

# Burnout and Competency Development in pre-Service Teacher Training

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## Abstract

**Introduction.** The burnout syndrome negatively affects the students' academic performance. The relation between academic burnout and the self-perception of skills in initial teacher training is subjected to analysis.

**Method.** A sample of 274 students (average age= 20,61 years old) from the Bachelor Degree in Early Childhood Education and the Bachelor Degree in Primary Education were involved in the study by filling in the Skills development in the Teaching Training programme questionnaire and the burnout MBI-SS scale. The questionnaire was administered anonymously, voluntarily and individually. Mean scores on both questionnaires through T Students and ANOVA were compared.

**Results.** The group of students with a higher burnout level presented lower levels of self-perception in the development of their skills. Only one dimension of burnout, efficacy, was positively associated with self-perception of the skills' development.

**Discussion and Conclusion.** It becomes clear the need to carry out a training work that stimulates the acquisition and self-perception of personal and systemic-contextual skills.

**Keywords:** Burnout, skills, initial training, teacher, efficacy.

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# ***Burnout* y Desarrollo de Competencias en la Formación Inicial de Maestros**

## **Resumen**

**Introducción.** El síndrome de *burnout* afecta negativamente al rendimiento académico. Se somete a estudio la relación entre *burnout* académico y la auto-percepción del desarrollo de competencias durante la formación inicial de maestros.

**Método.** Una muestra de 274 estudiantes (edad media = 20.61 años) de los Grados de Educación Infantil y Primaria participaron cumplimentando un cuestionario ad hoc *sobre autopercepción de competencias* y la escala de *burnout* MBI-SS. El cuestionario se administró anónima, voluntaria e individualmente. Se comparan puntuaciones medias obtenidas en ambos cuestionarios a través de T de Students y ANOVA.

**Resultados.** El grupo con alto nivel de *burnout* presenta niveles más bajos de auto-percepción en el desarrollo competencias. Solo una dimensión del burnout, eficacia, se asociaba positivamente con la auto-percepción del desarrollo de competencias.

**Discusión y conclusiones.** Se infiere la necesidad de realizar un trabajo formativo que estimule el desarrollo y la auto-percepción de las competencias personales y sistémico/contextuales.

**Palabras Clave:** *Burnout*, competencias, formación inicial, maestro, eficacia.

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## Introduction

University education in recent years orients the undergraduate's effort toward developing competencies. Different research studies have concluded that diverse factors may negatively influence university students' performance. Among these factors is student stress (Caballero, Hederich & Palacio, 2010). One of its consequences, burnout from academic activities (González & Landero, 2007), negatively influences teaching-learning processes, and consequently, academic performance. However, this line of study that relates stress and student burnout with academic performance, has not addressed academic performance in the sense of competency development.

A separate line of study has recently investigated the development of *competencies*. This line has been oriented more toward the study of competency profiles and their development (Castejón, Cantero & Pérez, 2008), both in pre-professionals in their initial university-level training (e.g. Sáiz & Román, 2011; Villardón-Gallego, Yániz, Achurra, Iraurgi & Aguilar, 2013), and in in-service teachers (e.g., Pérez-Escoda, Filella, Alegre & Bisquerra, 2012; Valdivieso, Carbonero & Martín-Antón, 2013). Some of these research studies conclude that self-assessment of competencies is the appropriate procedure for evaluating the subject's performance (Pena, Rey & Extremera, 2012; Valdivieso et al., 2013).

Given the existing gap in the scientific research literature on possible relations between academic burnout and competency development in university students, the present study focuses on these possible relationships in order to progress in our knowledge.

