



# Contributions from Attitude Change Theory on the Conceptual Relation between Attitudes and Competencies

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## Abstract

Some brief reflections regarding attitudes and professional competencies are presented for the purpose of clarifying the complementary nature of the two constructs from an educational point of view. Two opposing trends are acknowledged: one identifies attitude (and more specifically, its affective dimension) as a part of competency, the other assumes that attitudes and competencies are concepts that function separately although each involves the other. The article is organized in two parts: the first focuses on the concept, structure, models and development of attitudes and how they are connected with competencies; the second specifies how both concepts are evaluated and presents some practical implications for improving educational intervention.

**Keywords:** attitude, attitude change, competency, cognitive dimension, affective dimension, behavioral dimension.

*Received:* 05/10/10    *Initial Acceptance:* 05/10/10    *Final Acceptance:* 07/30/10

## Resumen

En este trabajo se presenta una breve reflexión sobre las actitudes y competencias profesionales con el propósito de clarificar la complementariedad existente entre los dos constructos desde un punto de vista educativo, reconociendo la existencia de dos tendencias contrapuestas: la que identifica la actitud (y más concretamente, su dimensión afectiva) como una parte de la competencia y, la que asume que la actitud y la competencia son conceptos que funcionan en paralelo y que se implican mutuamente. El artículo se organiza en dos partes: una primera parte se centra en el concepto, estructura, modelos y desarrollo de las actitudes y su vinculación con las competencias profesionales y, una segunda, donde se concreta el proceso de evaluación de ambos conceptos y se presentan algunas implicaciones prácticas para mejorar la intervención educativa.

**Palabras Clave:** actitud, cambio de actitud, competencia, dimensión cognitiva, dimensión afectiva, dimensión conductual.

*Recibido:* 10/05/10    *Aceptación Inicial:* 10/05/10    *Aceptación Definitiva:* 30/07/10

## **Introduction**

A reading of studies on competencies, analyzed from the attitude change model, indicates two different trends: a) attitudes are simply a part of competencies, and, b) competency and attitude are concepts that can be treated jointly since they form part of a single process that is evaluated through action or execution. These trends, in addition to being considerably different from each other, involve unresolved conceptual problems and consequences in how competencies are treated.

A majority of the literature on competencies indicates that attitudes are simply part of the same, and are often compared to values and emotions. This option contradicts the classic concept of attitude. If we consider, by contrast, that both attitude and competency show certain parallels, then certain conceptual doubts are clarified, since both constructs incorporate into their structure the three factors that explain human behavior (cognitive, affective and behavioral), and both are evaluated from execution.

From an educational point of view, it is important to clarify the existing relationship between attitude and competency. It may be highly useful to confirm to what extent attitude and competency function as nearly parallel elements, a more advantageous approach than considering attitude – especially its affective component – simply a part of competency. Starting from this reflection, then, we seek to confirm to what extent attitude and competency follow similar processes that are complementary to each other.

## **General aspects of attitude and its influence on behavior**

Competencies are increasingly important for planning training, assessment, accreditation and execution of professions, especially in an information-based society where there is a need for wholistic academic orientations that encourage the development of learning (Pérez Gómez, 2008). For example, both in Spain (Organic Law 5/2002, July 19<sup>th</sup>, on Qualifications and Vocational Training) and in Europe (*European Qualifications Framework for Lifelong Learning*– EQF, 2008), competencies are used to address the Qualifications System for Professional Accreditation (Echeverría, 2008). However, the term competency continues to have multiple meanings and to undergo conceptual development (Echeverría, 2008; Gimeno Sa-

cristán 2008; Rodríguez Moreno, 2006; Tejada, 1999a, 1999b, 2005; Tejada & Navío, 2004). Most definitions and studies about competencies include the concept of attitude, but handle it differently, encouraging dispersal and confusion in the already complex situation of describing competency, particularly those aspects that precede execution. In order to better understand the possible contributions of attitude to the interpretation of competency, we offer some preliminary considerations.

### *The origin of attitudes and attitude change*

In early thinking, attitude, or the tendency to execute a task, stemmed from one or two factors: the cognitive factor, and in some definitions, the cognitive and affective factors together. Thurstone (1931) related attitude to thought and emotions. Allport (1935) included the behavioral component when defining attitude as a type of learning that predisposes one to thinking, feeling and acting in a determined way.

