

Affective Dimension of University Professors about their Teaching: An Exploration through the Semantic Differential Technique*

Dimensión afectiva de los profesores universitarios sobre la enseñanza: Una exploración a través de la técnica del diferencial semántico

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ABSTRACT

The main objective of this study is to increase our knowledge regarding professors' emotions about their teaching, as a component of teacher identity. In the first part, we present a comprehensive review of the literature about the types of teachers' emotions and teaching. In the second part we present the results of a validity study with a semantic differential scale developed to explore the emotions of university professors about their teaching. This scale was fulfilled by a sample of 198 university teachers and comprises a list of pairs of bi-polar adjectives that summarize a broad range of affective classifications about teaching in higher education. Exploratory factor analysis revealed a three-factor structure of emotions about teaching in higher education: Motivation for teaching, Evaluation of oneself as a teacher, and Teaching performance. The cross-referencing of the scale to Trigwell and Prosser's (2004) teachers' approaches to teaching is analysed and discussed. Our results suggest new lines of research about teachers' emotions in higher education, proposing further studies to collect more validity evidences about the affective dimensions of teaching.

Keywords authors

affects; emotions about teaching; teacher identity; higher education; semantic differential

Keywords plus

emotions; cognition; semantic differential; psychological test

RESUMEN

El principal objetivo de este estudio es incrementar nuestro conocimiento acerca de las emociones de los profesores sobre su enseñanza, como un componente de la identidad docente. En la primera parte, presentamos una revisión comprensiva sobre la literatura acerca del tipo de emociones de los profesores y la enseñanza. En la segunda parte presentamos los resultados de un estudio de validez con una escala de diferencial semántico desarrollada para explorar las emociones de profesores universitarios sobre su enseñanza. Esta escala fue diligenciada por una muestra de 198 profesores universitarios y consistió en una lista de pares de adjetivos bi-polares que resumen una gran cantidad de clasificaciones afectivas sobre la enseñanza en educación superior. El análisis factorial exploratorio revela una estructura de tres factores de emociones sobre la enseñanza en educación superior: motivación para la enseñanza, auto-evaluación docente, y desempeño en la enseñanza. El cruzamiento de la escala con la aproximación docente de Trigwell y Prosser (2004) se analiza y se discute. Los resultados sugieren nuevas líneas de investigación acerca de las emociones de los profesores en educación superior, proponiendo estudios

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futuros para reunión una mayor evidencia de validez sobre las dimensiones afectivas en la enseñanza.

Palabras clave autores

afectos; emociones sobre la enseñanza; identidad docente; educación superior; diferencial semántico

Palabras clave descriptores

emociones; cognición; diferencial semántico; pruebas psicológicas

Introduction

Affect in the educational field is considered an emerging area of study, especially when emotion, motivation, and cognition is integrated as a focus of research (Linnenbrink, 2006; Schutz, Hong, Cross, & Osbon, 2006). This may also be observed when revising the educational literature on the emotional aspects of teachers' professional activities (Demetriou & Wilson, 2009; Sutton & Wheatley, 2003). Most of what is known about the emotions of teachers' experiences comes from a wide range of research on teaching and teacher education. Theories of the emotional experience of teaching suggest that emotions may influence teachers' cognition and teachers' motivation. Consequently, knowledge of teachers' emotions is essential to understand teachers and teaching.

Until today, the available research literature on the affective dimension of teaching has been conducted mainly in five fields of study: a) Affective domain associated with teachers' preparation: in pre-service (Shoffner, 2009) and in professional development (Day & Leitch, 2001); b) Teachers' emotions during processes of educational change (Hargreaves, 1998), especially in educational reforms (Darby, 2008; Kelchtermans, 2005; Lasky, 2005; Reio, 2005; Schmidt & Datnow, 2005; van Veen & Slegers, 2006; van Veen, Slegers & van de Ven, 2005); c) Teachers' emotions in classrooms: in teaching situations (Ria, Sève, Saury, Theureau, & Durand, 2003), in their interactions with students (Hargreaves, 2000; Teixeira & Fleury, 2003; Daley, Renyard, & Sonuga-Barke, 2005), and in teachers' regulation of emotions and classroom management processes (Sutton, Mudrey-Camino, & Knight, 2009; Tsouloupas, Carson, Matthews,

Grawitch, & Barber, 2010); d) Emotions associated with teachers' professional lives: the teacher's emotional experience (Winograd, 2003), the emotional context of teaching (Day & Kington, 2008; Flores & Day, 2006), the relationship between emotional experience and teacher identity (Shapiro, 2010; Vloet & Van Swet, 2010), and teachers' emotions in the construction of teacher identity (Zembylas, 2003); and e) The post structural methodological perspective in the study of emotions and teacher identity (Zembylas, 2003, 2005a, 2005b, 2007).

All research on teachers' affective dimension shares three conceptual limitations. First, in most studies there is no clear differentiation between different levels of the emotional aspects of teacher affects. Secondly, teachers' emotions are generated and applied only to specific objectives, such as in their preparation and professional development, in processes of educational changes, in teaching situations, or in teachers' professional lives. Thirdly, although the teacher's emotions are clearly identified and labelled (i.e. care, affection, love, satisfaction, anger, disappointment, fear), there are few classifications to sort these emotions into relevant and useful categories in education. The most common classification categorizes all emotions into only two categories, positive and negative emotions.