### *Academic burnout*

Student burnout from academic activity began to be investigated from the theoretical model of professional burnout in earlier studies (Gil-Monte & Peiró, 1999; Schaufeli, Leiter, Maslach & Jackson, 1996; Maslach & Jackson, 1981); in some cases, studies specifically addressed in-service teaching in Early Childhood and Primary Education (Arís, 2009). Academic burnout is described as feeling exhausted from the demands of study; possessing a critical, indifferent attitude toward study; and feeling incompetent as a student (Schaufeli, Martínez, Marques, Salanova & Bakker, 2002; Schaufeli, Salanova, González-Romá, & Bakker, 2002). The construct of academic burnout is composed of three dimensions –exhaustion, cynicism

and efficacy—as reflected in the factors used to measure burnout in the Maslach Burnout Inventory-Student Survey (MBI-SS).

In recent years, several research studies address the study of academic burnout in pre-occupational samples using the MBI-SS scale (Bresó, Salanova & Schaufeli, 2007; Fontes de Oliva, Andrade, Rodrigues de Abreu, Vieira & Matos, 2012; Salanova, Martínez, Bresó, Llorens & Grau, 2005; Schaufeli, Salanova et al., 2002). This scale is considered to be useful for early detection of typical signs of this syndrome, and for promoting early interventions that redirect students toward academic success.

A student is experiencing burnout when the MBI-SS scale shows high scores in exhaustion and cynicism, and low scores in efficacy (Salanova, Martínez et al. 2005; Schaufeli, Martínez et al., 2002). Efficacy has been considered by some studies to be fundamental to the burnout process, explaining this phenomenon as a crisis in efficacy (Salanova, Bresó & Schaufeli, 2005; Salanova, Cifre, Grau, Llorens & Martínez, 2005) and that efficacy is an important predictor of academic burnout (Durán, Extremera, Rey, Fernández-Berrocal & Montalbán, 2006; Salanova, Martínez & Llorens, 2012; Schwarzer & Hallum, 2008). There is therefore a negative relationship between the dimension of perceived efficacy and burnout.

In the last decade, some research has studied the relationship between academic burnout in students, and other variables such as academic performance (Salanova, Martínez et al., 2005), performance in terms of success expectations (Manzano, 2002), and professional development (Martínez & Salanova, 2003). There are noteworthy findings from Salanova, Martínez et al. (2005), who detected significant relationships between psychological well-being and academic performance, observing that better academic performance is accompanied by less exhaustion, and greater efficacy, vigor, dedication, self-efficacy, happiness and satisfaction with studies. However, very little is known about the relationship between academic burnout in students and the acquisition and development of competencies that university graduates should have upon completion of their studies.

### *Self-efficacy in university students*

Since the decade of the 1970s, when Bandura (1977) introduced the concept of *self-efficacy*, there are more and more research studies that have studied the role of self-efficacy in the student's academic and personal development (Bandura, 2012; Cho & Serena, 2013; Gon-

zález, Donolo, Rinaudo & Paolini, 2011). In Socio-Cognitive Theory, self-efficacy is understood as “beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1997, p. 2), affecting one’s behavior, motivation and perseverance in achieving one’s objectives (Hultell, Melin & Gustavsson, 2013). Self-perception of one’s capabilities is one factor that affects cognitive processing of information about one’s own performance, and being aware of these effects allows us to understand the conditions wherein people can best take advantage of their mastery experiences (Salanova et al., 2012). University students are considered to have self-efficacy if they have security and confidence in their ability to cope with and carry out the academic tasks and activities that are assigned to them (García-Ros & Pérez-González, 2011).

Changes in self-efficacy are strongly tied to changes in states of well-being, such as burnout and engagement. When students experience negative thoughts about the capabilities they possess, they can develop a lower perception of these capabilities, which in turn reinforces the likelihood that the feared inadequate performance will actually come about (Bresó, Schaufeli, & Salanova, 2011). However, when one makes a positive self-observation about his or her own competencies, that person promotes a self-motivating mechanism that enables them to reach higher levels of self-efficacy (Caballero et al. 2010).

