

The Effect of Overeducation on Job Content Innovation and Career-Enhancing Strategies among Young Spanish  
Employees

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## Abstract

The increase of education in younger people and the relative scarcity of qualified jobs available for them make the overeducation of young workers a social issue. We explored the relationships between overeducation and extra-role behaviors (job content innovation and career-enhancing strategies), as well as the direct and moderating role of personal initiative and intrinsic work values in these relationships. We collected data from a sample of 638 young Spanish employees. As expected, there were negative relationships between overeducation and content innovation, and career-enhancing strategies. Personal initiative and intrinsic work values related positively to extra-role behaviors. Moreover, high levels of intrinsic work values and personal initiative emerged as moderating factors which buffered the negative effect of overeducation on extra-role behaviors.

Keywords: overeducation; job content innovation; career-enhancing strategies; personal initiative; intrinsic work values.

## The Effect of Overeducation on Job Content Innovation and Career-Enhancing Strategies among Young Spanish Employees

In recent decades, an increase of the level of education of individuals has occurred in all Western countries. This has been accompanied by higher-than-average growth rates for jobs for higher-educated workers. However, the supply of these qualified workers has outpaced the growth in demand for higher-educated labor, in such a way that many individuals are forced to accept a job that requires less skill than they actually obtained. Consequently, overeducation has emerged and become a problem (Büchel & Battu, 2003; Büchel, de Grip, & Mertens, 2004). Groot and Maassen van den Brink (2000) have stated that 26% and 21.50% of the population in the United States and Europe, respectively, are overqualified for the positions they currently hold. Studies on European countries (e.g., Büchel, 2002; Wirz & Atukeren, 2005) have illustrated the incidence of this phenomenon and Spain does not escape it, where it mostly affects young employees. Over the last two decades, the younger generation's level of education has improved through the extension of post-compulsory education, although this has not corresponded to better job opportunities. This fact, along with the high unemployment rates, makes it particularly difficult for young people to hold a qualified job. Thus, their incorporation into the labor market once they have finished formal education typically involves the acceptance of jobs for which they are overqualified (Alba-Ramírez & Blázquez, 2004).

As a result of the emergence and magnitude of the overeducation phenomenon, a sharp increase in the number of publications addressing this topic and its effects has taken place (for details, see Büchel et al., 2004), mainly motivated by the concern about its harmful consequences on workers' earnings (e.g., Alba-Ramírez & Blázquez, 2004; Cutillo & Di Pietro, 2006; McGuinness & Bennett, 2007). The issue of how the condition of overeducation affects work-related behaviors that go beyond role specifications, such as job content innovation and career-enhancing strategies, has not received empirical attention, despite its practical importance: these extra-role behaviors represent important ways through which employees could have an influence on their subsequent work role, career development, and even on increased organizational effectiveness (Feij, Whitely, Peiró, & Taris, 1995; Nabi, 2003). Therefore, the objectives of this study are to test certain hypothetical relationships between overeducation and job content innovation and career-enhancing strategies in a sample of young Spanish employees aged between 16 and 30 years. This work also aims to obtain a better understanding of this phenomenon testing both direct and moderating hypothetical effects of relevant individual variables on these relationships according to the literature on behavior at work, such as personal initiative and work intrinsic values.

### Overeducation and its Relationship with Job Content Innovation and Career-Enhancing Strategies

Generally, authors define overeducation as having more education than is required to perform one's job. Researchers have discussed at length the question of the measure of the required education to fulfill job tasks (see Hartog, 2000). This debate is ongoing, but most researchers agree that worker self-assessment is the best available measure. Workers are overeducated if the formal qualification exceeds those required to perform their job by using the employees' self-assessment (e.g., Alba-Ramírez & Blázquez, 2004; Groeneveld & Hartog, 2004; Groot & Maassen van den Brink, 2000; Hersch, 1991). In this paper we measured overeducation in a similar way: overeducated workers are those who report that the level of education required for their jobs is below the level of education they have attained.

We could expect that overeducated workers undertake extra-role behaviors to a larger extent, especially career-enhancing strategies, since those activities could serve as a tool to aid transfer them from their current jobs and to help them to occupy jobs that better fit their level of education. However, empirical evidence has shown that the condition of overeducation negatively affects extra-role behaviors. A study with industrial employees revealed that perceived underutilization of knowledge, skills, and abilities was significantly associated with low innovative performance (Lämsäalmi, Kivimäki, & Elovainio, 2004). In this line, Feldman (1996) has stated that the condition of underemployment, in which skill underutilization and overeducation are two of its dimensions, is negatively related to organizational citizenship, one of the most studied extra-role behaviors. It consists of discretionary behaviors that are beneficial to the organization, but are not explicitly acknowledged by the formal reward system, such as altruism, courtesy, civic virtue, awareness, and sportsmanship (see Organ & Ryan, 1995). Here we are interested in studying other extra-role behaviors, namely job content innovation and career-enhancing strategies, which researchers have paid less attention to.