New views of the dialogical self in psychology provide different approaches to respond to the three previously mentioned aspects related to teachers' emotions. The emerging theory of dialogical self (Hermans & Hermans-Konopka, 2010) offers a more elaborate approach to teacher identity, conceived of as both unitary and multiple, continuous and discontinuous, as well as individual and social (Akkerman & Meijer, 2010).

In addition, recent contributions from an educational psychology lens (Schutz, Aultman, & Williams-Johnson, 2009) conceptualize emotion with a dimensional model. Within this model, they use the term *Affective Tendencies* to describe stable predispositions towards certain ways of emotion. Affective tendencies have the potential to influence how teachers feel, and "act as lenses through which individuals view their transactions in the world" (p. 196).

Based on the two contributions, we consider that the notion on teacher identity must be re-defined, in order to integrate cognition and emotion within the individual dimension of teacher identity (Meneses, Badia et al., 2009). If we assume that one unitary dimension of teacher identity exists (unitary, continuous and individual), then we need to identify a conceptual space for affective tendencies within the dimensions of teacher identity (unitary, continuous and individual), that these affective tendencies can be applied to teaching in general, without referring to specific objects; and we need to search for a new classification of affective dimension about teaching in teachers' identity.

New Perspectives to Conceptualise the Affective Dimension of Teachers about their Teaching

Distinguishing between Feelings and Emotions about Teaching

From the psychological perspective, several authors have defined the term *feelings*, often distinguishing between different affective dimensions. These conceptual distinctions have been applied to study teachers' feelings about their teaching in different ways. The classification developed by Peirce (1931-1935) includes three different categories of human emotional experience. The first category refers to the affective state, shaped by continuous emotional flow of the person involved. The person can explain his emotional perceptions about sensations that are not easily identifiable of, for instance, well being or malaise. The second category is composed of the emotional state that arises from the relationship between the person and a real-life context. The person is able to explain these feelings, which happen in a particular time and space. The third category concerns the awareness that the person has about different kinds of feelings that occur in prototypical social contexts, like emotional episodes (Schutz et al., 2009). These feelings can be shared with others. This categorization was applied by Ria et al. (2003) to teachers' emotions that arise in ordinary teaching situations.

Damasio (1994) develops another classification about the human affective dimension that also includes one category referring to feelings. This classification distinguishes between feeling and emotion. Emotion has been defined as a physiological reaction to external stimuli, whereas feeling refers to the mental experience of one emotion, a cognitive awareness of emotions. Damasio also distinguishes between two kinds of emotions. Primary emotions are basic and universal emotions, such as fear, anger, disgust, sadness and happiness. Secondary emotions, on the other hand, are cultural emotions and originate in close relation to situational meanings that one community attributes to both different social situations and to human experiences. In order to better understand this, an evaluative and conscious mental process is needed, composed of variations of the five mentioned emotions. For example, euphoria and ecstasy are variations of happiness, whereas melancholy and nostalgia are variations of sadness. Teixeira and Fleury (2003) used this conceptual framework to analyse how these feelings, primary and secondary emotions, influence the dynamics of interaction between teachers and students.

How Emotions Arise in Teachers

Lazarus (1999) defines emotion as a complex and organized system that includes thoughts, beliefs, motives, meanings, bodily experiences and physiological states. According to Lazarus, there are three aspects that cause the appearance of one emotion: the relational dimension, the motivational dimension, and the cognitive dimension. The relational dimension refers to the fact that emotions are always connected to the relationship between person and environment, especially the social environment. This relationship changes over time and brings about emotions at any given moment. These emotions can be negative, that is, they could harm the person, or positive, that is, they could benefit the individual.

The motivational dimension refers to emotions and moods as reactions to how a person manages his own individual aims and goals in everyday en-

counters and life in general. The motivational dimension helps to take into account the relevance of one action, act or activity of everyday life for a specific person. The more relevant the act or meeting, the more emotional the level will be for one person.

The cognitive dimension links emotion with basic awareness and appraisal processes that work in particular social meetings in daily life. This awareness consists of setting beliefs about how things are going for the person and is usually. These appraisal processes always depend on the meanings a person attributes to the facts that happen in everyday occurrences. Van Veen and Slegers (2006) use these categories of the human affect in order to identify the emotions related to change in teaching, in the organizational role of one teacher in the school, and the processes of teacher identity preservation.

Two Different Kinds of Emotions: Positive and Negative

Kemper (1978) distinguished between two sets of emotions, called positive and negative emotions. Kemper defined emotion as an evaluative answer in the short term, positive or negative in essence, that involves somatic and cognitive components. Sutton and Weatley (2003) revised a considerable amount of studies that have applied this conceptual distinction to study the emotional experience of teaching. They showed that teachers have different positive emotions such as care, love and affection for their students; or happiness, satisfaction and pleasure in teaching. In contrast, negative emotions would be those such as anger, frustration, anxiety and helplessness. Recently, Vloet (2009) also used this conceptual distinction and identified happiness, joy, confidence, security, and inner calm as positive emotions; and anxiety, stress, loneliness, helplessness, anger, and disappointment as negative emotions. These emotions about teaching are considered to be one of the components of the professional identity of a teacher (Vloet & Van Swet, 2010).

