

# Predicting academic burnout and engagement in educational settings: Assessing the incremental validity of perceived emotional intelligence beyond perceived stress and general self-efficacy

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This study examines the role of Perceived Emotional Intelligence (PEI) (measured by the Spanish version of the Trait Meta-Mood Scale) and general self-efficacy as predictors of burnout and engagement dimensions. The unique contribution of PEI dimensions on the burnout and engagement scores is explored, controlling the influence of demographics characteristics, perceived stress and self-efficacy. Data were collected from a sample of 373 Spanish undergraduate students (mean age= 21.87 yr; SD= 5.82 yr) and analyzed using hierarchical regressions. Results indicate the relevance of PEI as an individual resource and support the hypothesis that this construct accounted for non-overlapping variance on academic burnout and engagement above and beyond classic constructs predicting these criterion measures such as perceived stress and general self-efficacy.

*Predicción del burnout académico y el engagement en contextos educativos: evaluación de la validez incremental de la inteligencia emocional percibida controlando el estrés y la autoeficacia general.* Este estudio examina el papel de la Inteligencia Emocional Percibida (IEP) (evaluada con la versión española del Trait Meta-Mood Scale) y de la autoeficacia general como predictores de las dimensiones de *burnout* y *engagement*. La contribución única de las dimensiones de la IEP sobre las puntuaciones de *burnout* y *engagement* es analizada controlando la influencia de características demográficas, estrés percibido y autoeficacia. Los datos fueron obtenidos de una muestra de 373 estudiantes universitarios españoles (edad media= 21.87 años, DE= 5.82 años) y analizados utilizando regresión jerárquica. Los resultados indicaron la relevancia de la IEP como recurso individual y apoyan la hipótesis del potencial explicativo de este constructo con relación al burnout académico y al engagement independientemente de constructos clásicos que predicen ambos fenómenos como el estrés percibido y la autoeficacia general.

Over the past few years, the study of positive psychology has become an emerging approach for many social researchers (Seligman & Csikszentmihalyi, 2000). This perspective has emphasized the relevance of the scientific study of positive experiences, happiness and well-being in psychology (Seligman, 2003), focusing on positive human resources rather than on weaknesses and distress symptoms. In this sense, positive psychology has become a framework where the traditional interests on individual-differences have consistently been extended with the analysis of constructs as emotional intelligence (EI) (Salovey, Mayer, & Caruso, 2002). Following the ability-based model proposed by Mayer and Salovey (1997), EI is conceptualized as the capacity to perceive, assimilate, understand, and manage emotions in oneself and others (see also Brackett & Salovey, 2006). These abilities represent useful tools to process

emotional information successfully and might be considered as personal coping resources that allow individuals to manage in and cope with external and internal demands in stressful situations (Salovey, Bedell, Detweiler, & Mayer, 1999; Caruso & Salovey, 2004). Accordingly, empirical research, using self-report and ability measures, has linked EI abilities to different personal and work outcome variables including vital satisfaction (Extremera & Fernández-Berrocal, 2005), job satisfaction (Wong & Law, 2002), mental and physical health (Ciarrochi, Deane, & Anderson, 2002; Tsaousis & Nikolaou, 2005), quality of interpersonal relationships (Lopes, Brackett, Nezlek, Schütz, Sellin, & Salovey, 2004), organizational commitment (Nikolaou & Tsaousis, 2002), health, well-being, and management performance (Slaski & Cartwright, 2002), lower stress at work (Nikolaou & Tsaousis, 2002), and better emotional recovery in stressful situations (Fernández-Berrocal & Extremera, 2006; Goldman, Kraemer, & Salovey, 1996; Salovey, Stroud, Woolery, & Epel, 2002), among others. Finally, recent research has provided evidence that emotionally intelligent individuals show lower symptoms of job burnout and engagement in both educational and workplace settings (Durán, Extremera, & Rey, 2004; Gerits, Derksen, Verbruggen, & Katzko, 2005).

