

## Psicología Educativa





# Effects of induction of positive and negative emotional states on academic self-efficacy beliefs in college students



Leonardo Adrián Medrano<sup>a,b</sup>, Ezequiel Flores-Kanter<sup>a</sup>, Luciana Moretti<sup>a</sup>, Germán Leandro Pereno<sup>a,b,\*</sup>

<sup>a</sup> Universidad Siglo XXI, Córdoba, Argentina

<sup>b</sup> Universidad Nacional de Córdoba, Argentina

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#### ABSTRACT

Studies have examined the relationship between positive and negative emotions with self-efficacy, but we consider that some theoretical and methodological aspects are missing. In this study, the difficulties in participants' emotional regulation were included as a co-variable. We analyzed factors undergoing the absence of affective congruity. An experimental design taking the type of induced emotions (positive vs. negative) as independent variable was carried out. The manipulation of this variable was effected with the combined exhibition of movie/music. The results suggest that the induction of positive and negative mood states increases and decreases respectively, the levels of self-efficacy. This was only observed in participants in a condition of intense or raised mood and in atypical or slightly accurate items of character. We concluded that the induction of positive and negative mood states increases and decreases respectively in the emotional regulation modulates the effect of inductions of mood states.

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### Los efectos de la inducción de estados emocionales positivos y negativos sobre las creencias de autoeficacia académica de estudiantes universitarios

#### RESUMEN

Numerosos estudios han examinado la relación entre emociones positivas y negativas y autoeficacia, aunque consideramos que algunos aspectos teóricos y metodológicos no son contemplados. En este estudio se icluyen como covariables las dificultades en la regulación emocional de los participantes. Así, analizamos algunos factores que pueden producir la ausencia de congruencia afectiva. Se llevó a cabo un diseño experimental que considera como una variable independiente el tipo de emoción inducida (positiva vs negativa). La manipulación de esta variable se efectuó a través de la exposición combinada de película/música. Los resultados sugieren que la inducción de estados de ánimo positivos y negativos aumentan y disminuyen, respectivamente, los niveles de autoeficacia. Esto solo fue observado en participantes que demostraron una condición de estados de ánimo positivos y negativos o poco seguros. Concluimos que la inducción de estados de ánimo positivos aumenta y disminuye, respectivamente, los niveles de autoeficacia en estudiantes universitarios. La dificultad en la regulación emocional modula el efecto de la inducción del estado de ánimo.

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\* Corresponding author: Universidad Siglo 21. Calle de los Latinos N° 8555. B° Los Boulevares, 5008 Córdoba, Argentina.

E-mail address: gpereno@psyche.unc.edu.ar (G.L. Pereno).

There is evidence about the consequences of affects on cognition, and diverse theories, with a degree of complementarity, have developed in order to explain the relation between affects and cognition (Forgas, 2001). One of these pieces of evidence is the Informational Affect Theory (e.g., Affect Infusion Model;

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Affect-as-Information Model), explaining that affect can notify the content of thoughts, judgments, and decisions of people (Forgas, 2001). Likewise, other lines of research were aimed at demonstrating that the affect is an essential component for the achievement of a cognitive adaptive response (Adolphs & Damasio, 2001). In sum, it is possible to affirm that affect is an essential factor of cognitive processes and that affect modulates the information processing in multiple domains.

Special attention deserves the analysis of the relation between emotions and judgments of self-efficacy. This variable modulates the choice of activities and behaviors; the patterns of thoughts determine the effort and the perseverance that the person devotes, and finally it lets organize and execute the necessary action courses to reach a good performance (Bandura, 1997).

Bandura (1997) postulated that the mood state could influence the self-efficacy judgments in two ways, direct and indirect. A person's affective state could influence directly the self-efficacy because the emotional state could operate as a sign or information to judge the own capacities. In relation to the Affect-as-Information Model (Schwarz & Clore, 1983), people use their affective states to produce a quick judgment without trying to integrate the external characteristics with their own memory and the internal associations to generate a judgment. However, for Bandura (1997), the impact of this pathway should not be so important, because it depends on the way this information is interpreted.

The major influence of the emotional state on judgments of selfefficacy is an indirect one. Bandura (1997) explains that memory provides the necessary information to make judgments of selfefficacy. The emotional state activates articulated memories with the affect, facilitating the recall of successful experiences (when the emotional state is positive) or failure (when the emotional state is negative), consistently affecting the judgments of personal efficiency.