Specifically, job content innovation, a construct firstly elaborated by Schein (1971), refers to the development of new work procedures and methods for performing job tasks efficiently (Feij et al., 1995). Like job content innovation, career-enhancing strategies constitute a type of extra-role behavior which addresses employees' empowerment to assume personal responsibility for their own performance and development. To achieve this, individuals develop work objectives and plans, seek advice and information from others about training or work assignments, or develop skills by doing varied job assignments (Feij et al., 1995). Job content innovation has to do with improved job performance by using new and better ways (West, 1997; West & Farr, 1989), while career-enhancing strategies are viewed as a significant precursor of individual career success

(Nabi, 2003). At any rate, as extra-role behaviors, both refer to discretionary actions which go beyond role expectations, but are not explicitly acknowledged by the formal reward system (Katz & Kahn, 1978).

Moreover, those extra-role behaviors could be also seen as coping strategies aimed to face stressful work environments properly. Bunce and West (1994) have shown that workers consider innovative actions as an effective way of dealing with heavy workload. However, the extent to which employees actually exert those activities might be contingent upon other work contextual perceptions. Workplace fairness is a contextual condition that could inhibit or facilitate employee extra-role behaviors (Janssen, 2000). The literature on workplace justice has also suggested that the perception of effort-reward fairness influences the exhibition of extra-role behaviors at work by prompting employees to define the relationship with the organization in terms of social exchange (e.g., Messer & White, 2006; Organ & Ryan, 1995).

#### Social Exchange Theory

According to the Social Exchange Theory (Blau, 1964), when efforts are fairly rewarded in a social exchange relationship with employers, employees are willing to reciprocate by extra-role behaviors (e.g., Brandes, Dharwadkar, & Wheatley, 2004) which go beyond contractually determined job achievements. That is, employees should perceive a balance between their inputs (e.g., hard work, skill level) and the outputs obtained (e.g., salary, recognition) (Adams, 1965) to engage in extra-role activities. On the other hand, and in the case of perceived under-reward unfairness, employees are likely to restrict these actions as they believe that discretionary efforts are inappropriate and are not a mandate of the organization. The drive to act innovatively as a way to cope with job demands is likely to diminish in this case (Janssen, 2000). In addition, if employees perceive a lack of advancement or career prospects in the organization, then the use of career-enhancing strategies is less probable as they are unlikely to perceive any utility in doing so (Nabi, 2003). This situation could be the case of overeducated workers.

After several years of effort to study, an individual expects to obtain a qualified job, which usually implies desired intrinsic rewards such as complete skill utilization or task variety, and also to achieve extrinsic rewards in terms of promotion opportunities or salary. When employees are overeducated, they perceive that they obtain few reinforcements, such as limited career development opportunities, underutilization of their skills (Borgen, Amundson, & Harder, 1988; Burriss, 1983; Feldman, Leana, & Bolino, 2002), and also reduced salaries (e.g., Alba-Ramírez & Blázquez, 2004; Cutillo & Di Pietro, 2006; McGuinness & Bennett, 2007), which as a result could lead them to restrict extra-role behaviors.

### Direct and Moderating Effect of Personal Initiative and Intrinsic Work Values

Personal factors, which are not usually included in studies on overeducation, might affect, and even change, the relationship between overeducation and those extra-role behaviors. As far as we know, only one previous study (Johnson & Johnson, 2000) has explored the role of two individual variables: negative (i.e., predisposition to view the world in negative terms) and positive affectivity (i.e., predisposition to experience positive emotional states). They analyzed its moderator effects on the relationship between perceived overeducation, represented by two indicators: perceived lack of growth opportunity (no-grow) and perceived mismatch, and satisfaction with the work itself. Unexpectedly, the results have displayed that the combination of no-grow and negative affectivity was associated with greater satisfaction with the work, while positive affectivity did not moderate this relationship. Here, we are interested in extending the research by examining other individual factors that could protect employees from the negative effects of overeducation on job content innovation and career-enhancing strategies, thus making them become involved in those actions. We focus on personal initiative and also on intrinsic work values as the literature highlights their significant predictive role.