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This general interest on individual resources has also influenced the research on traditional constructs as perceived self-efficacy. Self-efficacy beliefs are often defined as our own capabilities to plan and execute courses of action required to reach certain aims. These general beliefs of self-efficacy are one core factor of Bandura's social-cognitive perspective (i.e., Bandura, 1997, 2001; Schwarzer, 1993). Specifically, individuals with greater beliefs of self-efficacy, compared with their non-self-efficient counterparts, report better health, greater social integration, and higher attainments (Schwarzer & Schmitz, 2004). Furthermore, certain theoretical models have included self-efficacy perceptions as a key issue in the development of burnout syndrome in organizational settings (i.e., Cherniss, 1993; Harrison, 1983), and even some of them have described the phenomenon as a self-efficacy crisis that starts when the professionals realize that they can not control the results or success in their jobs (Montalbán, Durán, & Bravo, 2000).

The field of burnout itself has not remained detached from the tendency to focus on positive constructs. In recent years the study of work engagement has generated a growing interest in the study of employee well-being and positive aspects of the work environment. While burnout syndrome has been described as being the result of chronic work-related stress (Maslach, 2003) and usually it is characterized by feelings of emotional exhaustion and being emotionally drained by intense contact with recipients, depersonalization or negative, cynical attitudes toward them or toward the work in general, and a sense of lack of personal accomplishment and low competence or efficacy in one's work (Maslach & Jackson, 1986; Maslach, Schaufeli, & Leiter, 2001), conversely, work engagement has been considered the conceptual opposite of burnout and defined as a positive work-related state of mind characterized by vigor (feelings of energy and resilience, willingness to invest effort in one's job and persistence), dedication (the person shows a strong involvement, sense of enthusiasm and significance, pride and inspiration linked to his/her job), and absorption (the individual can experience a total immersion in his/her work, unwillingness to detach him/herself from it, feelings of happiness while performing the job and the perception that the time pass by quickly) (Salanova, Schaufeli, Llorens, Peiró, & Grau, 2000). Nevertheless, these phenomena have been analyzed not only in the workplace context, but also a considerable amount of research has found that burnout and engagement can appear in academic context and affect students well-being (i.e., Schaufeli, Martínez, Marqués-Pinto, Salanova, & Bakker, 2002; Schaufeli, Salanova, González-Romá, & Bakker, 2002). More specifically, there are two variables that are considered to be important in understanding the appearance and the maintenance of academic burnout and engagement. The first variable is the level of stress experienced by individuals and the stressors that appear in the organizational context. In fact, stress is viewed by some researchers as the major predictor of burnout (Maslach, Jackson, & Leiter, 1996) so that less stressed students would experience less symptoms of burnout and consequently should experience higher levels of engagement. Secondly, burnout and engagement may be a function of individual differences in students' dispositional characteristics. In that sense, general self-efficacy is believed to be an important predictor of academic burnout and engagement. Accordingly, studies examining the relationship among self-efficacy, burnout and engagement have found that those who score higher on measures of self-efficacy

show fewer symptoms of burnout (Ever, Brouwers, & Tomic, 2002) and report higher levels of engagement (Linnenbrink & Pintrich, 2003; Salanova, Martínez, Bresó, Llorens, & Grau, 2005). As noted above, one variable that may partly account for individual differences in burnout and engagement is EI. Referring to measurement, different instruments have been developed to assess EI, one of most typically used is the Trait Meta-Mood Scale (TMMS, Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), a EI self-report measure that assesses stable individual differences in the qualities of the reflective mood experience, that is, what some authors have called an index of Perceived Emotional Intelligence (PEI). However, this scale has raised some concerns related to its utility to predict relevant outcomes compared to other well-known dimensions (Davies, Stankov & Roberts, 1998). In this sense, a new construct must demonstrate incremental validity beyond other conceptually similar constructs in order to be considered useful and to demonstrate its unique contribution in predicting outcomes of interest. While perceived stress and general self-efficacy have traditionally been considered significant predictors of burnout (Schaufeli & Buunk, 2002), further studies applying a hierarchical procedure are needed to examine empirically the extent to which PEI adds to the interpretation of burnout and engagement beyond what is accounted for by perceived stress and general self-efficacy. These studies might provide evidences to conclude that PEI as operationalised by the TMMS make significant independent contributions above other classic predictors to predict academic burnout and engagement and is a useful supplement to perceived stress and self-efficacy in prediction of these criterion measures.