According to what we have explained above, we are interested in this paper to focus in teachers' emotions about their teaching. We conceptualise

the term "emotions about teaching" as a specific set of teachers' knowledge on the affective dimension of their teaching. This specific knowledge is abstract, and for that it is not applicable on concrete and real educational scenarios. In contrast, it could refer to different aspects related to teaching, and it could be organised around different affective contents of teaching.

As Russell (2003) suggested, the emotions of people at any particular point of time can be conceptualized as a blend of different affective dimensions. Each affective dimension can take different level of intensity.

These mentioned aspects of teachers' emotions towards their teaching were used to carry out this empirical research, addressed to identify different ways to classify the emotions experienced by academics. Therefore, the main objective of this paper is to identify categories of teachers' affective dimensions to teaching. We believe that the use of the semantic differential technique may be the best choice for measuring individuals' identity meanings related to emotions. According to Burke and Stets (2009, p. 93), by using the semantic differential technique "the meaningful responses to the self as an object could be captured, taking advantage of the fact that the self is reflexive and has the ability to respond to itself".

According to validity theory (among others, see Shepard, 1993) the main aim of this article is to explore the internal structure and the cross-referencing of the semantic differential scale developed, in order to assess the affective dimensions of teachers' experiences in higher education teaching. In order to accomplish this aim, we carried out an exploratory factor analysis to identify different teachers' emotions about their teaching activity and explore their relationship to teaching approaches. In 2004, Trigwell and Prosser characterised two main factors as part of teaching approaches, and two years later, in 2006, they carried out a confirmatory factorial analysis of the "Approaches to Teaching Inventory".

Trigwell, Prosser, and Taylor (1994) defined Approaches to Teaching as a theory that tries to characterise different ways of teaching in higher education, in specific situations. Each approach to

teaching is characterized in terms of intentions and strategies. According to Trigwell and Prosser (2004), two different teaching approaches were revealed, named *Conceptual Change/Student-focused*, and *Information Transmission/Teacher-focused*. As stated by these authors, we could expect that “adopting a Conceptual Change/Student-focused approach to teaching is more likely to lead to high quality student learning and to greater teaching satisfaction, than the adoption of an Information Transmission/Teacher-focused approach.” (1994, p. 419).

In addition, some studies have established links between various approaches to teaching with other teaching aspects, such as for example, discipline and teaching context (Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006) and university teachers’ experiences of academic leadership (Ramsden, Prosser, Trigwell, & Martin, 2007).

Method

This research has been conducted as part of the Teacher Assessment and Critical Incidents project (EPIC, as is known in its Catalan initials), an international study aiming to assess university professors’ identity in Latin America, carried out by SINTE members. SINTE is a consolidated research team (Government of Generalitat of Catalonia, Ref. SGR-0819) that develops research, training, and dissemination activities on studying the strategic learning paradigm and its different derivations and applications, both in formal education and non-formal education settings. The EPIC’s main objective is the analysis of professors’ perception of their professional identity through the examination of professional roles, teaching and learning conceptions and approaches, teaching strategies and procedures, and academic emotions.

Data Collection

An online survey was created by means of LimeSurvey (<http://www.limesurvey.org>), open source software that allows for administering secure surveys and collecting data from a given list of participants. Before receiving a private URL that

identified and tracked participants’ responses by email, heads of department contacted their teaching staff to introduce the researchers, the main goals of the project, and encouraged teachers’ participation. Two additional reminder messages were sent during the two months of survey administration to involve non-responders in the study. All data were gathered confidentially, and participants agreed to become part of an aggregate analysis that guaranteed their anonymity. As it is the case for any identified administration, only one complete response was accepted from each selected participant, avoiding any undesired or repeated participation in the final sample of the study.

Participants

The study’s fieldwork was made in 2009, developing and administering an online survey to a selected sample of university teachers in Latin America. Participants in this research were teachers that worked in Latin American Universities and lived in Latin America; they had certain particular characteristics, in some cases negative. As López (2009) explained, the recent crisis of the academic profession has had devastating effects on teaching and research, as well as on teachers’ professional development. It has spoiled teaching conditions in the academic profession; teachers need to complement their salaries by working as knowledge consultants; corruption is a current issue in the academic area, and finally, appropriate incentive policies related to indicators of productivity, for Faculty differentiation.

Heads of departments of education from five Latin American universities settled in Peru, Colombia, Chile, Mexico, and Argentina provided the contact information –namely, name, surname and email– of the teaching staff serving in undergraduate and graduate programs. One hundred and ninety-eight of the total –1.027 teachers contacted– answered the survey (see table 1 for details), indicating an overall response rate of 19.28% that ranges between 10.07 and 58.82% among the five participating universities.

TABLE 1
Population, Sample, and Response Rates of the Study

	Antioquia	La Puebla	PUCP	UDD	Rio Cuarto	Total
Teaching staff	578	114	198	51	86	1.027
Final sample (percentage)	64 (32.3)	22 (11.1)	67 (33.8)	30 (15.2)	15 (7.6)	198 (100)
Response rate percentage	11.07	19.30	33.84	58.82	17.44	19.28

Source: own work.