Katz and Stotland (1959), cited in Albarracín, Johnson, Zanna and Kumkale (2005) and, more recently, Arnau (2010), Bohner and Wänke (2002), Erwin (2001), Johnson, Maio and Smith-McLallen (2005) and Montané, Jariot and Rodríguez (2007), accept that attitudes are predispositions to act in a determined way based on responses that might have an affective, cognitive or behavioral nature, since these three elements in inter-relationship are what constitutes attitude. For their part, Eagly and Chaiken (1993, 1998, 2005, 2007) recognize the existence of affective, cognitive and behavioral factors, not as constituents of attitude—a precept adopted by the triad theory—but rather as resulting from a global evaluative response influenced by the information that each of them contributes to the tendency to act. Sometimes the contributions are separate, and other times interactive. Along these lines, we assume that attitude is a tendency to act in a determined way that is expressed in an evaluation in favor of or against an object, and that is influenced by the intervention of cognitive, affective and behavioral elements.

Some of the most influential theories in attitude change are the theories of consistency, stemming from the work of Heider (1946, 1958) on the model of balance. One of the most notable is that of cognitive dissonance (Festinger, 1957), which assumes that ideas predispose action, and that cognitive dissonance tends to unify concepts with behaviors, according to interests and the ease and/or difficulty of adapting such behaviors. It is possible to make use

of this proposal only as a complement to clarify how the cognitive component tends to influence behavior. This concept has evolved and it has become accepted that cognitive dissonance tends to unify ideas with behaviors, as long as a process of ego defense is in play; Aronson (1968, 1999) demonstrates that dissonance is produced when another variable is present that tends toward defense of the ego and/or of personal interest. Others relate it to the expected factors, and to personal responsibility and defense of self-esteem (Cooper & Fazio 1984; Montané 1982, 1983, 2005). However, Montané and collaborators (2007) showed the weakness of the consistency theories, which focused exclusively on the defense of logic and on reduction of dissonance for attitude change.

Considering our conception and description of attitude so far, it would not be warranted to list exclusively cognitive and affective components in an effort to explain attitude change – or to use these two as the only elements for explaining the passage from attitude to execution, in the form of behavior and/or competency. In order to initiate attitude change, it is essential to intervene in the three dimensions of attitude, as indicated in the attitude change model developed by Montané and collaborators (2007). The model establishes a five-phase sequencing that impacts both the development of teaching-learning content as well as pedagogical intervention in the classroom, namely: initial assessment, information improvement, review of behavior habits, integration of emotions and final assessment. The effectiveness of this model has been confirmed through studies by Arnau (2010), Arnau and Montané (2010), Jariot and Montané (2009), Jariot and Rodríguez Parrón (2007), Montané (2010), Montané and Ferrer (1993), Montané and Jariot (2005), Montané and collaborators (2007), Montané, Martínez and Jariot (2004).

### *Characteristics, development and execution of attitudes*

From the conceptions of attitude expressed above, we draw out three major considerations that may be of interest in relating attitude to competency: how the three components (cognitive, behavioral and affective) effect attitude execution, how the three interact, and their reciprocity with attitude.

a) The three components influence attitude execution directly.

The influence of the three factors – cognitive, behavioral, and affective – in their three-fold impact, explains to a large extent the prediction and execution of the desired or expected behavior (Ajzen, 2001; Ajzen & Fishbein, 2005; Fazio, 1995; Olson & Stone, 2005). According to this affirmation, ideas, behaviors and emotions directly influence one's action. Consequently, one way or another, if there are improvements to information, skills and behavior habits, and if emotions and feelings that favor the execution are introduced, then attitude results and prediction of behavior will improve (Ajzen 2001; Ajzen & Fishbein, 2005; Johnson, Maio & Smith-McLallen, 2005; Maio & Haddock, 2010; Marsh & Wallace 2005; Montané et al., 2007). This predictability is increased when attitudes are based on direct experience and depend on one's own personality (Fazio & Zanna, 1981); they are more accessible to memory (Fazio, 1995; Gawronski & LeBel, 2008); they are extreme (Holland, Verplanken & Knippenberg, 2002; Petersen & Dutton, 1975); they are consistent (Eagly & Chaiken, 2005) and they are not ambivalent (Armitage & Conner, 2000). The triad approach is a reality to be considered both in the structure of attitudes and in intervention or attitude formation (Eagly & Chaiken, 2007; Fabrigar, MacDonald & Wegener, 2005).