To answer this empirical question, the present study focused on examining the relative contribution of PEI to predict burnout and engagement in undergraduate students, controlling for socio-demographic variables (sex and age), perceived stress and general self-efficacy beliefs. Following the Schaufeli and Bakker (2004) research model for burnout and engagement, EI abilities might be thought as a relevant student's individual resource and, according to this view, one might hypothesize that EI abilities would be related to burnout and engagement dimensions (i.e., negatively related to emotional exhaustion and depersonalization and positively related to personal accomplishment, vigor, dedication, and absorption). As far as we know, no published study has attempted to empirically examine the incremental contribution of EI abilities compared with these two variables in educational settings. In addition, we hypothesize that EI dimensions and general self-efficacy as personal resources would show stronger prediction links with academic engagement dimensions and the positive dimension of burnout (academic efficacy). Since there are no previous studies in this context, the hypotheses as to which specific EI dimensions influence all proposed links remains an open question.

## Methods

### *Participants and procedure*

The sample consisted of 373 Spanish undergraduate students (302 female, 70 male, and 1 unreported) with a mean age of 21.87 years ( $SD= 5.82$ ), ranged from 18 to 56 years, who were working toward different degrees at the Universities of Malaga ( $N= 100$ ; 26.8%) and Huelva ( $N= 273$ ; 73.2%). The students completed in the classroom an anonymous battery of questionnaires arranged in the order described below.

Materials

*Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983).* We used the Spanish version of this 14-item measure of self-appraised stress (Remor & Carrobles, 2001). Students were asked to rate the frequency with which they have been in situations they consider stressful during the last month. Frequency is rated across a 5-point Likert-type scale ranging from 0 (never) to 4 (very often) and higher scores reflect a greater perception of stress.

*Trait Meta-Mood Scale (TMMS; Salovey et al., 1995).* This scale, considered a proxy for PEI (Salovey et al., 2002; Fernández-Berrocal, Salovey, Vera, Extremera, & Ramos, 2005), was designed to assess how people reflect upon their moods. In this study we used the Spanish shorter version of the TMMS, which contains 24 items (eight for each subscale) scored on a 5-point frequency response scale from 1 (never) to 5 (very often) (Fernández-Berrocal, Extremera and Ramos, 2004). This scale is composed by three dimensions and evaluates the extent to which people attend to and value their feelings (Attention), feel clear about those feelings (Clarity), and use positive thinking to repair their negative moods (Repair).

*Maslach Burnout Inventory-Student Survey (Schaufeli et al., 2002).* This scale, designed to measure the burnout level of students, contains 15 items which evaluate the dimensions of Emotional Exhaustion (5 items), Cynicism (4 items) and Academic Efficacy (6 items). Students must indicate the level of agreement with every item, which were scored on a 4-point Likert response scale from 1 (totally disagree) to 4 (totally agree). High scores on Exhaustion and Cynicism dimensions and low perception of Academic Efficacy are indexes of burnout.

*Student Academic Engagement (Schaufeli et al., 2002).* In this scale 17 items are used to assess the three dimensions of the construct: Vigor (6 items), Dedication (5 items) and Absorption (6 items). The items were scored on a 4-point Likert scale from 1 (totally disagree) to 4 (totally agree). Higher scores on the three dimensions reflect stronger levels of engagement.

*General Self-efficacy (Schwarzer, 1993).* Self-efficacy was evaluated with a Spanish version of this scale translated by Bäßler and Schwarzer (1996). This instrument contains 10 items which scored on a 4-point Likert scale from 1 (not at all true) to 4

(exactly true). The scale assesses the individual beliefs in her/his own capabilities to attain aims. In this case, higher scores are reflecting a higher level of perceived general self-efficacy.

Results

Table 1 shows the zero-order correlations among the variables included in this study, their descriptive results, and alpha coefficients. All measures have obtained satisfactory internal consistency over .70, except Academic Efficacy (alpha= .63), Vigor (alpha= .57) and Absorption (alpha= .55) subscales.

