



What are the Barriers to Independent Study and Learning in First Year Undergraduate Engineering Students?

Robert Morris

robert.morris@dit.ie

Dublin Institute of Technology (Ireland)

Abstract

This mixed method case study was carried out in the Dublin Institute of Technology, Ireland and was conducted with the co-operation of four experienced lecturers of engineering and three groups of first year undergraduate engineering students.

The main aim of the research was to identify factors which represent barriers to the independent study and learning of first year engineering students.

Many first year engineering students do not return to college for the second year of their programmes. Many reasons for this are identified in the research, including the failure of students to pass assessments and exams as a result of the lack of independent study and learning. For this research qualitative interviews were carried out with four experienced lecturers to capture their views and experiences of the study and learning habits of first year students. The data gathered during these interviews, in conjunction with my own personal experiences, and knowledge gathered from the research literature on the subject, served to guide and inform the selection of the questions which were used in a student survey.

The Quantitative student survey consisted of two parts, the first included questions relating to the profile and study habits of the students, the second employed a set of questions titled "a brief measure of learner autonomy". This resource provides a numeric value for the student's learner autonomy which provided the mechanism used to explore the relationship between the level of autonomy of some students and their profile and study habits.

The analysis of the data gathered provides a detailed insight into the views of the engineering lecturers and the factors which represent barriers to the first year students study and learning.