It is difficult to reduce attitude to predisposition alone. Academically, it is true that attitude can be understood as a predisposition to execution, but in order to verify whether there is a predisposition, the execution of the attitude must be evaluated. Consequently, evaluation of attitude execution forms an intrinsic part of the attitude itself. Observation of the behavior or the different ways to evaluate the attitude, are examples of how the extensive literature on attitude evaluation indicates that attitude execution becomes necessary to complement the concept of attitude (Albarracín et al., 2005; Bohner & Wänke, 2002; Erwin, 2001; Fazio & Olson, 2003; Gawronski, 2007; Haddock & Maio, 2004; Krosnick, Judd & Wittenbrink, 2005; Maio & Haddock, 2010).

b) The three dimensions interact among themselves.

The three dimensions of attitude, besides the separate effect that each one has on attitude response, are closely connected. Thus, cognitive content influences in turn, and depends upon, the affective components and the behavioral elements which manifest as behavioral and skill habits. Numerous authors relate the processes of thought to emotions and habits, and

consider these three components to be what prepares attitude execution, and by extension, the actual behavior, if we draw a parallel between internal predisposition and attitude execution (Eagly & Chaiken, 2005, 2007; Maio & Haddock, 2010; Montané et al., 2007; Zanna & Rempel, 1988).

This new conception of the structure of attitude makes it unlikely that a single dimension in itself is able to explain predisposition to attitude execution. Thus, it would be risky to reduce attitude to a single dimension, for example, to the affective dimension. Hypothetically, it would only be possible to attain a change in attitude in the case that the remaining dimensions (cognitive and behavioral) were implicitly present and showed sufficient value and consistency among themselves (Maio & Haddock, 2010). In fact, attitude is defined as the result of a combination of the three factors (Albarracín et al., 2005; Bohner & Wänke 2002; Eagly & Chaiken, 1993, 2005, 2007; Erwin 2001; Montané et al., 2007).

c) Manifestation of the attitude affects, in turn, the elements that helped it to emerge.

The expression of the attitude, in turn, interactively influences the same elements that were involved in its execution (Ajzen & Fishbein, 2005; Albarracín et al., 2005; Marsh & Wallace, 2005; Montané et al., 2007). Logically, if behavior is the result of the three components of attitude, given that they are closely related, attitude in turn influences the three factors, although this influence would certainly be quite varied according to the object or the result of the attitude execution (Clore & Schnall, 2005; Kruglanski & Stroebe, 2005; Olson & Stone, 2005).

It has been shown that attitudes predispose the execution of certain behaviors that, once put into practice, may reshape or change attitudes, leading to the development of other new attitudes that require new behaviors, and by extension, new competencies. Attitude and behavior are always under development, since they form part of the same process of intercommunication and reciprocal interdependence (Ajzen & Fishbein, 2005; Eagly & Chaiken, 1993, 2005, 2007; Fazio, 1995; Fazio & Zanna, 1981; Olson & Stone, 2005). The experience of *role playing* is one example of how the expression of behavior can transform the earlier behavior, and consequently, change prior attitudes (Jannis 1968, cited in Olson & Stone, 2005).

In summary, the following chart (Figure 1) illustrates the three-fold interaction of the three factors and their relationship to attitude, as well as how it manifests itself in the form of behavior and by extension, competency, understood as “knowing how to act”.