The idea that the intensity of the emotional states reaches to distort the attention and influences the way in which people interpret and recover information can be deduced from the Associative Network Theory proposed by Bower and Forgas (2003). According to this model, there are emotional nodules connected in the brain, and each one has multiple situational detectors. When an emotion is activated in an evocative situation, this emotional nodule extends the excitation to a series of indicators which are connected. The indicators include physiological reactions, facial expressions, action trends, and memories of events that have been associated with past emotions. As a result, when an emotion is activated, the concepts, words, topics, and rules of inference that are associated with each emotion are primed and more available for its use. In line with this, the emotional state will put in the first line some perceptual categories, topics, and manners of interpretation that are coherent with the emotional state. These "mental samples" will act as interpretative filters of reality, introducing a bias in the judgments.

As suggested by Bandura (1997), the beliefs are formulated on the basis of previous experience. If the person has had previous failure experiences, he/she will feel less capable than if he/she has had previous successful experiences. However, it is possible to hypothesize that the emotional state inclines the collection of experiences of success or failure. For example, opposite to the question "How competent do you feel to get a good performance in an exam?" there is an activation of the concept "examination/test", which belong to an associative network that include connections with autobiographical events of success (for example, obtaining a good score) and autobiographical events of failure (for example getting a bad qualification or not understanding a content). In turn, every event is associated with an emotional nodule which is in contact with positive and negative emotions, respectively (Figure 1).

The phenomenon of the mood state dependent memory occurs through a *summation of the activation* process motivated by the

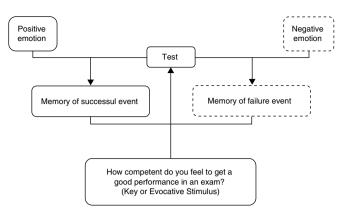


Figure 1. Diagram of summation of activation.

*Note.* In this case, you could find the memories of previous experiences of success more accessible because this nodule is highly activated because of the concept of examination or test (activated by clues of the environment or evocative stimuli) and the positive emotional state.

active concept, in this case "exam" or "test", adding an immediate emotional state, turning more accessible to selective memories. Based on the memories of previous experience, the immediate emotional state could affect the judgments of self-efficacy. Hereby, if the person is in a positive emotional state, it is more likely that he/she remembers the successful event and, because of that, it could be activated by two different sources, the concept "examination/test" activated by clues of the environment and the nodule of positive emotion, and less probable that memories of the event of failure since it only would be activated by one source (the concept of exam activated by environmental clues).

Many studies have examined the relationship between positive and negative emotions with the judgments of self-efficacy. The methodological procedure used has been the same, i.e., the participants are induced to experience positive and negative emotions by methods of induction like music and/or movies, and then they are asked to communicate the confidence that they have to take different actions. In spite of the similarities in the methodological design used in some studies, the observed results are different. Some studies report that positive emotions reinforce the beliefs of self-efficacy and negative emotions discourage them (Baron, 1990). Other authors do not corroborate this effect (Cervone, Kopp, Schaumann, & Scott, 1994). Recently, Totawar and Nambudiri (2014) suggest that the hedonism levels and utilitarian motivation modulate the relationship between the mood states and the perception of self-efficacy. On the other hand, Jundt and Hinsz (2001) have found that the mood state correlates positively with the beliefs of self-efficacy in a worker sample.

We should consider that some theoretical and methodological aspects are not contemplated. First, many of the precedent studies do not work with specific judgments of self-efficacy, but they request that the participants evaluate their beliefs to execute them satisfactorily like intellectual, physical, and social general tasks, i.e, without delimiting clearly the behavior and contexts involved. Contrary to that, Bandura (1997) emphasizes that self-efficacy is a situational construct tied to behavioral delimited domains, and consequently it should be evaluated by instruments that contemplate such specificity. For this reason, in the present study we considered the beliefs of academic self-efficacy of college students, that involve three specific behavioral domains: 1) performance self-efficacy, i.e., the beliefs that the students have reached a good qualification (Pajares, 2003); 2) learning self-efficacy, about the beliefs to regulate their own actions and the necessary thoughts to reach the aims of learning (Zimmerman, 1995); and 3) social aca*demic self-efficacy*, related to the confidence that the students have to carry out social competent behaviors in the academic context Download English Version:

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