The intercorrelations among TMMS subscales and the burnout/engagement dimensions have shown that, on the one hand, higher Attention and Clarity were linked with higher Academic Efficacy, Vigor, Dedication and Absorption, and with lower Cynicism. On the other hand, greater skills at repairing moods were associated with lower Emotional Exhaustion and lower Cynicism and with higher Academic Efficacy, Vigor, Dedication, and Absorption. In this case, the results revealed higher correlations indexes between Repair and each burnout and engagement dimensions. With regard to Perceived Stress, this variable has been found to be negatively associated with Clarity and Repair. Paying attention to the links between TMMS dimensions and General Self-efficacy, it is worth noting that both Clarity and Repair were found to be positively associated to General Self-efficacy. Interestingly, compared to Clarity, Repair dimension showed the stronger correlation although modest with Self-efficacy ( $r = .43$ ) indicating that perceived ability to repair moods is associated with general self-efficacy among students but are not strongly redundant so that might involve relatively different emotional and cognitive process.

Finally, similar to previous studies, burnout and engagement dimensions showed moderate to high correlations indexes among them. In this case, the relationship between Dedication and Cynicism obtained the strongest index. As expected, higher Perceived Stress was positively related with Emotional Exhaustion, Cynicism, and negatively associated with Academic Efficacy and the three dimensions of engagement.

To examine the incremental validity of TMMS dimensions over Perceived Stress and General Self-efficacy in accounting for

Table 1  
Descriptives, internal reliabilities ( $\alpha$ ) and Pearson correlations of the study variables

	M	S.D.	$\alpha$	1	2	3	4	5	6	7	8	9	10
1. Perceived stress	1.70	.73	.74	-									
2. Attention to feelings	3.35	.85	.89	.08	-								
3. Mood clarity	3.09	.79	.87	-.32**	.27**	-							
4. Mood repair	3.10	.84	.85	-.38**	.15**	.37**	-						
5. Self-efficacy	2.88	.49	.86	-.40**	-.05	.36**	.43**	-					
6. Emotional exhaustion	2.47	.58	.74	.33**	-.00	-.08	-.22**	-.19**	-				
7. Cynicism	1.87	.61	.75	.37**	-.14**	-.23**	-.24**	-.18**	.39**	-			
8. Academic efficacy	3.02	.38	.63	-.29**	.13**	.25**	.30**	.33**	-.29**	-.52**	-		
9. Vigor	2.50	.43	.57	-.25**	.16**	.18**	.22**	.22**	-.34**	-.37**	.53**	-	
10. Dedication	3.25	.46	.70	-.17**	.19**	.19**	.26**	.16**	-.20**	-.69**	.54**	.37**	-
11. Absorption	2.62	.41	.55	-.14**	.16**	.17**	.23**	.16**	-.10	-.29**	.48**	.56**	.41**

\*\* $p < 0.01$ ; \*  $p < 0.05$

variance in academic burnout and engagement dimensions, six hierarchical regression analyses were conducted. For each of the six regression analysis, demographic characteristics (sex and age) were entered as covariables at step one. Perceived Stress was entered on the second step. Next, General Self-efficacy was included on the third step. Finally, TMMS dimensions were included in the fourth step.

The results of these regression analyses revealed that Perceived Stress contributed with statistically significant R<sup>2</sup> changes to the variances of all burnout and engagement dimensions. Only in the Beta final model of Absorption this variable was not included as statistically significant predictor. Also the demographic characteristics sex and age obtained significant results in the burnout equations: sex has shown a significant negative influence on Cynicism and has appeared as positive predictor of Dedication, while age influenced negatively

Exhaustion and positively Cynicism. In turn, the influence of Self-efficacy has remained as statistically significant for Academic Efficacy in the final model, though the F change score has been significant for all the engagement dimensions.

Interestingly, the final models obtained in the hierarchical regression analysis have highlighted a statistically significant contribution of EI abilities for all burnout and engagement dimensions, except for Exhaustion. On the one hand, Attention was a significant predictor of Cynicism, Academic Efficacy and the three dimensions of engagement. On the other hand, Repair was a significant predictor of Academic Efficacy, Dedication, and Absorption. In contrast, Clarity was not a significant predictor of any burnout or engagement dimensions. Paying attention to the specific contribution of EI abilities on R<sup>2</sup> change, the highest score was obtained for Dedication (6% of the variance).