Specifically, personal initiative comprises a set of co-occurring behaviors addressed to develop a fuller set of goals with long-term orientation. It is characterized by a self-starting nature, a proactive approach, and by the persistence in overcoming difficulties and setbacks that arise in the pursuit of a goal (Frese, Fay, Hilburger, Leng, & Tag, 1997; Frese, Kring, Soose, & Zempel, 1996). So, personal initiative is conceptualized in terms of overt behaviors that enable people to deal with job difficulties more actively. As it involves using additional energy at work, and also perseverance in the face of obstacles, among other things, Rank, Pace, and Frese (2004) have stated that it may predict job content innovation. Similarly, proactive personality, considered a stable disposition to take personal initiative, predicted subsequent innovation at work and career initiative (Seibert, Kraimer, & Crant, 2001). In the same vein, Frese et al. (1997) have noted that people with high initiative also planned their career well and even executed their career plans more often than individuals with lower initiative.

In addition, the meaning of working attributed by the employees, in the form of work values, could also play a significant predictive role. Most theorists agree that values are standards or criteria for choosing goals or guiding actions, and are relatively enduring and stable over time (see Rokeach, 1973). Specifically, work values are understood as the way in which people evaluate work or the work environment in terms of what is “right” or more preferred (Dose, 1997), and consequently they want to find them in their job (Peiró, García-Montalvo, & Gracia, 2002). Additionally, they are one of the key dimensions that condition how people evaluate the work

environment and its results, the kinds of decisions made, and the behaviors achieved (Dose, 1997). The literature distinguishes between extrinsic and intrinsic work values. While individuals who hold extrinsic work values give importance and prefer favorable external conditions that accompany an occupational choice (e.g., good salary or pension plan), people with intrinsic work values appreciate more the content of the work itself (George & Jones, 1997) by considering important and preferable factors such as interesting and challenging job contents, or autonomy in performing the job. Intrinsic work values are those that appear to relate positively to both career-enhancing strategies and job content innovation (Feij et al., 1995). Hence, we also expect intrinsic work values to relate positively to both extra-role behaviors.

Moreover, these two variables might not only have a direct effect, but also a moderating role on the relationship between overeducation and the studied extra-role behaviors, by exerting an interesting and unexplored motivational function that could protect individuals from the negative effects of overeducation. When overeducated employees have high initiative, and behave in a proactive way, the adverse impact of overeducation will be reduced. In fact, research into innovation has shown that high personal initiative could be a moderating factor (Frese, 2000).

Similarly, intrinsic work values could not only be a precursor of job content innovation and career-enhancing strategies, as Feij et al. (1995) have obtained, but also a moderating variable, although these authors have not explored this possibility. There is a lack of empirical evidence since research on extra-role activities (mostly focused on organizational citizenship behavior) has centered more on exploring the degree to which employees have opportunities to satisfy work values (Feather & Rauter, 2004). Despite the condition of overeducation, in our study we understand that if workers consider that the intrinsic characteristics of the work are very important for them, so that they wish to find them in their job, then the adverse impact of overeducation on extra-role activities will be reduced.

### Summary and Hypotheses

In short and based on the Social Exchange Theory (Blau, 1964), when workers occupy a job beneath their level of education, they perceive an unequal balance of educational efforts in relation to the rewards they obtain at work (e.g., reduced career development options, underutilizations of their skills, or reduced salaries) (Alba-Ramírez & Blázquez, 2004; Borger et al., 1988; Burris, 1983; Cutillo & Di Pietro, 2006; Feldman et al., 2002; McGuinness & Bennett, 2007). This situation could motivate them to restrict job content innovation and career-enhancing strategies as they believe that these behaviors actually constitute actions beyond their role that are not rewarded by the organization. However, personal factors, such as personal initiative and intrinsic work values

could be involved. People with higher personal initiative are more innovative at work, and they also plan and execute their career plans better (Frese et al., 1997; Rank et al., 2004). Similarly, individuals who value intrinsic aspects of the job are more engaged in job content innovation actions and career-enhancing strategies (Feij et al., 1995). In addition, these two variables could also act as buffering factors of the negative effect of overeducation on the extra-role behaviors. The same motivational effect could appear if they place great importance on the intrinsic characteristics of their job. Accordingly, we formulate the following hypotheses:

H1: Overeducation will be negatively related to the extra-role behaviors at work (job content innovation and career-enhancing strategies).

H2. Personal initiative and intrinsic work values will have additive (direct) positive effects on extra-role behaviors (job content innovation and career-enhancing strategies).

H3. The negative effect of overeducation on extra-role behaviors will be buffered by higher levels of personal initiative.