Numerous studies support the importance of personal resources for managing and coping with internal and external demands in stressful situations (Cho & Serena, 2013; Durán et al., 2006). The person who feels that he or she has no possibility of reaching a goal will not invest resources for that purpose, nor will many resources be invested when a goal is easily reachable with little investment (Beck & Schmidt, 2012). Malinen et al. (2013) add that individuals who experience easy success always expect quick results and are easily discouraged when faced with any difficulty. On the other hand, people with greater self-efficacy usually invest more resources (Beck & Schmidt, 2012), more effort, time, persistence; they recover quickly from setbacks and maintain their commitment to their objectives (Schwarzer & Hallum, 2008), thereby achieving better performance than persons with lower self-efficacy.

### *Competency development in university students*

Research on competency development in university students has been emerging in recent years (Beneitone et al., 2007; de la Fuente, Justicia, Casanova & Trianes, 2005; Palmer, Montañó & Palou, 2009; Pertegal-Felices, Castejón-Costa & Martínez, 2011; Shen-Miller,

2012), based on the idea that resources obtained at this stage will serve as a foundation for ongoing development, in this case, for teachers (Palomera, Fernández-Berrocal & Brackett, 2008). Caballero et al. (2010) affirm that many students manage to correctly develop competencies, but others have great difficulties in higher education, possibly leading to “academic mortality”. According to these authors, without adequate strategies for facing academic demands, the stress load that students bear may lead to *feelings of incompetence*. In the same way, it may provoke escape behaviors as an inappropriate way of coping in order to resolve the conflict (Gustems & Calderón, 2014). Along these lines, Martínez and Salanova (2003) state that a lack of competence and efficacy, the appearance of negative feelings of inadequacy and a decrease in personal expectations may lead to negative self-assessment and to feelings of failure and low self-esteem.

Current undergraduate study plans in the EHEA are oriented toward acquisition of several types of competencies. Some of the most important ones come under the headings of “generic/cross-curricular” or “specific” (ANECA, 2005; González & Wagenaar, 2003). Generic or cross-curricular competencies are common to all degrees, in other words, every university student should acquire them regardless of the program they are enrolled in (ANECA, 2005). Among the generic or cross-curricular competencies there are instrumental, personal and systemic competencies (González & Wagenaar, 2003). On the other hand, specific competencies are those that pertain to the different university degree programs. In the case of the teaching profession, specific competencies are described in the *Libro Blanco de Magisterio* [White Book on Early Childhood and Primary Education] (ANECA, 2005). These specific competencies are common to all teachers, regardless of their specialization.

### *Objectives and hypotheses*

A review of the scientific literature on academic burnout in students and the competency orientation of Higher Education (both cross-curricular and specific competencies) leads to the question of how these aspects may be related to each other. For this purpose, we studied students’ self-perception of their development of cross-curricular and specific competencies, measured their levels of academic burnout, and studied possible differences in their self-perceived competency development as a function of their level of burnout. It was expected that students who present a high level of burnout syndrome will present lower self-perception

of competency development, whether cross-curricular or specific, when compared to students with a lower level of burnout.

## Method

### *Participants*

The base population was composed of 437 students enrolled in the second year of undergraduate programs in Early Childhood and Primary Education, in the Faculty of Educational Sciences at the University of Cordoba (Spain), academic year 2011-12. Actual study participants were 274 students (81.4% women), of which 129 were enrolled in the Early Childhood specialization (47.1%) and 145 in the Primary specialization (52.9%). Subjects' age ranged from 18 to 40 years ( $M = 20.61$  years;  $S.D. = 3.169$ ). A sampling error of 4% was assumed for a confidence level of 97%.

### *Instruments*

The *Maslach Burnout Inventory-Student Survey* (MBI-SS; Schaufeli, Martínez et al., 2002; Schaufeli, Salanova et al., 2002) was used to assess the degree of burnout experienced by the student. The instrument comprises three dimensions. The dimension of *exhaustion* (5 items;  $\alpha = .863$ ; e.g.: "I'm emotionally exhausted from doing this degree program"), of *cynicism* (4 items;  $\alpha = .790$ ; e.g.: "I have lost interest in the degree since I started my university studies") and of *efficacy* (6 items;  $\alpha = .752$ ; e.g.: "I think that I make effective contributions during class"). The set of items that make up the dimensions are presented on a Likert scale with scores that range from 0 (*Never*) to 6 (*Every day/Always*).