Table 2

Hierarchical regression analysis: regressing predictor variables on burnout

	R <sup>2</sup>	R <sup>2</sup> change	F change	β
Criterion variable: <b>emotional exhaustion</b>	.15			
<b>STEP 1</b>		.04	7.99**	
Sex				-.00
Age				-.16**
<b>STEP 2</b>		.09	39.90**	
Stress perception				.29**
<b>STEP 3</b>		.00	.64	
Self-efficacy				-.03
<b>STEP 4</b>		.01	1.80	
Attention				-.04
Clarity				.09
Repair				-.11
Criterion variable: <b>cynicism</b>	.20			
<b>STEP 1</b>		.01	1.14	
Sex				-.10*
Age				.11*
<b>STEP 2</b>		.15	67.29**	
Stress perception				.36**
<b>STEP 3</b>		.00	1.41	
Self-efficacy				.02
<b>STEP 4</b>		.03	4.73**	
Attention				-.13*
Clarity				-.05
Repair				-.07
Criterion variable: <b>academic efficacy</b>	.19			
<b>STEP 1</b>		.00	.66	
Sex				.09
Age				-.00
<b>STEP 2</b>		.09	34.84**	
Stress perception				-.17**
<b>STEP 3</b>		.06	25.23**	
Self-efficacy				.22**
<b>STEP 4</b>		.04	5.47**	
Attention				.12*
Clarity				.05
Repair				.12*

Table 3

Hierarchical regression analysis: regressing predictor variables on engagement

	R <sup>2</sup>	R <sup>2</sup> change	F change	β
Criterion variable: <b>vigor</b>	.12			
<b>STEP 1</b>		.01	1.81	
Sex				.06
Age				.06
<b>STEP 2</b>		.06	24.81**	
Stress perception				-.20**
<b>STEP 3</b>		.01	5.92*	
Self-efficacy				.11
<b>STEP 4</b>		.04	5.02**	
Attention				.17**
Clarity				.01
Repair				.07
Criterion variable: <b>dedication</b>	.14			
<b>STEP 1</b>		.02	4.48*	
Sex				.19**
Age				.01
<b>STEP 2</b>		.04	15.95**	
Stress perception				-.12*
<b>STEP 3</b>		.01	4.87*	
Self-efficacy				.05
<b>STEP 4</b>		.06	8.32**	
Attention				.14**
Clarity				.04
Repair				.18**
Criterion variable: <b>absorption</b>	.08			
<b>STEP 1</b>		.00	.39	
Sex				.05
Age				.02
<b>STEP 2</b>		.02	7.58**	
Stress perception				-.06
<b>STEP 3</b>		.01	5.42*	
Self-efficacy				.07
<b>STEP 4</b>		.04	5.30**	
Attention				.11*
Clarity				.04
Repair				.15*

P values are from the final equation \*p<.05; \*\*p<.01

### Discussion

The present study confirmed the relative contribution of PEI on academic burnout and engagement, controlling the influence of socio-demographic characteristics (sex and age), Perceived Stress and General Self-efficacy beliefs in a sample of Spanish undergraduate students. These findings lend preliminary support for the construct validity of PEI, at least as operationalised by the TMMS. In general, Attention and Repair remained significant predictors in the Beta final models (except for Exhaustion), even after controlling for gender and sex, Perceived Stress, and Self-Efficacy. Taken together, these findings not only indicate that PEI is not redundant with cognitive processes reflected in perception of stress and general self-efficacy, but that PEI may be a significant and independent predictor of academic burnout and engagement dimensions in undergraduate students. Nevertheless, with respect to the value of TMMS dimensions as predictors of academic burnout and engagement, our study found that the amount of additional variance accounted for by Attention and/or Repair was significant (except for Exhaustion) but modest (ranging from the 3.2% of the variance in Cynicism and 6% of the variance in Dedication).

The particular relevance of Repair and the no-contribution of Clarity as predictors of academic burnout and engagement can have relevant implications for understanding the unique contribution of EI in different organizational contexts. In that sense, in the educational field students might have more control on regulating their emotional states experienced by academic tasks so that Repair would be the most important predictor. Conversely, the higher complexity of workplace setting and the multiple stressors experienced could limit the effects of individual strategies (such as Repair) and the perceived ability to distinguish between moods and to know the causes and consequences of feelings would become a more useful tool to cope with stressors (Durán, Extremera, & Rey, 2005).