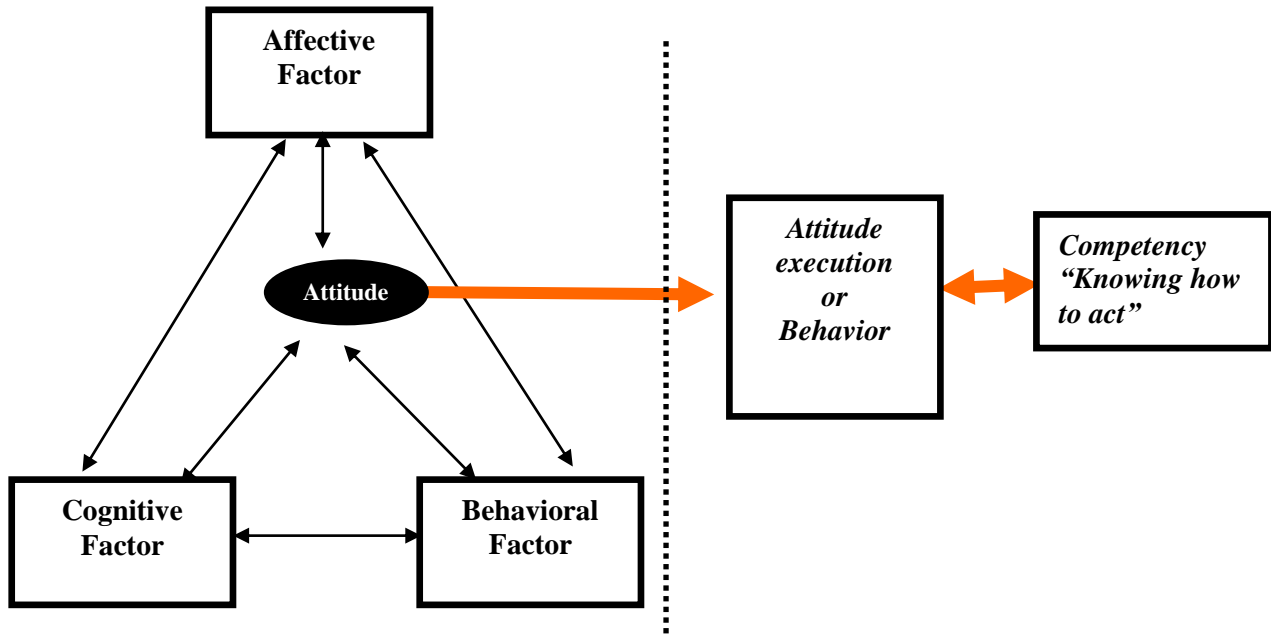


Figure 1. The three factors of attitude and their three-fold interaction.

The richness and complexity of this interrelationship offer a framework for understanding, and also clues about how to intervene and how to explain not only attitudinal processes, but also similar competency-related processes. In addition, it is not surprising that a set of more closely defined elements enters in to describe how the three factors supposedly relate to each other. Thus, cognitive aspects related to emotions are manifest in concepts of persuasion and conclusiveness, according to the behavioral theory set out by Ajzen and Fishbein (1980); others relate emotions and skills to each other in behavioral terms (Erwin, 2001; Levitan & Visser, 2008).

There are also other attitudinal dimensions that can be useful in relating to behavior, namely: the relationship with the negative, neutral or positive object opens a relationship interval that influences how behavior is evaluated within a rejection-attraction continuum (Petersen & Dutton, 1975). This continuum in the form of true or mistaken evidence, adequate or inadequate skill, feelings of rejection or attraction, applies to the three dimensions. This ex-



plains the different nuances of the action execution, and their influence on the development and manifestation of competencies.

### **First steps in relating attitude with competency**

One early approach in relating attitude to competency is to verify how the literature on competency relates to attitude. This literature can be summarized into two basic propositions, or intents, namely: a) that attitude (especially its affective dimension) is simply part of competency, and, b) that attitude and competency present certain similar elements, since both belong to the three dimensions of human behavior and are evaluated through its execution, based on the evidence of the action taken.

The two propositions present differences and similarities in their consideration of attitudes and competencies. In the first proposition, definitions of competency reduce attitude to values or emotions in the form of “knowing how to be”, a fact that contradicts the current, triadic concept in the majority of the literature on attitude. The contributions of the other two factors of attitude – concepts and behavioral predisposition – are overlooked, making this biased concept of attitude less than useful. In the second proposition, however, the concepts of competency and of attitude are identified in parallel, and some of the elements relating to the origin, development and execution of both attitude and competencies are clarified. At the same time, certain clues come forward for helping us understand, interpret and intervene in improving competencies in line with the demands of the future.

#### *1<sup>st</sup> proposition: attitude as simply one part of competency*

Considering the constituent definition of attitude, it is hard to understand and to justify attitude as simply part of competency, as we find in most definitions of professional competency that we found (Pereda & Berrocal, 2001; Repetto, 2003; Repetto, Ballesteros & Malik, 2000; Repetto, Pena, Mudarra & Uribarri, 2007; Roe, 2003; Tejada, 2005; Tejada & Navío, 2004) and in compilations by Echeverría (2001) and Rodríguez Moreno (2006). Many of the authors cited take a wholistic, complex approach to competency, defining it as a combined set of knowledge (knowing), procedures (knowing how) and attitudes (knowing how to be). This

coordinated, integrated set, along with a mobilization of resources from the environment, qualifies a person to act effectively in diverse professional situations. Along these lines, most authors integrate the term attitude in the definition of competency, but identify it with one of its dimensions – the affective – in terms of “knowing how to be”, thus overlooking the influence of behavioral and cognitive factors in the presence of attitude. Reducing attitude to only affective content contradicts, or at least differs from, the generalized understanding of the concept of attitude, which includes the three dimensions mentioned above.