Another questionnaire was also used to gather data on: (a) socio-demographic and academic data; (b) the cross-curricular or generic competencies selected by the ANECA in the White Book on the Primary/ECE degree program (ANECA, 2005), drawn from the Tuning Project (González & Wagenaar, 2003); and (c) specific competencies from the White Book on the Primary/ECE degree program that are common to all its specializations (ANECA, 2005). The two competency lists can be consulted in Figures 1 and 2. Each student rated his or her own degree of competency development on a Likert scale from 0 (not being developed) to 6 (being developed very much).



<i>Instrumental</i>	TI1. Analysis and synthesis
	TI2. Organization and planning
	TI3. Oral and written communication in my native language
	TI4. Expressing myself in a foreign language
	TI5. Using computer knowledge related to my sphere of study
	TI6. Managing information
	TI7. Problem solving
	TI8. Decision making
<i>Personal</i>	TP9. Working in a team
	TP10. Working in an interdisciplinary team
	TP11. Working in an international context
	TP12. Interacting with other people
	TP13. Recognizing diversity and multi-culturality
	TP14. Critical reasoning
	TP15. Ethical commitment
<i>Systemic</i>	TS16. Autonomous learning
	TS17. Adapting to new situations
	TS18. Creativity
	TS19. Leadership
	TS20. Knowing other cultures and customs
	TS21. Taking the initiative and showing an entrepreneurial spirit
	TS22. Promoting quality
	TS23. Being sensitive to environmental topics.

**Figure 1. Cross-curricular competencies**

<i>Knowing</i>	ES1. Understanding the complexity of educational processes and of teaching-learning processes
	ES2. Knowing the content that must be taught and how to teach it
	ES3. Scientific-cultural and technological training
<i>Knowing how</i>	ESH4. Respecting cultural and personal differences among students and other members of the educational community
	ESH5. Analyzing and questioning the curriculum proposals from the Educational Authority
	ESH6. Designing and developing educational projects and unit lesson plans that adapt the curriculum to the sociocultural context
	ESH7. Promoting students' autonomous learning, developing strategies that help prevent exclusion and discrimination

ESH8. Organizing my own teaching by integrating the use of single-discipline, cross-curriculum and multi-disciplinary knowledge, appropriate to the educational level

ESH9. Preparing, selecting or constructing teaching materials and using them in the specific framework of the different disciplines

ESH10. Adequate use and incorporation of information and communication technology in teaching-learning activities.

ESH11. Promoting quality in the contexts in which the educational process takes place.

ESH12. Using assessment as a regulating element that promotes improvement in teaching, learning and my own development.

ESH13. Carrying out educational support activities within the framework of inclusive education

ESH14. Fulfilling the function of mainstream teacher, giving guidance to students and their parents, and coordinating all educational activities for my group of students

ESH15. Participating in research projects related to teaching-learning

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<i>Knowing how to relate</i>	ESE16. Interacting, expressing myself and keeping emotional balance in all situations
	ESE17. Working with my colleagues as a team, sharing knowledge and experiences
	ESE18. Acting as a facilitator with the students in order to participatively set up rules for living together democratically; collaboratively facing and solving problem situations and various types of interpersonal conflicts
	ESE19. Collaborating with the different sectors of the educational community and the environs

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<i>Knowing how to be</i>	ESS20. Having a realistic image of myself, acting according to my own convictions, taking on responsibilities, making decisions and playing down possible frustrations.
	ESS21. Adopting the ethical dimension of teacher, encouraging students to have a critical, responsible civic attitude.
	ESS22. Stimulating students' academic performance and their scholastic progress, within the framework of whole-person education
	ESS23. Accepting the need for ongoing professional development, through self-assessment of my own teaching practice

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**Figure 2. Specific competencies**

### *Procedure*

The questionnaires were distributed in November 2011, during class hours, with teacher consent. The participants, all of them over the age of 18, were informed of the confidential treatment of any data they provided, and afterward they gave their responses anonymously, individually and voluntarily. Questionnaire completion in every case lasted between 15-20 minutes.