Almost three quarters of the final sample (73.4%) were females, with a mean age of 44 years ($SD = 9.2$). One half of the teachers (50.5%) had a master's degree, 35.6% had a bachelor's degree, and 13.8% had attained a doctoral degree. One third of the teachers that completed the survey (33.2%) had five or less years of teaching experience, 26.1% between six and ten years, and 40.8% more than ten years. Also, they are mostly teaching under-graduate students (80.3%), with a less frequent participation in graduate (21.2%) and doctoral (3.0%) programs.

Measures

Among other measures, an ad-hoc semantic differential (Osgood, Suci, & Tannenbaum, 1957) was developed to assess the teachers' meanings about their teaching experiences. These measurement scales are typically composed of a set of bipolar adjectives arranged in pairs, through which the internal, connotative, and emotional response to objects, events, or concepts is elicited. In theory, each pair of adjectives represents the opposite limits of a continuous dimension, that participants are expected to rate by allocating a point in an interval scale. As a result of their judgements, a multidimensional semantic space is conformed for a given individual or group, as an empirical representation of their meanings.

As Lenno (2006) indicated, in the semantic differential technique, an affective or connotative meaning of a concept is defined. The source of these bi-polar adjectives about the affective dimension of teaching came, firstly from the literature, and secondly from the participants. At the first step, a broad range of bi-polar adjectives from Osgood et al. (1957), McDowell (1975), and Bechini (1986)

were selected. Following Osgood et al. (1957), as there is no standardized semantic differential test, we selected the items according to the requirements of our research. So, bi-polar adjectives that were consistent with the meaning of "teaching" were chosen. Then, 10 experienced university teachers validated this first set of pairs.

According to the literature review on the affective dimension of teaching, discussed above, fifteen pairs of adjectives were finally designated to report teachers' academic emotions through a seven-point rating Likert scale: irrelevant-relevant, negative-positive, pessimistic-optimistic, unpleasant-pleasant, bad-good, inopportune-timely, superficial-deep, inflexible-flexible, incomplete-complete, tense-peaceful, heavy-light, hard-soft, difficult-easy, complex-simple, and demanding-undemanding. Semantic differential scores were transformed to fit in a scale ranging from -3 to +3, easier to interpret with a middle or neutral point in zero (0).

Teaching approaches were assessed using the Approaches to Teaching Inventory (Trigwell & Prosser, 2004), a well-known inventory to measure the key aspects of the variation in approaches to teaching.

Finally, we also collected information about personal and professional background. The gathered information includes age, sex, education and qualification levels, experience in teaching, current teaching levels, and subjects.

Analytical Approach

As a first step of the data analysis, an exploratory factor analysis on "Teacher feelings" was carried out, to reduce items variability to a multidimen-

sional semantic space representing teachers' meanings. Three scales were formulated (see Table 2 for details), adding the raw scores and dividing them by the number of items included in each factor, to retain the original scale (i.e., ranging from -3 to +3) and to facilitate its interpretation.

In the second step of the data analysis, the correlation between the teachers' feelings about their teaching and the teachers' approaches to teaching was explored (Trigwell & Prosser, 2004). The possible link between both constructs was explored using a Pearson's correlation analysis.

Findings

Internal Structure of Teachers' Feelings about their Teaching

A non-orthogonal solution with oblique rotation (Oblimin with Kaiser normalisation) was first calculated to examine potential correlations between factors. As they were not significantly correlated (i.e., $r < 0.22$, corresponding to less than 5% of variance explained), a final orthogonally rotated solution (Varimax with Kaiser normalisation) was ultimately computed to obtain a simpler and more interpretable structure.

Principal component analysis showed a three-factor structure ($KMO = 0.762$) and a significant Bartlett test, $p = 0$) that accounts for an acceptable 53.42% of the total variance. The corresponding multidimensional semantic space is created as an empirical representation of teachers' meanings about their emotions. According to the meaning of the items with large factor loadings, these factors were named as "emotions related to the motivation

for teaching", "emotions related to the evaluation of oneself as a teacher" and "emotions related to the performance of teaching".

From Table 2 it is clear that "the emotions related to the motivation for teaching" ($M = 1.99$; $SD = 0.72$) and "the emotions related to the evaluation of oneself as a teacher" ($M = 1.9$; $SD = 0.76$) receive the highest scores of teachers as compared to "the emotions related to the performance of teaching" ($M = -0.5$; $SD = 1.09$).

Likewise, the first factor (the emotions related to motivation for teaching) is the most influential and it explains almost half of the total variance (23.77%). Cronbach's α tests were conducted to evaluate the reliability of the scale and its three compounding factors, showing a quite acceptable reliability ranging from 0.733 to 0.789.

Table 3 shows the entire set of selected pairs, it provides additional descriptive information, and also shows the rotated component matrix. Principal component analysis resulted in a three-factor structure, representing three types of affective ratings related to teachers' teaching.

