



**Tipos de regulación metacognitiva en estudiantes universitarios españoles durante la lectura de textos de ciencias en inglés: propuesta y validación.**

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## **1. Introduction**

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Adult learning has become a policy priority for economic growth and social development in industrialized countries. While educational provision and participation has increase in general population, yet remains unequal across population subgroups. Many researchers continue to be interested in understanding the reasons why adults participate in learning activities and in determining the factors that influence this decision. Why some adults participate in training while others do not is an interesting social question, above all when there is evidence that participation in training is not distributed uniformly across the population. The emphasis placed on lifelong learning, both in terms of the economic benefits and social inclusion, have increased the social relevance of this area of research.

The present research analyses adults' motivation to participate to work-related training. The study examined how adult motivation for non-formal work-related training is affected by demographic variables such as gender, age, educational level, and labour status. The questions we raise are: what motivates adults to participate in work-related training? Does motivation to participate in work-related training differ according to demographics variables?

## **2. Theoretical framework**

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Research on participation of adults in education, be this formal, non-formal or informal, has been taking place for some time now and has led to the publication of many studies. Among the literature that has been generated in previous years are some important studies that consistently identify the profile of adults that participate in training. One of the early studies in this area was by Johnstone and Rivera (1965), who stated that the typical adults taking part in training were young, highly educated, in full time work and with a high income.

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Chisholm, Larson and Mossoux (2004) present a study based on data collected from large-scale international surveys in which they provide evidence of significant differences of levels of participation according to variables such as age, gender, educational level and occupation. According to their results, the group of older less educated females is the one with higher rates of non-participation. Recent studies on adult participation in training provide a consistent profile of those adults that take part in it: young adults participate more than older adults, adults with higher qualification degrees engage more than adults with low qualification degrees, and the employed participate more than the unemployed (Daahlen & Ure, 2009; Henry & Basile, 1994; Illeris, 2003; Illeris, 2006).

Other studies (Boudard & Rubenson, 2003; Carré, Aubret, Chartier, Degallaix & Fenouillet, 2000; Desjardins, Rubenson & Milana 2006) provide further nuances that indicate that the nature of an individual's job also influences the likelihood of a person participating in training; that is, jobs that are linked to new technologies and that require a high degree of literacy are related to higher levels of participation in training.

Adults' motivations are social and historical constructions and therefore change according to the context. Carré et al. (2000) argue that motivation assessment should be considered as a "snapshot of the relations that establish themselves, in a given context, at a given time, between a person and her/his environment". According to this author, a new approach to lifelong learning has emerged among adults that is marked by the current economic and social conditions such as competitiveness, knowledge economy, technological development, which demand adults to make a greater commitment to be 'apprentices' throughout their lives. For this reason, adults are increasingly "mobilized" to participate in training, but not necessarily "motivated" (Boudard & Rubenson, 2003; Carré et al., 2000; Hight, 1998).

Based on the theoretical view, we purpose the following research question:

1. What motivates adults to participate in work-related training?
2. Are there differences of motivation to participate among different demographic groups?

### 3. Research design

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The study relied on quantitative data collected from a questionnaire design for the purpose of this research. The questionnaire had two parts: the first part collected demographic data such as gender, age, level of education and employment situation; the second part included a list of 14 statements regarding reasons for participating in training based on a six-point Likert scale (0=totally disagree,

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5=totally agree). The statements regarding the respondents' reasons for participating in training reflect work-related and non-work-related motives to participate which had been highlighted by previous studies (Chisholm, et al. 2004).

An exploratory factor analysis was performed to reasons to participate item set of the questionnaire in order to reduce the dimension and obtain latent variables. Diagnostic analysis was done prior to the factor analysis to assure the data were suitable. We followed a diagnostic process described by Pérez & Medrano (2010), Kline, (1994) and Tabachnick & Fidell (2007) to check for violations of normality, linearity and multicollinearity.

Independent variables such as gender, age, level of education and employment status were coded into categorical variables. Gender was coded 0 for man, 1 for woman. Age was coded into four categories: 1=18-24, 2=25-34, 3=35-44, 4=more than 45 years old. Level of education was coded into three levels: 1=*Compulsory Primary/Secondary Education* (ISCED 0-3), 2= *Post-compulsory* (ISCED 4-5) and 3= *University qualifications* (ISCED 6-8). Labour status was coded in two categories, 1=unemployed and 2=employed.

An analysis of variance of the components extracted in the factor analysis was performed in terms of the demographic characteristics. One-way between-subjects ANOVA was run according to age and educational level and t-test was run for gender and employment status with a level of significance of 0.05. Effect size was also calculated using the eta-squared coefficient and Cohen's *d*.

#### 4. Results

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The two extracted components reflect the orientation of adults' motivation to participate in training described in the literature, but with certain particular characteristics. The first component describes a motivation to participate in training that is oriented towards improving work perspective; that is, finding a job in the case of the unemployed and finding a better job or at least keeping their current job in the case of the employed. It includes items such as 'get a better job', 'change job', 'reduce chances of losing job', 'get a qualification', and 'improve job prospects'. It also includes the items 'get to know new people', 'start a new business', and 'be made to participate', although these have relatively low values.