### *Statistical Analyses*

SPSS 15.0 was used to create a data matrix and to carry out descriptive and comparative statistical analyses. Means and their respective standard deviations of students' perceived degree of competency development were studied.

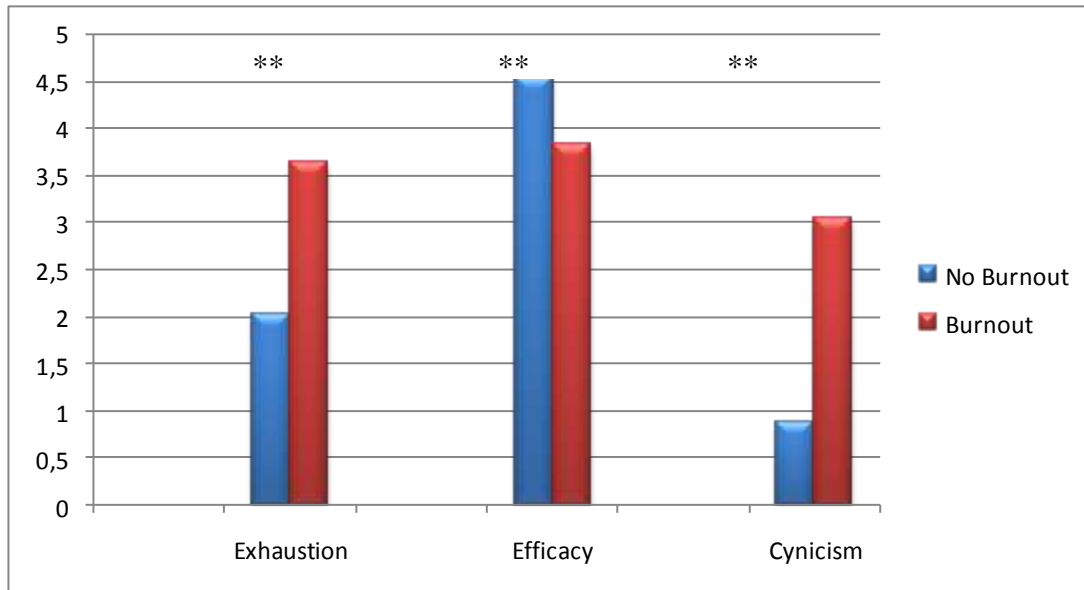
A two-phase cluster analysis enabled us to divide the sample into groups, depending on: (a) degree of competency development; and (b) level of *burnout*. Cluster analysis was used to determine the difference between those experiencing burnout and a "no burnout" group, since the scores did not allow us to establish cut-off points for high, medium and low levels of burnout. In both cases, the method of maximum similitude was used for measuring the distance, as well as the Bayesian information criterion (BIC) by Schwarz.

Student's *t* test and ANOVA statistics were used to check for differences between the mean scores of the different groups. Regarding the *t* tests for independent samples, we used the Levene test as a criterion for whether to accept the variances as equal or not. Post hoc analyses were carried out in the case of the ANOVAs, in order to determine which groups showed significant differences from each other; these were based on the statistics of Tukey-b (when equal variances were assumed) and Games-Howell (when equal variances were not assumed). The confidence level applied was 95% ( $p < .05$ ) or 99% ( $p < .01$ ), as appropriate.