The first factor, which is called "emotions related to the motivation for teaching", encompasses the following items: the affective dimension of teachers' attitude towards teaching (positive-negative), the importance or pertinence of their teaching (relevant-irrelevant), the positive or negative expectation about their improvement in teaching (optimistic-pessimistic), the rigidity or adaptability of their teaching (flexible-inflexible), and the pressure of emotional intensity of teaching (peaceful-tense).

The second factor, called "emotions related to the evaluation of oneself as a teacher", encompasses the following items: intensity of teaching (superfi-

TABLE 2
Mean, variance explained and Cronbach's alpha of each factor (N = 198)

	Mean (SD)	Percentage Variance explained	Cronbach's alpha
Emotions related to the motivation for teaching	1.99 (0.72)	23.77	0.789
Emotions related to the evaluation of oneself as a teacher	1.9 (0.76)	18.44	0.742
Emotions related to the performance of teaching	-0.5 (1.09)	11.2	0.733
Total	1.12 (0.54)	53.42	0.725

Source: own work.

TABLE 3

Rotated component matrix (factor loadings) and descriptive statistics for the pairs of adjectives that characterizes the perception of teachers regarding their emotions about teaching (N = 198)

	Mean	SD	F1	F2	F3
F1. Motivation for teaching	1.99	0.72			
Negative – Positive	2.19	0.88	0.777	0.145	-0.09
Irrelevant – Relevant	2.24	0.92	0.729	0.078	-0.227
Pessimistic – Optimistic	2.17	1.01	0.726	0.063	-0.088
Inflexible – Flexible	1.80	1.01	0.699	0.173	0.059
Tense – Peaceful	1.48	1.19	0.66	0.112	0.107
F2. Evaluation of oneself as a teacher	1.9	0.76			
Superficial – Deep	1.8	1.13	-0.019	0.762	-0.066
Bad – Good	2.07	0.93	0.158	0.734	0.025
Inopportune – Timely	1.98	0.99	0.255	0.716	0.05
Unpleasant – Pleasant	2.13	0.89	0.229	0.687	0.108
Incomplete – Complete	1.52	1.37	-0.007	0.588	0.123
F3. Performance of teaching	-0.50	1.09			
Difficult – Easy	-0.51	1.46	0.122	-0.005	0.841
Complex – Simple	-0.95	1.55	-0.165	-0.009	0.747
Hard – Soft	-0.19	1.4	-0.084	-0.005	0.681
Heavy – Light	0.15	1.45	0.12	0.146	0.627
Demanding – Undemanding	-0.99	1.95	-0.322	0.175	0.547
Total scale	1.12	0.54			

Source: own work.

cial-deep), utilitarian evaluation of teaching in the sense that teaching has the required qualities (bad-good), teaching adequacy (inopportune-timely), teaching gratification (unpleasant-pleasant) and the degree of teaching regarding the fact of having all the necessary or appropriate parts (incomplete-complete).

The third factor, called “emotions related to the performance of teaching”, encompasses the following items: teaching effort (difficult-easy), laboriousness of teaching (complex-simple), plasticity of teaching (hard-soft), imaginary weight of teaching (heavy-light), and teaching demand or requirement (demanding-undemanding).

Table 3 also shows that the adjectives with highest scoring (relevant, positive, optimistic, pleasant and good) are related to the dimension of evaluation. This dimension measures the teachers’ appreciation of their teaching, which is the main component of the teachers’ attitude towards their teaching. On the other hand, the adjectives with lower scoring (hard, difficult, complex and demanding)

are related to the self-perceived dimension of potency of their teaching. The sample of teachers assesses positively their teaching, and appreciates that their teaching is moderately difficult to develop.

Correlation between Teachers’ Feelings about Their Teaching and Trigwell and Prosser’s (2004) Teaching Approaches

As we have indicated above, *teaching approaches* is a well-founded conceptual construct, it has a questionnaire that has been tested, and has generated a great impact on the academic community interested in university teaching. Principal component analysis on “teaching approaches” showed a two-factor structure (KMO = 0.722) and a significant Bartlett test ($p = 0$), which accounts for an acceptable 46.67% of the total variance. Both factors show an acceptable reliability, with a Cronbach’s α of 0.709 and 0.689 respectively. We have identified the same two factors that Trigwell and Prosser (2004) called “Conceptual change / Student

TABLE 4
Correlations between “Approaches to Teaching” and “Teachers’ Affective Perceptions about their Teaching”

Teachers’ Affective Perceptions about their Teaching		Approaches to Teaching (Trigwell & Prosser, 2004)	
		Conceptual change / Student focused	Information transmission / Teacher focused
Emotions related to motivation for teaching	Pearson Correlation	0.342**	-0.079
	Sig. (2-tailed)	0	0.294
	N	176	177
Emotions related to the evaluation of oneself as a teacher	Pearson Correlation	0.332**	-0.021
	Sig. (2-tailed)	0	0.786
	N	175	176
Emotions related to the performance of teaching	Pearson Correlation	0.082	-0.09
	Sig. (2-tailed)	0.285	0.239
	N	172	173
Total	Pearson Correlation	0.369**	-0.088
	Sig. (2-tailed)	0	0.263
	N	164	165

Source: own work.

focused”, and “Information transmission / Teacher focused”.