H4. The negative effect of overeducation on extra-role behaviors will be buffered by higher levels of intrinsic work values.

## Method

### *Sampling Design and Participants*

This paper is part of a wider research developed by the Occupation Observatory of Youth, devoted to do a socioeconomic and psychosocial analysis of the transition process of young people living in the Valencian region, and the metropolitan cities of Barcelona and Madrid (Spain). The sample consisted of young people aged between 16 (minimum legal age to start working in Spain) and 30 years. In order to obtain a representative sample of all the young people of this region and these cities, the selection was a standard and two-stage procedure with stratification in the first stage. The allocation was proportional within each of the three sub-samples (Valencian region, Madrid, and Barcelona). The stratification within the Valencian region was based on county and town size. Considering the different counties and the different town sizes within each county, 106 strata were obtained. After the proportional allocation within each area (obtained by using the data of the Population Census) the towns were selected following two criteria: to obtain at least two towns in each stratum and the minimum number of interviews had to be six for each town. When there were more than two towns in one stratum, we performed a random selection with probabilities proportional to the size of the group of young people aged between 16 and 30 years. In each selected town, we obtained sample units by the procedure of



random routes with sex quotas. After two attempted contacts, we replaced non-respondents with a randomly chosen substitute of the same age and gender.

The sample consisted of 638 Spanish employees interviewed in 2002 (46.70% males, 53.30% females) from the Valencian region (63.3%), Madrid (14.6%), and Barcelona (22.1%). They worked in service companies (e.g., waiters/waitresses, shop assistants) (70.80%), industry (e.g., textile production workers, paper production workers) (20.60%), and agricultural/cattle raising/fishing activities (e.g., farmers, stockbreeders) (2.40%); 6.20% did not answer this question. Ages ranged from 16 to 36, and the mean age of the sample was 23.52 ( $SD = 3.91$ ), although 94.5% were below 30 years of age. The rest were above this age because they were first interviewed in the broader research in 1996. The level of schooling completed by the participants, according to the Spanish educational system, which ranges from 1 (i.e., an absence of schooling) to 12 (i.e., the highest level of education -doctor degree), was as follows: no schooling (0%), Primary Education (3.60%), Lower Secondary Education – first and second academic year (12.90%), Lower Secondary Education – third and fourth academic year (13%), Upper Secondary Education (18%), Intermediate Specific Vocational Training (8%), Advanced Specific Vocational Training (19.40%), some years at university (5.30%), University Diploma/Technical Engineering or Technical Architecture (6.90%), Bachelor's Degree/Degree in Architecture, Engineering (10.80%), Master's Degree (1.90%), and Doctor's Degree (0.20%). Trained professional interviewers in the content of the survey and the interviewing procedure conducted the survey through structured face-to-face interviews at their homes, using the random route method to select the interviewees.

### *Measures*

*Overeducation.* We obtained this variable from education mismatch, measured by two indicators: 1) the individual's level of education and 2) the level of education required by his/her job, both using the same response range (1-12). We assessed the level of education required by the following question: "If an individual would have to perform your job, which level of education would you recommend him or her to possess?" In order to determine whether the individual was overeducated, the worker's self-report on the level of education required at the job was subtracted from his or her current level of education. Negative and zero scores were indicative of undereducation and education match, respectively. Positive scores were indicative of overeducation. We used the full range of education mismatch scores to carry out the data analysis, so avoiding data loss.

*Intrinsic work values* were assessed by a seven-item scale developed by The Meaning of Work (MOW)-International Research Team (1987), which asked about the importance of intrinsic work outcomes (e.g., task

variety). This scale was also used satisfactorily in other studies on young workers (e.g., Feij et al., 1995; van der Velde, Feij, & van Emmerik, 1999), showing its predictive power (e.g., those values increased the probabilities of resisting a job that does not offer opportunities for learning among Spanish workers, see Peiró et al., 2002). Participants responded on a 5-point scale which ranged from 1 (not important at all) to 5 (very important). Internal consistency (Cronbach's  $\alpha$ ) was .85.

*Personal initiative* was assessed by three items taken from the self-reported initiative questionnaire which was developed and validated by Frese et al. (1997) (see also Fay & Frese, 2001). This three-item scale was also used adequately in a previous study among young Spanish workers (e.g., Peiró et al., 2002), displaying its predictive strength (e.g., it reduced the probability of resisting a challenging job). A sample item was "Whenever there is a chance to get actively involved, I take it". Participants responded on a 5-point scale which ranged from 1 (strongly disagree) to 5 (strongly agree). Internal consistency (Cronbach's  $\alpha$ ) was .72.

