Motivation and Learning Strategies’ Evaluation in Higher Education Portuguese Engineering Students

Rita Melo, Rui Mendes, Isabel Sá, Isabel Gonçalves & Ana Lucas

Abstract

Intervention in Higher Education’s academic achievement benefits from the use of tools that can easily identify some of the variables present in students’ motivation and learning strategies. The Motivated Strategies for Learning Questionnaire (MSLQ) contains such tool and was the purpose adapted to Portuguese engineering students by analysing MSLQ scales acceptability and levels of internal consistency. All the original MSLQ have been considered for a 28-item final version that includes different undergraduate courses. Students could then choose the course they attended in order to complete the questionnaire. True, and the original MSLQ, in which student could choose a specific course to the course was excluded from the final version. New students were included in the sample. Competitors’ results were better than the original. Besides, such results showed that general tendency to be less committed as regards to the course given, increasing the possibility of subjective answers. No self-selection bias was found. MSLQ’s sample was divided into three groups - Easy, Difficult and Random courses. MSLQ’s original scale structure was divided into 15 scales: A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich, P.R. & De Groot, E. (1990). Baltimore: Brookes Publishing Co. The MSLQ questionnaire was translated to Portuguese and subsequently retoversed by a certified translator. The final version of the 33-item MSLQ was then used to evaluate the internal consistency of the scales that compose the MSLQ. In what concerns scale structure, a factorial analysis was conducted. On the other hand, besides making the collection of surveys less time consuming, this procedure also made it possible to obtain higher values with the same data and, simultaneously, values closer to the original study. In the future, we plan to evaluate the internal consistency of scales that include a larger number of items, and compare them with the internal consistency structure found in this study. The present research adapted an instrument that has proven to be a useful tool for screening students’ motivation and learning strategies. The MSLQ contains 81 items and is divided in two main parts: motivation and learning strategies, covering a set of 15 scales. The MSLQ was initially reported in 1990 and retains approximately 15 to 20 minutes to complete (Pintrich & De Groot, 1990). Each item was evaluated on a 7-point Likert scale, from 1 (‘not at all true for me’) to 7 (‘very true for me’). The result is then a resolution scales that assesses students’ beliefs and values in a course and their intrinsic goal orientation, Extraneous Goal Orientation, Task Values, Control of Learning Belief, Self-efficacy for Learning and Performance and Test Anxiety. The learning strategies scales assess the student states of different cognitive and metacognitive strategies, as well as resource management. They are Training/Repetition, Elaboration, Organization, Critical Thinking and Metacognitive Self-regulation. Time Management and Study Environment, Effort Regulation, Peer Learning and Help Seeking.

References

Pintrich, P. R., Smith, D. A., Garcia, T., & McKeachie, W. J. (1991). Motivated Strategies for Learning and Performance, revised edition. Boston: Allyn & Bacon. Pintrich, P. R. & De Groot, E. (1990). A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich, P.R. & De Groot, E. (1990). Baltimore: Brookes Publishing Co. The MSLQ questionnaire was translated to Portuguese and subsequently retoversed by a certified translator. The final version of the 33-item MSLQ was then used to evaluate the internal consistency of the scales that compose the MSLQ. In what concerns scale structure, a factorial analysis was conducted. On the other hand, besides making the collection of surveys less time consuming, this procedure also made it possible to obtain higher values with the same data and, simultaneously, values closer to the original study. In the future, we plan to evaluate the internal consistency of scales that include a larger number of items, and compare them with the internal consistency structure found in this study. The present research adapted an instrument that has proven to be a useful tool for screening students’ motivation and learning strategies. The MSLQ contains 81 items and is divided in two main parts: motivation and learning strategies, covering a set of 15 scales. The MSLQ was initially reported in 1990 and retains approximately 15 to 20 minutes to complete (Pintrich & De Groot, 1990). Each item was evaluated on a 7-point Likert scale, from 1 (‘not at all true for me’) to 7 (‘very true for me’). The result is then a resolution scales that assesses students’ beliefs and values in a course and their intrinsic goal orientation, Extraneous Goal Orientation, Task Values, Control of Learning Belief, Self-efficacy for Learning and Performance and Test Anxiety. The learning strategies scales assess the student states of different cognitive and metacognitive strategies, as well as resource management. They are Training/Repetition, Elaboration, Organization, Critical Thinking and Metacognitive Self-regulation. Time Management and Study Environment, Effort Regulation, Peer Learning and Help Seeking.