Table 4 shows the correlations between both types of factors: “Teachers’ affective perceptions about their teaching”, and “Approaches to teaching”.

Table 4 also shows that two of three dimensions included in “Teachers’ affective perceptions”, even the total score, are significant and positively correlated with the teaching approach named “Conceptual change / Student focused”. On the contrary, all dimensions of “Teachers’ affective perceptions” are no significant and negatively correlated with the teaching approach called “Information Transmission / Teacher focused”.

Discussion

As we have explained in the introduction, teachers’ emotions are associated with their teacher identity (Shapiro, 2010). The first type of affective rating related to teaching is “emotions related to teacher motivation for teaching”. Motivation for teaching was defined by Kelchtermans (2005, p. 1000) as “the motives or drives that make people choose to become a teacher, to remain in or to leave the profession”. According to Lazarus (1991, p.

820), “*Motivational* means that acute emotions and moods are reactions to the status of goals in everyday adaptation encounters and in our lives overall. The concept of motivation helps us understand what makes an adaptational encounter personally relevant and a source of harm or benefit, hence emotional”. Teaching requires higher motivation, commitment and emotional attachment (Day & Leitch, 2001), and can also be perceived as a positive and relevant job (Ezer, Gilat, & Sagee; 2010). If teachers do not perceive these qualities, they may drop out this profession (Hong, 2010).

Results indicated that other important intrinsic values related to teacher motivation are a positive expectation and perception of flexibility about teaching. Darby (2008) exemplifies how the application of a school reform initiative affects the teachers’ emotions related to their motivation to teach.

The second type of affective rating related to teaching is “emotions related to the evaluation of oneself as a teacher”. Kelchtermans (1993, p. 449) calls this aspect “self-esteem”, which also has been defined as an “*evaluation of oneself as a teacher*. How good am I as a teacher?”, and refers to the teacher’s appreciation of his/her actual job activity. According to Kelchtermans (2005), edu-

educational reforms implicitly or explicitly question the teachers' self-esteem and will trigger intense emotions of doubt, anxiety and guilt or shame. Hong (2010), Kelchtermans (1996) and Martin and Luickenhausen (2005) have stressed the need for the teacher to feel the task of teaching as a secure and comfortable activity that can be exercised without stress, which may be negative for a good professional development. Day and Leitch (2001) highlight the importance of how positive and negative emotions, generated in educational institutions, affect teachers' self-esteem and professional development.

The third type of affective rating related to teaching is "emotions related to the performance of teaching". Kelchtermans (1993, p. 449) calls this aspect "task perception", which refers to the way teachers define their job. Conway and Clark (2003) reported that teachers highlight positive personal relationships, being a member of a team and Center, and friendly emotional climate in labor relations. According Hamman, Gosselin, Romano, and Bunuan (2010), in this type of rating, related to the performance of teaching, included two categories: classroom management (how one orchestrates the matters of discipline, student behavior or classroom procedures), and instructional strategies (the use of strategies, the focus of instruction, or instructional process). Sutton et al. (2009) explained in detailed the relationships among teachers' emotions, classroom management, and teaching practice.

Conclusions

In this research we have tried to identify different groups of affective ratings associated with emotions about university teaching. As we have noted, while the research literature related to teachers' emotions about their teaching is broad; specific studies about teachers' emotions about their teaching are scarce (Postareff & Lindblom-Ylänne, 2011).

The three affective ratings related to teaching, shown in the findings section, have strong connections with other previous theoretical classifications. For example, with the three components that Kelchtermans (1993) introduced into the characterization of retrospective professional self:

self-esteem, job motivation and task perception. These three components try to answer three complementary interrogations: *What are the motives that move me to devote myself to the activity of teaching? How good am I as a teacher? and what's my job as a teacher?* Positive or negative scores obtained by the differential semantics can be very useful to characterize the affective aspect, and also the degree of emotional intensity, of each of the three "retrospective self professional" components.

Exploratory evidences about the relationship of the three types of teacher's feelings and the two types of teaching approaches are consistent with the findings obtained recently by Postareff and Lindblom-Ylänne (2011). According to these authors, "teachers with consonant learning-focused profiles had the most positively charged emotions regarding teaching. However, those with consonant content-focused profiles had neutral or negative feelings about teaching and about the development of teaching." (2011, p. 799).

Data obtained can also be interpreted taking into account the specific situation of Latin America Higher Education. Some authors (Bernasconi, 2007; Brunner, 2008) draw a negative situation for university teaching in this area: learning-oriented teaching methods and content knowledge acquisition are currently the main aims of teaching, not the acquisition of competencies. The same authors also indicate other problems for the Faculty: motivational problems, existence of a lot of part-time teachers, lack of competencies on research, and co-existence of many teachers that are not committed to the university. Our results partially contradict some of these arguments related to problems for the Faculty. While teachers in the sample obtained high levels of motivation to teaching and positive self-evaluation as teachers, they also believed that teaching was rather a demanding, difficult, or complex task.

This study has some important limitations. First, findings should be viewed only as an exploration of the internal structure and cross-referencing of a semantic differential scale developed to assess university teachers' emotions about their teaching. Second, we present an exploratory factor analysis

that accounts for about fifty percent of the observed variance. Certainly, further items may be developed and included in future investigations, and greater sample sizes would be required to extend the exploratory results presented here. Finally, different populations of Latin American countries may be considered in order to address how different cultural factors could influence the internal structure of teachers' feelings about their teaching.

