Predictors of Deep Learning in Undergraduate Students

Juan L. Núñez [(1)], Celia Fernández [(2)], Fernando Grijalvo [(1)]

[(1)] Department of Psychology and Sociology. C/ Santa Juana de Arco, 1. 35004 Las Palmas. Spain. Tlf: 0034928458924. E-mail: juanluis.nunez@ulpgc.es

[(2)] Department of Education. C/ Santa Juana de Arco, 1. 35004 Las Palmas.

1. Introduction - Students use different strategies to learn new content. Sometimes they use more superficial methods, such as repeating the material again and again until they remember it, whereas on other occasions they prepare and organize the material, carrying out a deeper learning. In superficial learning, students adopt a passive role and in deep learning they try to relate the new information with the previous knowledge. The use of deep strategies entails remembering better the content and higher results. The aim of the present research is to identify the predictors of deep learning in undergraduate students. Participants were 276 undergraduate students of University of Las Palmas de Gran Canaria, 241 female and 29 male (6 missing values), with an average age of 21.80 years (*SD* = 2.93). The Spanish version [1] of the Assessment Experience Questionnaire (AEQ) was used. For this research, items were formulated in a positive sense and seven subscales were used as independent variables: quantity of effort, coverage of syllabus, quantity and quality of feedback, use of feedback, appropriate assessment, clear goals and standards, and learning from the examination. The dependent variable was the deep approach subscale.

2. Results and Discussion - Multiple linear regression analysis stepwise was carried out between the seven subscales of AEQ (independent variables) and deep approach (dependent variable). The results showed that four subscales enter into the regression equation and are able to predict positive and significantly ($p < .05$) the deep learning: quantity of effort ($\beta = .37$), clear goals and standards ($\beta = .20$), coverage of syllabus ($\beta = .14$), and quantity and quality of feedback ($\beta = .12$). Analysis of variance for regression showed a significant F value ($F = 33.91$; $p < .05$). The four variables explained 33% of the variance of the students' deep learning ($R^2 = .33$). Therefore, there is a lineal and significant relation between the four variables and deep learning, taking into account that the variable which carries the most weight in the regression equation is the students' effort.

3. Conclusions - Results of this research provide a significant contribution to the field of education. In this sense, teachers and educational institutions should reinforce to a large extent the effort and less the result, propose clear and specific objectives from the beginning, justify and think carefully about the importance of all the subjects of the program and provide an appropriate and adequate feedback on each learning task.

4. References

[1] J. L. Núñez y C. I. Reyes, *Estudios sobre Educación*, **26**, (2014) p. 63.