*Extra-role behaviors* were measured with a scale referring to job content innovation (three items) and career-enhancing strategies (three items). The items about job content innovation were from the questionnaire on innovative attempts (i.e., behaviors that have an innovative goal), which was developed by Jones (1986) and adapted by Feij et al. (1995). This three-item scale used here was validated in a Spanish sample (Martín, Cifre, & Salanova, 1999), where job content innovation was associated with higher psychological well-being. A sample item was "I make suggestions to the supervisor regarding different methods or procedures for doing the work". The items about career enhancing strategies came from the questionnaire developed by The Work Socialization of Youth (WOSY)-International Research Team (1989) about career enhancing strategies, and was also included in other studies (Claes & Ruiz-Quintanilla, 1998; Feij et al., 1995), showing high content face validity (see Ruiz-Quintanilla & Claes, 1995). A sample item was "I have developed skills which may be needed in future positions". Participants responded on a 5-point scale which ranged from 1 (strongly disagree) to 5 (strongly agree). Internal consistency (Cronbach's  $\alpha$ ) of the job content innovation and job enhancing strategies were .69 and .72, respectively, and it was .71 for the global scale.

Higher scores in the scales were indicative of greater levels in intrinsic work values, personal initiative, job-content innovation, and career-enhancing strategies. The participants received the questionnaires in Spanish. The scales were originally in English and were translated into Spanish, and then from Spanish into English (using 'back-translation') by native English and Spanish speakers in order to check for the equivalence of meaning in both languages.

## Results

### *Preliminary Results*

A MANOVA analysis was performed to assess the differences in the study variables associated with regional groups. The multivariate analysis was significant, Wilks' Lambda,  $F(10, 1262) = 7.774, p < .001$ . Additionally, variance analyses were significant for personal initiative,  $F(2, 635) = 23.78, p < .001$ , intrinsic work values,  $F(2, 635) = 13.96; p < .001$ , and career-enhancing strategies,  $F(2, 635) = 5.114, p < .01$ . In all three cases, individuals of the Valencian region scored higher than the other two groups.

Table 1 shows the empirical ranges, means, standard deviations (*SD*), alpha coefficients, and zero-order correlations of the study variables. On average, the employees exhibited education mismatch ( $M = 1.17, SD = 2.27$ ), so their level of education was more than one level beyond that required for their jobs. Therefore, the sample, on average, was overeducated. The average level of personal initiative, intrinsic work values, and extra-role behaviors was moderately high. Education mismatch, where the positive scores were indicative of overeducation, correlated negatively with both extra-role behaviors. On the other hand, personal initiative, intrinsic work values, and also education correlated positively with job content innovation and career-enhancing strategies. These two dimensions of extra-role behaviors correlated positively. Additionally, we asked the participants about their preference for a job for which they would be overeducated. We found that 87% reported they had no preference for a job where their level of qualification was higher than the required level.

### *Main Results*

To confirm the hypotheses, we performed two hierarchical multiple regression analyses, one for job content innovation and the other for career-enhancing strategies, where all the interaction terms were introduced (Cohen & Cohen, 1983). After controlling for gender, age, level of education (e.g., Büchel & Battu, 2003; Johnson & Johnson, 2000), and region, the results of the analyses (see Table 2) show that education mismatch related negatively to job content innovation and career-enhancing strategies, thus confirming Hypothesis 1. Also Hypothesis 2 was confirmed as personal initiative and intrinsic work values were positively linked to job content innovation and career-enhancing strategies. Nevertheless, personal initiative presented a greater  $\beta$  coefficient than education mismatch and intrinsic work values. Therefore, it was the most important predictor of both extra-role behaviors. Education was also positively linked to the two extra-role behaviors.

Furthermore, the results in Table 2 display two significant interaction effects, one that affects job content innovation (Education mismatch x Personal initiative) as expected, and an additional effect that influences career-enhancing strategies (Education mismatch x Personal initiative x Intrinsic work values), although the moderating effects were relatively small. We chose the values for the variables included in the interactions to be

1SD below and above the mean to present the results (Jaccard, Turrisi, & Wan 1990). Figure 1 graphically represents the two-way interaction between education mismatch and personal initiative on job content innovation. This figure illustrates that the highest level of job content innovation appeared in the condition of low education mismatch (i.e., undereducation) and high personal initiative (.67), while the lowest appeared in the condition of low personal initiative and high education mismatch (i.e., overeducation) (-.42). Besides, overeducated individuals exhibited higher job content innovation when they displayed high personal initiative. However, the distance between high and low values was not substantial. In fact, this difference between the high and low personal initiative scores was greater in the case of the undereducation condition. Hence, Hypothesis 3 was confirmed for job content innovation since in this case, personal initiative buffered the effect of overeducation to some extent.