Nevertheless, we believe that this classification can be useful in the future in two types of complementary research related to the teachers' professional identity. On the one hand, this scale in revised versions of the "Teacher's Identity" questionnaire may be included, and the relationship of these three affective ratings with other identity components such as the teachers' roles and conceptions of teaching and learning may be explored. On the other hand, the results of this paper will also be useful to prepare semi-structured interviews, collecting new data on the identity of university teachers, especially concerning the affective dimension of their teaching.

References

- Akkerman, S. F., & Meijer, P. C. (2010). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education*, 27(2), 308-319.
- Bechini, A. (1986). *El diferencial semántico. Teoría y práctica*. Barcelona: Hispano Europea.
- Bernasconi, A. (2007). Is there a Latin American model of the university? *Comparative Education Review*, 52(1), 27-52.
- Brunner, J. J. (2008). The Bologna Process in the Latin American horizon: Limits and possibilities [Special issue]. *Revista de Educación*, 119-145.
- Burke, P. J., & Stets, J. E. (2009). *Identity theory*. New York: Oxford University Press.
- Conway, P. F., & Clark, C. M. (2003). The journey inward and outward: A re-examination of Fuller's concerns-based model of teacher development. *Teaching and Teacher Education*, 19(5), 465-482.
- Daley, D., Renyard, L., & Sonuga-Barke, J. S. (2005). Teachers' emotional expression about disruptive boys. *British Journal of Educational Psychology*, 75(1), 25-35.
- Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Avon Books.
- Darby, A. (2008). Teachers' emotions in the reconstruction of professional self-understanding. *Teaching and Teacher Education*, 24(5), 1160-1172.
- Day, C., & Kington, A. (2008). Identity, well-being and effectiveness: The emotional contexts of teaching. *Pedagogy, Culture & Society*, 16(1), 7-23.
- Day, C., & Leitch, R. (2001). Teachers' and teacher educators' lives: The role of emotion. *Teaching and Teacher Education*, 17(4), 403-415.
- Demetriou, H., & Wilson, E. (2009). Synthetising affect and cognition in teaching and learning. *Social Psychology of Education*, 12(2), 213-232.
- Ezer, H., Gilat, I., & Sagee, R. (2010). Perception of teacher education and professional identity among novice teachers. *European Journal of Teacher Education*, 33(4), 391-404.
- Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education*, 22(2), 219-232.
- Hamman, D., Gosselin, K., Romano, J., & Bunuan, R. (2010). Using possible-selves theory to understand the identity development of new teachers. *Teaching and Teacher Education*, 26(7), 1349-1361.
- Hargreaves, A. (1998). The emotions of teaching and educational change. In A. Hargreaves, A. Lieberman, M. Fullan & D. Hopkins (Eds.), *International handbook of educational change* (Part 1, pp. 558-575). Dordrecht, The Netherlands: Kluwer.
- Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16(8), 811-826.
- Hermans, H. J. M., & Hermans-Konopka, A. (Eds.). (2010). *Dialogical self theory: Positioning and counter-positioning in a globalizing society*. Cambridge, UK: Cambridge University Press.
- Hong, J. Y. (2010). Pre-service and beginning teachers' professional identity and its relation to dropping out of the profession. *Teaching and Teacher Education*, 26(8), 1530-1543.
- Kelchtermans, G. (1993). Getting the story, understanding the lives: From career stories to teachers'

