & Luthans, 2007 [19]; Yamkovenko & Holton, 2009 [20]).

The aim of this paper is to assess the effectiveness of the "customized training" undergone by the public administration workers of Catalonia (Spain), by diagnosing the factors that influence transfer. This research is part of the thesis developed by Quesada (2011) [21] to create a model for evaluating the effectiveness of the "customized training" in the Catalan government, in terms of perceived transfer of learning.

2. Methodology

The sample of this study comprised 458 public service workers in Catalonia during 2010. The sampling process was not probabilistic-multistage, using different criteria for choosing the sample, according to the characteristics of the research. The criteria were twofold: to achieve a minimum sample of 400 participants in training -to validate the instrument using the technique of exploratory factor analysis- and the type of training -focusing on "customized training", because it is designed specifically to respond to professional needs of the department has requested and responds to the participants' needs more accurately than off the shelf training-. The profile of the collected sample has a higher participation of women (59.91%) than men (45.09%). The charge with a greater representation is the manager (42%), followed by the department heads (27%) and the section chiefs (20%).

We developed an exploratory model for evaluating the variables influencing transfer (MEVIT) by reviewing the scientific literature, and including the following variables: motivation to transfer, self-efficacy, sense of responsibility, lack of application possibilities, organizational transfer support, transfer design, attitudes toward transfer, subjective norms, perceived control, and intent to transfer. Next, we designed the MEVIT questionnaire with the aim of measuring learning transfer factors. The tool consisted of 40 items measured on a 5 points Likert rating scale (1 strongly disagree, 5 strongly agree). We applied it just before the end of training.

Once all the data was gathered, we used the SPSS statistical package for relevant statistical analysis (exploratory factor analysis, reliability test, descriptive analysis, ANOVA, multiple regression, etc.). In this paper we present the results of the exploratory factor analysis and the descriptive analysis of the factors influencing transfer.

3. Results

We performed an exploratory factor analysis in order to carry out a construct validation of the instrument. This analysis excluded the "intent to transfer" variable, as it was considered an independent scale. We proceeded with the maximum likelihood method, with an Eigen value greater than or equal to the unit, and factor loadings equal to or greater than 0.30. We used a Promax factor rotation (oblique rotation). The suitability test sample Kaiser-Meyer-Olkin and Bartlett's test of sphericity (KMO of 0.914 and significance of 0.000) suggested that the model was adequate and we continued the analysis. We removed items 39, 30, 12, 5, 6, 9, 37 and 40 in successive steps, because they had a very low correlation with the emerging factors.

From the analysis a model of five factors emerged and it explained 49.37% of the variance. It was composed of 28 items (the initial model had 36 items without the “intent to transfer” variable). Table 1 presents the emerging factors, the items that compose them, and the corresponding model variables.

Table 1. Factors emerged

Factor	Items	Variables of MEVIT model
Elements of control over transfer opportunities	28, 19, 10, 32, 11, 24, 31, 29	Lack of application possibilities, perceived control, subjective norms (social pressure), sense of responsibility
Motivational elements	33, 35, 20, 26, 27, 36, 1	Motivation to transfer, sense of responsibility (personal effort), self-efficacy, attitudes toward the transfer (personal consequence)
Elements of training and social context	14, 13, 22, 23, 16, 8, 17	Transfer design, subjective norms, organizational transfer support (peer support)
Attitudinal elements	2, 3, 4	Attitudes toward the transfer
Elements of work context	34, 25, 38	Organizational transfer support (supervisor support)

The *elements of control over transfer opportunities* factor is mainly based on the variables of "lack of application possibilities" and "perceived control". This factor represents those elements that the participant perceives as the possibility for them to decide when to transfer, under what circumstances and with what resources. Factor 2, however, is mostly represented by the variable "motivation to transfer," and one item from each of the other variables specified. The *motivational elements* encompass those aspects which the participant perceives as motivational; those which inspire them the desire or the willingness to transfer, knowing that the effort and the results are worthwhile.