## **Results**

### *Differences based on burnout*

Cluster analysis was performed in two phases in order to determine whether there were different groups of students as a function of the responses given on *MBI-SS* (Schaufeli, Martínez et al., 2002; Schaufeli, Salanova et al., 2002). The sample was divided into two groups (see Figure 3), one formed of 84 students experiencing burnout (30.7%), and another formed of 190 students labeled "no burnout" (69.3%). The first group was thus labeled because they presented higher scores than the second group for the variables of *exhaustion* and *cynicism* and lower scores in *efficacy*, all these differences being statistically significant.



\*  $p < .05$ ; \*\*  $p < .01$

**Figure 3. Comparison of scores between the “burnout” and “no burnout” groups, by dimension**

*Differences in perception of general competencies*

Significant differences were found ( $p < .05$ ) between the “burnout” and “no burnout” groups through the *t* test for independent samples, in their perceived development of eleven cross-curricular competencies (see Table 1) and six specific competencies (see Table 2), always in favor of greater estimated competency development in the “no burnout” group as compared to the “burnout” group.

**Table 1. Significant differences in self-perception of cross-curricular competency development between “burnout” and “no burnout” students.**

	Group	Mean	S.D.	<i>t</i> test for equality of means						
				<i>t</i>	df	<i>p</i>	Diff. means	Typical error of the diff.	95% Confidence Interval for the difference	
								Lower	Higher	
TI2	No burnout	4.57	(.991)	2.835	266	.005	.375	.132	.115	.635
	Burnout	4.20	(1.01)							
TI5	No burnout	4.37	(1.102)	2.668	268	.008	.410	.154	.108	.713
	Burnout	3.96	(1.301)							
TP9	No burnout	5.24	(.802)	2.992	128.380	.003	.380	.127	.129	.631
	Burnout	4.86	(1.026)							
TP10	No burnout	4.48	(1.204)	2.362	263	.019	.371	.157	.062	.681
	Burnout	4.11	(1.133)							

TP12	No burnout	5.23	(.919)	2.490	128.271	.014	.362	.146	.074	.651
	Burnout	4.87	(1.177)							
TP13	No burnout	5.15	(1.126)	2.185	267	.030	.320	.147	.032	.609
	Burnout	4.83	(1.063)							
TP15	No burnout	4.91	(1.010)	3.002	265	.003	.419	.140	.144	.694
	Burnout	4.49	(1.152)							
TS17	No burnout	4.77	(1.016)	2.440	269	.015	.325	.133	.063	.588
	Burnout	4.45	(1.003)							
TS21	No burnout	4.52	(1.158)	2.249	269	.025	.341	.151	.042	.639
	Burnout	4.18	(1.128)							
TS22	No burnout	4.53	(1.140)	2.098	269	.037	.322	.153	.020	.624
	Burnout	4.20	(1.217)							
TS23	No burnout	4.67	(1.174)	1.952	268	.050	.317	.162	-.003	.636
	Burnout	4.35	(1.337)							

**Table 2. Significant differences in self-perception of specific competency development between “burnout” and “no burnout” students.**

Group	Mean	S.D.	t test for equality of means							
			t	df	p	Diff. means	Typical error of the diff.	95% Confidence Interval for the difference		
								Lower	Higher	
ES1	No burnout	4.57	(.890)	2.073	269	.039	.244	.118	.012	.475
	Burnout	4.33	(.899)							
ESH4	No burnout	5.35	(.855)	3.648	116.290	.000	.556	.152	.254	.858
	Burnout	4.80	(1.266)							
ESE16	No burnout	4.71	(1.071)	2.244	133.899	.026	.363	.162	.043	.684
	Burnout	4.35	(1.292)							
ESE17	No burnout	5.08	(.970)	2.323	127.950	.022	.357	.154	.053	.661
	Burnout	4.72	(1.243)							
ESE19	No burnout	4.35	(1.297)	2.177	268	.030	.358	.164	.034	.682
	Burnout	3.99	(1.105)							
ESS20	No burnout	4.74	(1.039)	2.784	128.056	.006	.452	.162	.131	.773
	Burnout	4.29	(1.300)							