The moderation of personal initiative along with intrinsic work values in the linkage between overeducation and career-enhancing strategies appears in Figure 2. In general, and similarly to the previous interaction, the implementation of career-enhancing strategies was higher in the condition of low education mismatch (i.e., undereducation) than in the condition of high education mismatch (i.e., overeducation). In particular, the highest score in career-enhancing strategies appeared in the condition of undereducation among individuals with high personal initiative but low intrinsic work values (.70), while the lowest was in the condition of overeducation among workers with low personal initiative and intrinsic work values (-.57). As Figure 2 displays, overeducated individuals accomplished more career-enhancing strategies when both levels of personal initiative and intrinsic work values were higher than when they scored lower in both variables. A higher degree of personal initiative and intrinsic work values buffered the negative effect of overeducation on career-enhancing strategies to some extent. However, the career-enhancing strategies scores of overeducated individuals with high levels in both personal initiative and intrinsic work values actually only differed slightly from the corresponding scores of the other two conditions (i.e., high personal initiative-low intrinsic work values and low personal initiative-high intrinsic work values). Finally, we found no significant interaction effect between education mismatch and intrinsic work values affecting extra-role behaviors, so Hypothesis 4 was not confirmed.

#### Discussion

Despite the tendency in both political and academic debate to increasingly stress the importance of knowledge and education in our society, there is also a negative picture of the role of education in recent decades: an overeducation phenomenon has emerged in both the United States and Europe, and particularly in

Spain among young employees (Alba-Ramírez & Blázquez, 2004), which affects their activities. In particular, the first aim of this study was to test certain hypothetical relationships between overeducation and job content innovation and career-enhancing strategies among young Spanish workers, which sheds light on the consequences of overeducation beyond the well-known negative economic returns. We confirmed that the condition of overeducation is negatively linked with the performance of both extra-role behaviors, which transcend prescribed role specifications (Katz & Kahn, 1978).

This negative relationship could be explained on the basis of the Social Exchange Theory (Blau, 1964), which stresses that the extent to which an individual actually engages in these activities depends on his or her perception about workplace fairness; thus, in the case of perceived under-reward unfairness, the employee tends to restrict extra-role behaviors (Janssen, 2000; Messer & White, 2006; Organ & Ryan, 1995). This could be the case of overeducated workers as they perceive that they inequitably obtain a small amount of rewards, such as limited career development opportunities or reduced salaries (e.g., Alba-Ramírez & Blázquez, 2004; Borgen et al., 1988; Burris, 1983; Cutillo & Di Pietro, 2006; Feldman et al., 2002; McGuinness & Bennett, 2007).

This study also aimed to analyze the direct and moderating role of personal initiative and intrinsic work values in the relationship between overeducation and these extra-role behaviors, thus extending the research on this topic. In a preliminary way, we found that workers from the Valencian region had the highest scores on personal initiative, intrinsic work values, and also career-enhancing strategies. This could be explained by the loss of the relative weight of the value of work among youngsters, particularly in metropolitan cities, (e.g., Barcelona and Madrid), as consequence of the larger emergence and influence of postmodern values in these places (see Inglehart, 1997).

First, our findings support previous studies on the direct positive effects of personal initiative and intrinsic work values (e.g., Feij et al., 1995; Frese et al., 1997; Rank et al., 2004; Seibert et al., 2001). In fact, personal initiative is the variable which accounts for a greater proportion of unique outcome variance, and does so even more than education mismatch. Thus, being self-started, proactive, and persistent to face barriers predicts innovation at work and the development of actions for career improvement, which is in line with previous research (Rank et al., 2004; Seibert et al., 2001). Another interesting finding is that education is also positively linked to both extra-role behaviors. This predictive power could be explained by the fact that precisely the higher degrees of education allow the development of skills, such as problem solving, which are essential to undertake behaviors in the work role (e.g., Dorenbosch, van Engen, & Verhagen, 2005). In this study, education and personal initiative were the most important predictors of extra-role behaviors, which may

not be independent: a higher degree of education could be caused, in part, by student attrition, which is related to student personal initiative.