Factor 3, *elements of training and social context*, is primarily composed of the variables "transfer design" and "subjective norms". This factor takes into account the elements of the learning context –strategies to transfer, trainer help, the similarity between training contents and workplace, etc.- and the environmental elements -the desirability of transfer expressed by the peers, peer support, the pressure exerted by the group, etc.-, all of which sometimes push the participant to apply learning. The *attitudinal elements* factor is represented by a single variable, belonging to the Theory of Planned Behavior of Ajzen (1991) [22] "attitudes toward the behavior". It refers to the attitude or the willingness of the participant to transfer; in other words, whether it is good or bad for them, pleasant or unpleasant, and so on. Finally, the elements of work context factor is also composed of a single variable "organizational transfer support" which refers to items related to the support of the supervisor and the vision of the company with respect to transfer.

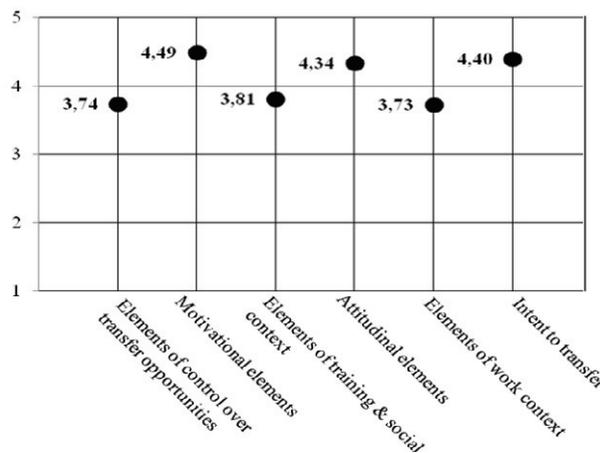


Figure 1. Graph of transfer factors of the evaluated training.

We also analyzed the reliability of the "intent to transfer" scale, using a 0.824 alpha. From these results, we performed a descriptive analysis of the factors and the "intent to transfer" variable (see figure 1).

As shown in Figure 1, the factors' scores are quite similar. To facilitate interpretation, we consider factors with values between 1 and 2 as a source of high resistance to perceived transfer, due to their presence it is very low and, therefore, does not help transfer to occur in an appropriate way. Values between 2 and 3 represent factors with low scores; although they are perceived as weak, do not affect transfer very negatively. Factors scoring between 3 and 4 are seen as facilitators of transfer, but their impact can be significantly improved with specific strategies depending on each case. Finally, factors with values between 4 and 5 act very positively on perceived transfer, indicating its highly facilitating role.

Specifically, the results show "motivational elements" as the most valued factor by participants in training, with an average of 4.49 out of 5 points (SD 0.46). However, the "elements of work context" are less appreciated (average 3.73, SD 0.86), followed by the "elements of control on transfer opportunities" (average 3.74, SD 0.76). Still, we consider all the variables analyzed as facilitators of the transfer process, with the need to implement strategies that enhance the "elements of control on transfer opportunities", "elements of training & social context" and "elements of work context" factors to develop their full potential and could be considered strong facilitators of transfer, along with other factors.

4. Discussion

The results show that the MEVIT model is valid, reliable and allows us to measure learning transfer indirectly, specifically by the factors influencing transfer. The construct validation has reduced initially the considered variables into a smaller number of factors. This has provided us a much more manageable model for analysis.

Some of the emerging factors are consistent with the factors already explored in the literature, such as "motivation to transfer" (i.e. Burke & Hutchins, 2007 [23], Smith et al., 2008 [24]), "application opportunities" (i.e. Clarke, 2002 [25], Lim & Morris, 2006 [26]), and "work context" (i.e. Holton, Bates & Ruona, 2000 [27]). The implementation of the MEVIT model shows a very encouraging overview. The scores reached by the factors influencing transfer emphasize "motivation to transfer," along with "intent to transfer" as the two strengths of the "customized training" of the Catalan government. Furthermore, if we consider the Ajzen's theory (1991) [28], a high "intent to transfer" assures us that the workers participating in the "customized training" have transferred a lot of learning into their workplace (values greater than 4 on a scale of 5).

However, we must confirm this assumption with empirical data. As part of the thesis, and in order to explore the MEVIT's predictive power, we have carried out an assessment of the perceived transfer that includes measures of learning and transfer through pre and post training skills questionnaires completed by the immediate supervisors. With this, we will have a very good tool to measure what facilitates and what hinders learning transfer, therefore, the areas of improvement for an efficient and cost-effective training in the public administration of Catalonia.

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