### *Differences in the perception of cross-curricular and specific competencies*

The scores obtained on cross-curricular competencies made it possible to classify students into two groups which were differentiated through the two-phase cluster analysis. The

first group of subjects presented a very high level of perceived competency development, and was made up of 128 subjects (49.6%); the second group had a noticeably lower level of perceived competency development, and contained 130 subjects (50.4%). Regarding self-perception of specific competency development as expressed by scores, students were also classified by another two-phase cluster analysis, resulting in three groups. The first group, having a high level, was composed of 126 subjects (47.7%); the second group, with a medium level, contained 104 subjects (39.4%); and third, low-level group contained 34 subjects (12.9%).

In order to check for differences in the dimensions of burnout between the group that considered themselves more developed in cross-curricular competencies and the group that considered themselves less developed, *t* tests for independent samples were carried out. Statistically significant differences were found only for the dimension of *efficacy* ( $t_{258} = 3.331$ ,  $p < .01$ ) and were not detected for either *exhaustion* ( $t_{258} = -1.795$ ,  $p > .05$ ) or *cynicism* ( $t_{258} = -1.311$ ,  $p > .05$ ).

Regarding self-perception of specific competency development, classified into three levels (high, medium and low), an ANOVA was performed in order to check for differences between the three groups with regard to the dimensions of burnout. Again, statistically significant differences were found only in the dimension of *efficacy* [ $F(2, 261) = 3.402$ ,  $p < .05$ ]. The post-hoc tests did not detect which groups were responsible for the differences.

## Discussion and Conclusions

As expected, a high level of academic burnout showed a clear relationship with low levels of self-perceived competency development. In contrasting the perceived degree of competency development between student groups with high vs. low/null levels of burnout, whenever significant differences were found, the high burnout group had the poorer perception. This result was seen in eleven of the 23 generic or cross-curricular competencies, and in six of the 23 specific competencies.

In two of the three dimensions of academic burnout—*exhaustion* and *cynicism*—no significant differences were observed when comparing the levels (high vs. low) of cross-curricular and specific competency development. However, significant differences were found

with regard to the *efficacy* dimension, which some researchers consider to be the main factor in burnout (Martínez & Salanova, 2003; Salanova, Cifre, et al., 2005), or an important predictor thereof (Schwarzer & Hallum, 2008). A positive connection was observed between the self-estimated levels of competency and efficacy, a fact which concurs with conclusions from certain previous studies (e.g., Salanova, Bresó et al., 2005).

While the results of the present study, due to its design, do not allow us to express the direction of the relationship found between competency development and academic burnout – whether the first produces the second or vice versa – there is no discrepancy with results from the studies by Hultell et al. (2013), Bresó et al. (2011) or Caballero et al. (2010). These studies, supported by Socio-Cognitive Theory, conclude that the competency crisis may have a negative impact on the subject's self-perceived efficacy, giving rise to the development of burnout. Considering the direction of this relationship described by some researchers, who state that the efficacy crisis is inextricably identified with burnout (García-Renedo, Llorens, Cifre & Salanova, 2006; Salanova, Cifre et al., 2005), and considering that self-efficacy leads to academic success (García-Ros & Pérez-González, 2011; Salanova et al., 2012), we feel that development of strategies that would have a positive impact on the learner's self-efficacy could be especially effective in reversing or preventing burnout, and for improving students' academic performance. These strategies could be therapeutic and/or educational.

#### *Implications for intervention*

Among the possible *therapeutic* strategies from recent years, there is evidence on the effectiveness of cognitive-behavioral intervention programs. For example, the study by Bresó et al. (2011) shows positive results in reducing anxiety and in increasing self-efficacy, through the work of a therapist in developing emotional competencies in the university students, reducing their feelings of incompetence and their text anxiety. With this purpose in mind, the program focused on students' intolerance of uncertainty, erroneous beliefs about their worries, lack of orientation toward problems, and cognitive avoidance.