On the contrary, if we accept that emotions form part of attitude along with the other two factors that are present as personal elements of competency, we find ourselves in a situation that is partially similar to what was just described, allowing us to relate competency to attitude. In this line of thinking, the personal elements of competency would be the same as those that influence the formation and execution of attitude (cognitive, behavioral and affective). What seems evident is that attitude accompanies competency, in its origin as well as in its development and execution. The problem lies in resolving to what extent it is identified with and to what extent it differs from competency itself.

*2<sup>nd</sup> proposition: similar aspects that relate attitude to competency*

Attitude and competency present similar aspects in their origin, development and manifestation. Both attitude and competency appear as the result of influence from ideas, emotions and behaviors. It is probably true that attitude appears more as a tendency and competency than an action. Although, in fact, they derive from different perspectives, both are the result of the influence of the three components mentioned. Differing levels among the components of attitude and competency are able to account for certain nuances:

- The ability to influence the three components – cognitive, affective and behavioral – at differing levels and degrees, offers a wide variety of possibilities and nuances that explain the origin, development and expression of attitude and competency.
- There is a long tradition of considering the preparation of or training in competencies, and real-life assessment of the same. It would be very difficult to understand predisposition without examining execution or to consider the effectiveness of the competency without incorporating attitudinal aspects in its execution.

- The distinction between being capable and demonstrating capability, between potential and action, knowing how to do something and actually doing it, abilities and competencies, preparation and execution, training and application, process and product, inclination and expression of attitude, etc., are concepts that fit perfectly well in the process of improving information, behavioral habits and emotions, for preparing attitude execution or manifestation of competency. Some authors' distinction between predisposition and inclination to express the attitude (Eagly & Chaiken, 2007; Schwarz, 2007; Schwarz & Bohner, 2001) is probably similar to the process by which information, habits and emotions make up competency and its demonstration, making a later verification possible.

The fact that attitude and competency share the three elements of human behavior – cognitive, affective and behavioral – offers certain clues for understanding the merging processes between the two concepts. The attitude change approach also presents two perspectives: a cross-spanning approach that includes influence from the three factors, and an approach that focuses on the final result of these factors merged (Montané et al., 2007). The developmental perspective of the final result of attitude introduces us into a process view of both competency and attitude (Visser, Bizer, & Krosnick, 2006; Visser & Krosnick, 1998).

### **Assessment of attitude execution and competency: a mutually confluent process.**

Assessment of both attitude and competency is what tells us their true value, and this is the point where both concepts become equivalent. It is true that attitude looks at predisposition and competency at effective performance, but each take on an objective value as their execution is assessed. Thus, an important point about competency is its assessment as a function of its execution (Echeverría, 2008; Rodríguez Moreno, 2006; Tejada 2005; Tejada & Navío 2004). At first it may seem that attitude is based on the inclination to put something into practice, but attitude also takes on its value as a function of its application (Visser et al., 2006).

Both competency and attitude make assessment of execution or manifestation a priority, regardless of whether attitude is understood as predisposition and competency as action. For attitude, assessment of its execution is an indicator that allows us to verify to what extent

there is evidence for a predisposition to act. Assessment research makes it possible to verify to what extent attitude explains a certain percentage of its realization, and by extension, of competency execution.

Similarly, the ample literature related to competency concurs in affirming that competency only takes on value if it is demonstrated in action. The convergence between attitude and competency must be sought out, because attitude and competency take on value and are assimilated when they are executed. At the end of an attitude is its manifestation in the form of a behavior, habit or automatism, while the end of competency is the effectiveness of its execution. Assessment of attitudes and competencies are two ways of verifying the result of training and of ensuring motivation, through transfer procedures, for the execution and effective resolution of professional tasks that stem from a given employment. In this line of thinking, competency needs attitude, even though attitude may not be sufficient for a competent execution.