The present findings between perceived stress and burnout syndrome are consistent with those obtained in studies on burnout that characterizes the syndrome as a response to chronic stress (Maslach, 2003). Our study have confirmed that greater Perceived Stress in undergraduate students was significantly associated with not only all burnout dimensions but also with engagement dimensions, expanding previous studies. Besides, in regression analysis Perceived Stress remained a significant predictor for all burnout and engagement dimensions, with one exception: the scale of Absorption. Absorption subscale was only predicted by Attention and Repair. This result would suggest that even though the relevance of stress in developing burnout and experiencing less engagement by students, being totally immersed in one's academic tasks and having difficulties detaching oneself from it, might be more common in students who are able to attend their moods and skilled at mood repair.

In addition, consistent with previous empirical studies on self-efficacy as individual predictor of burnout (i.e., Brouwers & Tomic, 2000; Evers et al., 2002; Salanova, Grau, Cifre, & Llorens, 2000), the present study found support of its relevance as predictor of the positive elements of burnout (Academic Efficacy) and engagement dimensions. These results might support the idea that the negative influence of Perceived Self-Efficacy on burnout might be explained by its stronger influence on Personal accomplishment/Efficacy (Gil-Monte, 2005). Paying attention to the influence on Academic Efficacy and engagement, others studies have claimed the strong link between the positive dimension of burnout and the scales of

engagement, leading to the conception of burnout' core including two dimensions: Exhaustion and Cynicism (Schaufeli et al., 2002).

Furthermore, these findings can have important implications for research linking EI and academic performance (Gil-Olarte, Palomera, & Brackett, 2006; Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan, 2004). Since this study suggests a link between EI and academic burnout and engagement, and the latter variables have been related to academic achievement (Schaufeli et al., 2002), it is tentative to hypothesize that academic burnout and engagement might function as mediators of the link between EI and academic performance in students. Specifically, further studies should employ mediational analyses method to examine whether the influence of emotional abilities on academic performance might be in certain degree a function of the influence of EI on student's academic burnout and engagement.

Although our study provides interesting preliminary evidence that EI dimensions are associated to academic well-being (burnout and engagement), the present findings should be interpreted with caution. Even if most of our scales were reliable, Academic Efficacy, Vigor, and Absorption were remarkable exceptions. These indexes can affect the results obtained and future studies will be needed to corroborate our conclusions. Furthermore, the present study has examined individuals' ability to attend, discriminate, and repair own emotions, but this does not preclude the importance of other interpersonal dimensions not measured by the TMMS. Besides, self-report measures in this domain present some limitations due to its reliance on conscious introspection and the possibility of self-enhancement. Further studies might also consider the inclusion of the newer ability measures such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002) that measures IE by directly assessing participants' emotional abilities according to a criterion of correctness rather than relying on self-beliefs. Both approaches might be seen as complementary more than exclusive. The inclusion of both kinds of measures would provide more extensive and reliable findings about personal abilities involving both conscious and more automatic emotional processing styles. Moreover, although the present study examines the influence of EI on academic burnout and engagement, one can not draw any conclusions about causality due to the cross-sectional design used. Hence, longitudinal design studies would clarify the causal relations between EI and academic burnout and engagement.

Despite these limitations, the present study substantiates the importance of emotional abilities for predicting academic burnout and engagement in undergraduate students above and beyond other classic predictors. However, just training students in emotional abilities to be able to adequately manage their academic tasks may not be sufficient to cope effectively with educational demands. Academic stress and the way in which it is coped with must not be conceived just from a reduced perspective focus on the individual stress experience. The educational system and educators also need to be conscious of the consistent impact on student's burnout of a range of educational variables (i.e., obsolete methods of assessment; high concentration of exams in a short period of time; lack of mechanisms of guidance and counselling...), considering the syndrome not only as a function of the student but also as a potential consequence of the educational system. It is essential to investigate student's academic well-being embedding it within an organizational context where educators and policymakers should make efforts to adapt educational methods to prevent academic stress.

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