What is more, the results of the interaction tests display two significant moderating effects (i.e., buffering effects), although the effect sizes are small. As expected, high personal initiative buffers the negative effect of overeducation on job content innovation, but to a limited degree. Overeducated workers innovate at job when they exhibit a high level of personal initiative. This finding is in line with previous studies concerning the moderating role of initiative (Frese, 2000; Rank et al., 2004). In the same vein, we also found that personal initiative, along with intrinsic work values, buffer the negative influence of overeducation on career-enhancing strategies, again to a limited extent. The condition of high levels in both individual variables leads to higher achievement of career-enhancing strategies among overeducated workers in comparison with the condition of low levels in both individual variables. However, the difference with the other two conditions is not substantial. Unexpectedly, intrinsic work values do not play a moderating role individually since they only play a buffering role when they appear with personal initiative to predict career-enhancing strategies. It seems that valuing intrinsic aspects of the job, by itself, is not enough to protect overeducated workers from the restrictive influence of overeducation, in which personal initiative is essential. The reason could be that the behavioral nature of this variable (e.g., using additional energy at work, perseverance to cope obstacles), its long-term focus, and its proactive orientation are fundamental to plan any career (Frese et al, 1997), thus benefiting the development of career-enhancing strategies.

The notion that personal initiative and intrinsic work values serve as protective factors against overeducation is consistent with the Career Mobility Theory (e.g., Alba-Ramírez & Blázquez, 2004; Büchel & Mertens, 2004; Rubb, 2005), which proposes that workers may temporarily be in jobs for which they seem to be overeducated, but which provide them with skills to be used later in a job where they could make full use of their qualifications. Hence, overeducated employees with high personal initiative and intrinsic work values would see engagement in extra-role behaviors at work as a way of gaining the necessary training and experience to move upward to higher occupations which match their qualification. This explanation is reinforced when we notice that most participants did not prefer a job for which they were overeducated. Therefore according to the Career Mobility Theory, overeducated individuals may think that they could gain experience in the meantime, and acquire or develop core competences through the performance of those non prescribed activities which further help them to occupy a better job.

This study represents the first investigation of the role of overeducation in predicting workers' extra-role behaviors (i.e., job content innovation and career-enhancing strategies) from which several conclusions can be drawn. In general, this sample is overeducated on average. This situation is associated with an inhibition of job content innovation and career-enhancing strategies, which is most likely due to their perception of under-reward unfairness as they do not obtain the expected reinforcements at job. Nevertheless, it is important to pay attention to individual factors (i.e., personal initiative and intrinsic work values) and not only to work contextual perceptions, as these individual factors buffer the negative effect of overeducation on these extra-role behaviors, though not to a large extent. Our results show that the motivational potential of these variables helps individuals to enrich their job in order to improve its match to their level of education.

#### *Limitations*

The relationships cannot be interpreted causally as a result of the cross-sectional design of the research. Therefore, a longitudinal design would be preferable. Given the use of self-rating measures in the study, the effect of a common method variance on the studied relationships could emerge, and this might inflate correlations because of spurious covariances. Another limitation is the use of shortened scales for measuring the constructs of personal initiative and extra-role behaviors, so their validity and internal consistency reliability is questioned. In fact, the subscale that measures job content innovation should be improved in the future since Cronbach's  $\alpha$  did not meet the criterion of .70 as recommended by Nunnally (1978), although the internal consistency of the global scale referring to job extra-role behaviors was satisfactory. Thus the inclusion of the entire scales is preferable to avoid possible non desirable effects on the outcomes and conclusions of the study.

#### *Implications for Practice and Future Research*

These results have practical implications for HR management, individuals, and career counselors. The multiple changes which organizations are going through require increasingly adaptable workers who should go beyond the assigned tasks (i.e., role-making rather than role-taking behaviors). So HR specialists at companies might not hire workers who are overeducated for job performance, since this situation inhibits their exertion of role-making behaviors at work, such as content innovation and career-enhancing strategies, thus becoming a negative socialization precedent for future work experiences. While hiring overeducated people is unavoidable, HR professionals could help those individuals to develop initiative. Strategies such as self-organizing teams, quality groups, job redesign, and the development of an organizational climate for initiative all have the effect of making high initiative people (Frese & Fay, 2001). Workshops addressing the importance of pursuing self-set goals, anticipating problems and opportunities, persisting in reaching one's goal, short- and long-term planning,

and developing skills in the current job, could all be beneficial. Companies should also pay attention to the role of high intrinsic work values, and encourage them within the organization since, along with personal initiative, they concern the implementation of career-enhancing strategies. This could favor their future advancement within the organization and improve organizational effectiveness (Feij et al., 1995; Nabi, 2003).