The difference between attitude and competency probably lies in attitude looking more towards predisposition to act, while competency focuses more on the actual execution of the behavior.

### **Attitude and competency are modified by execution**

The manifestation of attitude, and probably of competency, as well as its assessment in action, in turn influences the same elements that helped it to emerge. This aspect explains how execution is transformed into routines or behaviors and how these can reshape ideas, skills and habits and can impact emotions, going so far as to generate new attitudes that involve or predispose new behaviors, and that help to acquire and develop new competencies, through learning in action.

Both manifestations of attitude and of competency involve a set of assessments that in turn involve positive or negative modifications that could be explained by how execution takes shape and evolves. Concepts of adaptation to change, transfer of learning, creative learning, etc., are ways of explaining how attitude execution and competency partially account for their own evolution and development. Both attitude execution and competency influence the cognitive, affective and behavioral elements that develop them.

By way of conclusion, all the above would make it seem that attitude, as a predisposition, ends with execution, while competency is demonstrated and perfected with later executions. But attitude accompanies competency in the entire process of acquisition, execution and evaluation and is configured with the same three elements that influence competencies: cognitive, affective and behavior. This same motive suggests that, due to their analogous structure and genesis, the components of attitude and competency present rather similar characteristics. Although there seems to be agreement in presenting the three components (cognitive, affective and behavioral) as factors that explain the origin and evolution of attitudes and competencies, the specific or formal differences between attitudes and competencies must be clarified. At least in part, these should probably be looked for in the triadic structure of the three components and in their interrelation. If competency is explained in part by its origin, development and the assessment of execution, as are attitudes, then the latter probably accompany competency in its further evolution. Consequently, we must accept that there are fundamental connections between attitudes and competencies that relate to their origin, development and execution and that such connections go beyond a simple relationship with the affective factor of attitude.

### **Some educational implications arising from attitudes and competencies**

Montane's change model (Montané et al., 2007), applied for the reduction of traffic accidents, is not limited only to the predisposition to act, but also considers attitude execution itself for the purpose of practicing safe behaviors related to effective, responsible driving. Therefore, some of the manifestations are probably closer to competency than to attitude execution.

The attitude change model incorporates a sequence of five phases (initial assessment, improvement of information, revising behavior habits, integrating emotions and final assessment), and it underpins the design, application and assessment of different road safety programs developed by the Chair of Road Training and Education of the Universitat Autònoma de Barcelona and the *Servei Català de Trànsit* [Catalan transit authority]. These are applied in the training of new drivers, drivers with experience, professional drivers and repeat offenders in all of Catalonia: a traffic safety program for new drivers, a driving safety pro-

gram for high powered motorcycles, a driving safety program for professional bus and truck drivers, a global development program based on safe driving for users of the penal system, and safe driving workshops for drivers with repeat offenses, all of which are designed to reduce risk behaviors when driving.

Application and assessment of these attitude change programs reveal significant results from the point of view of the intention and execution of safe, effective behavior in driving. Attitude is not only considered as the predisposition to act but also as the real execution of the behavior manifest in driving, such that attitude takes on its value when it is transformed into expected behavior and/or competency. In this case, the attitude presented as a predisposition to act is transformed in real execution or demonstration, something very similar to the definition of competency, especially if one takes into account how effectively the action is resolved.

The following cases are examples of the above. A sample of 134 new drivers, by applying the new driver traffic safety program, improved their safety level by 15 points out of 50 in comparison to a control group, with a significance of  $p < .001$  (Jariot & Montané, 2009). Similarly, the Driver's Education Program (Spanish initials PEC), applied to a sample of 24 reckless drivers, produced an improvement of 75% on items related to risk-related attitudes when driving. Furthermore, these results remained stable after 6 months, observed in safe, effective driving behaviors (Montané & Ferrer, 1993). Likewise, the safe driving workshops were applied to a sample of 54 users of alternative penal programs; after 6 months, 86% of those interviewed remembered the driving safety commitments made at the end of the program, and to a lesser extent (75%), they manifest an effort to keep these commitments and to put them in practice through safe mobility behaviors. All these facts are probably the result of crossing the limit from attitude to competency, or from the predisposition to act to real, effective execution of the behavior.

In conclusion, programs based on the attitude change model present satisfactory results. Such programs probably produce these results because, though founded on this model, they also include a strong component of practical execution, with many similarities to competencies.

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