- professional development. *Teaching and Teacher Education*, 9(5-6), 443-456.
- Kelchtermans, G. (1996). Teacher vulnerability: Understanding its moral and political roots. *Cambridge Journal of Education*, 26(3), 307-323.
- Kelchtermans, G. (2005). Teachers' emotions in educational reforms: Self-understanding, vulnerable commitment and micropolitical literacy. *Teaching and Teacher Education*, 21(8), 995-1006.
- Kemper, T. D. (1978). *A social interactional theory of emotions*. New York: John Wiley.
- Lasky, S. (2005). A sociocultural approach to understanding teacher identity, agency and professional vulnerability in a context of secondary school reform. *Teaching and Teacher Education*, 21(8), 899-916.
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819-834.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
- Lenno, G. W. (2006). *Electronic portfolios as high-stakes assessments of teacher candidates: A semantic differential of the California State University teacher education faculty*. ProQuest Dissertations & Theses (PQDT).
- Lindblom-Ylänne, Trigwell, K., Nevgi, A., & Ashwin, P. (2006). How approaches to teaching are affected by discipline and teaching context. *Studies in Higher Education*, 31(3), 285-298.
- Linnenbrink, E. A. (2006). Emotion research in education: Theoretical and methodological perspectives on the integration of affect, motivation and cognition. *Educational Psychology Review*, 18(4), 307-314.
- López, F. (2009). Trends of Higher Education worldwide and in Latin America and the Caribbean. In F. López, C. Brock & J. Sobrinho (Eds.), *Higher Education in Latin America and the Caribbean* (pp. 13-29). Caracas: UNESCO International Institute for Higher Education in Latin America and the Caribbean.
- Martin, E., & Lueckenhausen, G. (2005). How university teaching changes teachers: Affective as well as cognitive challenges. *Higher Education*, 49(3), 389-412.
- McDowell, E. (1975). The semantic differential as a method of teacher evaluation. *Journal of Educational Research*, 68(9), 330-332.
- Osgood, Ch. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning*. Urbana: University of Illinois Press.
- Peirce, C. S. (1931-1935). *Collected papers of Charles Sanders Peirce* (Vols. 1-6). Cambridge, MA: Harvard University Press.
- Postareff, L., & Lindblom-Ylänne, S. (2011). Emotions and confidence within teaching in higher education. *Studies in Higher Education*, 36(7), 799-813.
- Prosser, M., & Trigwell, K. (2006). Confirmatory factor analysis of the Approaches to Teaching Inventory. *British Journal of Educational Psychology*, 76(2), 405-419.
- Ramsden, P., Prosser, M., Trigwell, K., & Martin, E. (2007). University teachers' experiences of academic leadership and their approaches to teaching. *Learning and Instruction*, 17(2), 140-155.
- Reio, T. G. (2005). Emotions as a lens to explore teacher identity and change: A commentary. *Teaching and Teacher Education*, 21(8), 985-993.
- Ria, L., Seve, C., Saury, J., Theureau, J., & Durand, M. (2003). Beginning teachers' situated emotions: A study of first classroom experiences. *Journal of Education for Teaching*, 29(3), 219-233.
- Russell, J. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110(1), 145-172.
- Schmidt, M., & Datnow, A. (2005). Teachers' sense-making about comprehensive school reform: The influence of emotions. *Teaching and Teacher Education*, 21(8), 949-965.
- Schutz, P. A., Aultman, L. P., & Williams-Johnson, M. R. (2009). Educational psychology perspectives on teachers' emotions. In P. A. Schutz & M. Zembylas (Eds.), *Advances in teacher emotion research: The impact on teachers' lives* (pp. 195-212). Dordrecht, The Netherlands: Springer.
- Schutz, P. A., Hong, J. Y., Cross, D. I., & Osbon, J. N. (2006). Reflections on investigating emotion in educational activity settings. *Educational Psychology Review*, 18(4), 343-360.
- Shapiro, S. (2010). Revisiting the teachers' lounge: Reflections on emotional experience and teacher

- identity. *Teaching and Teacher Education*, 26(3), 616-621.
- Shepard, L. A. (1993). Evaluating test validity. *Review of Research in Education*, 19(1), 405-450.
- Shoffner, M. (2009). The place of the personal: Exploring the affective domain through reflection in teacher preparation. *Teaching and Teacher Education*, 25(6), 783-789.
- Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory Into Practice*, 48(2), 130-137.
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review*, 15(4), 327-358.
- Teixeira, F., & Fleury, E. (2003). How emotions shape the relationship between a chemistry teacher and her high school students. *International Journal of Science Education*, 25(9), 1095-1110.
- Trigwell, K., & Prosser, M. (2004). Development and use of the approaches to teaching inventory. *Educational Psychology Review*, 16(4), 409-424.
- Trigwell, K., Prosser, M., & Taylor, P. (1994). Qualitative differences in approaches to teaching first year university science. *Higher Education*, 27(1), 75-84.
- Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J. M., & Barber, L. K. (2010). Exploring the association between teachers' perceived student misbehaviour and emotional exhaustion: The importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology*, 30(2), 173-189.
- Van Veen, K., & Slegers, P. (2006). How does it feel? Teachers' emotions in a context of change. *Journal of Curriculum Studies*, 38(1), 85-111.
- Van Veen, K., Slegers, P., & van de Ven, P. (2005). One teacher's identity, emotions, and commitment to change: A case study into the cognitive-affective processes of a secondary school teacher in the context of reforms. *Teaching and Teacher Education*, 21(8), 917-934.
- Vloet, K. (2009). Career learning and teachers' professional identity: Narratives in dialogue. In M. Kuipers & F. Meijers (Eds.), *Career learning. Research and practice in education* (pp. 69-84). Hertogenbosch, The Netherlands: Euro-guidance.
- Vloet, K., & Van Swet, J. (2010). "I can only learn in dialogue!" Exploring professional identities in teacher education. *Professional Development in Education*, 36(1-2), 149-168.
- Winograd, K. (2003). The functions of teacher emotions: The good, the bad, and the ugly. *Teachers College Record*, 105(9), 1641-1673.
- Zembylas, M. (2003). Emotions and teacher identity: A poststructural perspective. *Teachers and Teaching: Theory and Practice*, 9(3), 213-238.
- Zembylas, M. (2005a). Discursive practices, genealogies, and emotional rules: A poststructural view on emotion and identity in teaching. *Teaching and Teacher Education*, 21(8), 935-948.
- Zembylas, M. (2005b). Beyond teacher cognition and teacher beliefs: The value of the ethnography of emotions in teaching. *International Journal of Qualitative Studies in Education*, 18(4), 465-487.
- Zembylas, M. (2007). Theory and methodology in researching emotions in education. *International Journal of Research & Method in Education*, 30(1), 57-72.