The second component describes a motivation to participate in training oriented towards the desire to learn about an interesting topic or to learn useful knowledge for use at work or at day-to-day life. It might be seen as a learning oriented motivation with practical connotations. In the light of these results, we decided to

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continue the analysis with these two components that emerged from the factor analysis. The components were given the names 'job-improvement oriented' and 'learning oriented' and scores were calculated for each component. The mean score for 'job-improvement oriented' is 2.70, and the mean score for learning oriented is 4.02.

To answer the question of whether there is a difference among groups in their motivation to participate we conducted an analysis of variance for the categorical variables. *Table 1* shows the results of these analyses.

**Table 1: Type of motivation according to age, gender, qualifications and labour status**

	N	Component 1: learning oriented Mean	Component 2: Job-improvement oriented Mean
<i>Gender</i>			
Female	244	4,05	2,66
Male	181	4,02	2,73
<i>Age</i>			
16-24	44	4,15	3,28*
25-34	159	4,01	2,68
35-44	126	3,99	2,48
more than 45	96	4,08	2,71
<i>Qualifications</i>			
Compulsory Primary/Secondary Education	71	3,97	3,13*
Post-Compulsory Education	147	4,14	2,79*
University Education	207	3,98	2,47*
<i>Labour Status</i>			
Unemployed	181	3,96	2,96*
Employed	244	4,09	2,49*
Total	425	4.02	2.70

Note: (\*) statistically significant difference  $p < .001$

There were significant differences in the mean score of '*job-improvement oriented*' motivation in different groups of age, qualification and labour status. The results showed that the 16-24-year-old group had a significantly higher score in job-improvement oriented motivation (3.28) than the other groups of age ( $F=6.056$   $p < .000$ ). The eta-square coefficient was .053, which express a moderate association. Furthermore, the results showed a significant difference in the score

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mean of each group of qualification ( $F=11.09$   $p<.000$ ). The group with compulsory primary and secondary education had the highest score (3.13), followed by the group with post-compulsory education (2.79) and the group with university education (2.47). The eta-squared coefficient was .054, also expressing a moderate association. Likewise, there was a significant difference in the score mean between employed and unemployed groups ( $t=4.420$   $p<.000$ ). The unemployed group had the highest score in this variable (2.96). Cohen's was calculated yielding an effect size of 0.41, which is considered a moderate effect. None significant difference was found in 'learning oriented' motivation mean scores among different groups of the categorical variables. The gender variable has no statistically significant effect on scores for the two dependent variables in this sample.

## 5. Discussion

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In our study, in general, 'learning oriented' has a higher score than 'job-improvement oriented' suggesting that these adults in our sample are driven by their desire of gaining new knowledge in something that they are interesting in. None significant differences are observed in the mean scores of the groups studied or the 'learning oriented'. We may conclude from this that all individuals of the sample, regardless of their personal characteristics, are motivated to participate in training oriented towards finding out about an interesting subject that can be of benefit both in day-to-day life and at work.

However, if we look into job-improvement oriented motivation we found significant differences among demographic groups. This motivation is related to an external element such as labour situation and suggests an intention of attending a training course which could increase the possibilities of finding a job, changing a job or getting a better job. We may see this motivation as an instrumental attitude towards this type of training, as means of achieving other goals. For example, the youngest group has a high score in this motivation compare with the other groups of age. One possible explanation for this result is that young adults need to make up for certain areas in which they are needing such as lack of work experience or insufficient grades during their compulsory education, and this in turn might mean that they see work-related training courses as an opportunity to address this drawback.

In addition, the data shows that there are significant differences according to level of education. The findings suggest that adults with low level of qualification score significantly higher in job-improvement motivation than adults with high level of qualification, which in turn score low. Individuals with low educational qualifications might see this type of training as an opportunity to improve their

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position in the work market. Given the current socio-economic conditions, where qualifications are essential in the work market, having a lowed qualification is a clear disadvantage and these training courses are therefore seen by this group as a way of improving their position in order to obtain or keep a job or change to a better one. The low score in this variable for the group holding university qualifications could indicate that this type of training is less relevant for obtaining or keeping a job or changing to a better one.

Furthermore, the data show that there is a statistically significant difference in the mean score of the employed and unemployed groups. The unemployed group has a significantly higher score than the employed group in job-improvement motivation. This result suggests that unemployed adults are more concern than the employed adults in improving their background conditions which in turn could increase their likelihoods to find a job. We considered perfectly legitimate to attend work-related training driven by the motivation to improve future labour perspectives or prevent to lose current job. However, there is little evidence that this type of training effectively helps individuals to achieve this goal. For example, Chisholm et al. (2004) found that only 10% percent of adults who reported attending training to find a job or change a job succeeded in doing so as a result of their training. This issue raises other questions about fulfilment of expectation of work-related training.

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