An important element of individuals for choosing a job should be the fact that it matches their level of education, despite it possibly having some immediately less attractive extrinsic rewards. Among overeducated workers the inhibition of extra-role behaviors, particularly career-enhancing strategies, which imply being responsible for one's own career management, is risky given its negative impact on enriching job experiences and career development. In fact, the current dynamic work environment emphasizes self-management in career development (Kuijpers & Scheerens, 2006). For this reason, whether an individual occupies a job for which he or she is overeducated, the fact of having previously acquired personal initiative and intrinsic work values becomes crucial. Here career counselors who either work with high school or university students, could play a key role. Their career counseling actions should address education in intrinsic rather than extrinsic values, as well as the development of initiative among students, irrespectively of their academic marks. We refer to the encouragement of the importance of intrinsic aspects of work, and the development of proactive individuals rather than passive ones. For instance, learning how to (re)define active goals, and plan, and search feedback actively. Besides they should be able to anticipate future problems and opportunities and convert them into a goal, back-up plans, and to develop alternative routes of action as well as to detect pre-signals for potential problems and opportunities. Besides, the skills to protect goals when frustrated by complexity, and maintaining searches in spite of the complexity and negative emotions, are essential (Frese & Fay, 2001). Job market changes require people to show more initiative than before which is also related to orientation and success in entrepreneurship (see Frese, 2006).

Additional specific questions could be tested in future research, such as which other individual factors (e.g., self-efficacy, career interests) could contribute to buffer the negative effects of overeducation on these extra-role behaviors. Research could focus on overeducation linkages with work-related attitudes such as job involvement and organizational commitment in-role performance as well as other extra-role behaviors (e.g., organizational citizenship behavior). The role of organizational factors or the career development opportunities for employees could be tested. Finally, researchers could explore the effects of restricted extra-role behaviors among overeducated workers in future studies, where indicators such as involvement in organizational career development programs, intentions to quit, turnover, and organizational effectiveness are considered.



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Table 1

*Range, Means, Standard Deviations (SD), Internal Consistencies (Cronbach's  $\alpha$ ), and Correlations (N = 638)*

Variable	Range	Mean	SD	$\alpha$	1	2	3	4	5	6	7
1. Gender (dummy)	0-1	–	–	–	–	–	–	–	–	–	–
2. Age	16-36	23.52	3.90	–	-.09*	–	–	–	–	–	–
3. Education	1-12	6.06	2.38	–	-.13***	.37***	–	–	–	–	–
4. Education mismatch	-8-8	1.17	2.27	–	-.02	-.06	.37***	–	–	–	–
5. Personal initiative	1-5	3.80	.71	.72	-.06	.06	.03	-.01	–	–	–
6. Intrinsic work values	1-5	4.11	.58	.85	-.02	.19***	.08*	-.06	.29***	–	–
7. Job content innovation	1-5	3.50	.74	.69	.03	.11**	.16***	-.08*	.38***	.25***	–
8. Career-enhancing strategies	1-5	3.62	.77	.72	-.03	.14***	.15***	-.10*	.29***	.24***	.55***

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2

Summary of Hierarchical Multiple Regression for Variables Predicting Extra-role Behaviors ( $N = 638$ )

	Job content innovation			Career-enhancing strategies		
	$\beta$	$\Delta R^2$	$\Delta F$	$\beta$	$\Delta R^2$	$\Delta F$
Step 1		.03***	5.62***		.04***	6.41***
Gender (dummy)	.07			.007		
Age	-.004			.01		
Education	.20***			.20***		
Region	.05			-.02		
Step 2		.02***	13.49***		.03***	17.37***
Education mismatch	-.13***			-.14***		
Step 3		.16***	62.35***		.09***	32.05***
Personal initiative	.34***			.24***		
Intrinsic work values	.14***			.13***		
Step 4		.01*	2.55*		.004	1.05
Education mismatch x Personal initiative	-.08*			-.04		
Education mismatch x Intrinsic work values	-.02			-.01		
Step 5		.00	.70		.005*	3.91*
Education mismatch x Personal initiative x Intrinsic work values	-.03			-.08*		
<i>Multiple R</i>	.47			.40		
$R^2$	.22			.16		
<i>Adj. R<sup>2</sup></i>	.21			.15		
<i>F</i>	16.12***			10.88***		

Note. Standardized regression coefficients are reported. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .  
Personal initiative x Intrinsic work values coefficients are not statistically significant.

Figure Captions

*Figure 1.* Two-way interaction effect of Education mismatch x Personal initiative on Job content innovation

*Figure 2.* Two-way interaction effect of Education mismatch x Personal initiative x Intrinsic work values on Career-enhancing strategies