*Educational* strategies for reversing or preventing burnout and for improving academic performance would focus on improving the learner's competency development as well as on improving his/her self-perception of these competencies. However, this inference leads to a new question: what types of competencies should this work focus on? The results of the present study can make a start in answering this question, especially in regard to students in teacher training.

The relationship between low competency development and greater level of burnout, within the *cross-curricular* competencies, was observed more in the personal competencies (in five of seven: TP9, TP10, TP12, TP13 and TP15) and systemic competencies (in four of eight: TS17, TS21, TS22 and TS23) than in instrumental competencies (in two of eight: TI2 and TI5). Burnout thus seems to be more strongly connected with negative self-assessment of aptitudes and attitudes of the following subtypes: interpersonal, such as ethical commitment and recognizing diversity and multi-culturality; and (b) interpersonal, such as interaction with others and teamwork (in one's discipline, or interdisciplinary). Burnout was also observed in closer association with a low competency level in the subject's relationship to the system/context, such as adapting to new situations, taking the initiative, entrepreneurship, and promoting quality.

The relationship between low *specific* competency development in pre-service teachers and a higher level of burnout appeared once again in personal and systemic/contextual competencies. The specific competencies of a personal type are: intrapersonal, such as having a realistic image of myself, acting according to my own convictions, taking on responsibilities, decision making and playing down possible frustrations; and (b) interpersonal, such as interacting, expressing myself and maintaining emotional balance, and working as a team with colleagues, sharing knowledge and experiences. The specific competencies that seem related to the system/context are: understanding the complexity of educational processes and of teaching-learning processes; (b) respecting cultural and personal differences among the students and other members of the educational community; and (c) collaborating with the different sectors of the educational community and the environs. Through the results obtained in their studies, Pérez-Escoda et. al. (2012) supported the idea that educational systems should incorporate programs that seek to develop emotional competencies, thus encouraging students' personal and social well-being.

Some recent research studies show that nearly half of students show evidence of competency problems in interpersonal skills (Shen-Miller et al., 2012) and that, in particular, some Education students have insufficient skills in teamwork, handling people, adapting to continuous change or controlling their emotions (Pertegal-Felices et al., 2011). For their part, Castejón et al. (2008) mention the need to encourage development of interpersonal intelligence in university students through teaching methods that stimulate cooperative work and



group dynamics, and so on. This evidence, along with the results of the present study, point out a need to embark on educational and guidance efforts that stimulate and develop personal competencies (intrapersonal and interpersonal) and systemic/contextual competencies, with students in teacher training, in order to improve their self-efficacy, help prevent burnout and improve their academic performance. We agree with conclusions from Palomera et al. (2008), that it is a priority to focus greater educational effort on developing this type of competencies, as opposed to the types of competencies that have been worked on traditionally in teacher training, namely, instrumental competencies, and conceptual and procedural competencies. Furthermore, recognizing and understanding one's own emotional states and those of others is favorable to the development of resources and strategies for coping with stressful situations (Gustems & Calderón, 2014).

### *Limitations and prospects*

The sample, being representative of the population described here, does not allow us to generalize the results to other populations. The instrument for measuring competencies, designed *ad hoc*, does not measure variables through scales, making it difficult to carry out more advanced analyses. Similarly, it does not measure a construct, but a series of isolated items. The study design, given its cross-sectional nature, does not allow us to predict whether the presence of burnout is a cause of lower self-perceived competency development or vice versa. Even so, the present study has contributed valuable data toward a greater understanding of this subject and for future study. In future research we intend to increase the sample and representativeness of the reference populations, extending the range to other university degree programs. It would be interesting to include measurements of *engagement*, the opposite concept of *burnout*, in order to verify whether there is any relationship between this concept and competency development.

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