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Robert Morris

Technological University Dublin, robert.morris@tudublin.ie

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Are the study habits of first year undergraduate students influenced by where they live while attending college?

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Robert Morris

Lecturer

Dublin Institute of Technology

ABSTRACT

This article is based on an element of research for a Masters thesis into the factors which determine success or failure in a specific first year cohort. One aim of the research was to establish if living away from the family home influences the study habits of first year undergraduate engineering students and impacts on their subsequent chances of success in both coursework and examinations. Data for the study were gathered largely from a survey of first year student cohorts. Interviews with four experienced lecturers and a review of the literature on the subject served to guide and inform the selection of the questions which were used in a student survey. The findings provide an insight into the factors which represent barriers to students developing autonomous study and learning skills. This article deals specifically with the factors associated to the students' living arrangements and study habits.

Key Words, First year students; study habits; barriers to study; students living arrangements

Introduction

This mixed method case study research was carried out in the Dublin Institute of Technology, Ireland with the co-operation of four experienced lecturers of engineering and three cohorts of first year undergraduate engineering students. The impetus for the study was the established fact that 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 examinations as a result of the lack of independent study and learning skills. The causes of non-progression, and the strategies which might be employed to address the phenomenon, have been the subject of vast quantities of research by the international education research community. Yorke & Longden (2004) provided invaluable guidance and insight to researchers with an interest in this topic. The fact that there is such great interest in the causes of non-completion and the improvement of retention of students signals a high level of commitment to the students by education professionals, the organisations they work in, and the bodies which govern them. This is reflected in how Becker (1975) views the development of education on an international scale, when he suggests that a "human capital" approach has been adopted by many of the world's governments, which can be summarised as viewing the success of each economy in terms of the degree to which its labour force is educated. It can be taken as a given





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that the concern about student drop-out rates will manifest in states which apply the human capital model to education and training.

Professor Vincent Tinto, one of the world foremost researchers of the subject of student retention, while making a presentation titled "Enhancing Student Retention: Lessons learned in the United States" at the National Conference on Student Retention, Dublin (Tinto, 2010) suggested that the United States of America (USA) is currently undergoing a paradigmatic shift in how institutions think about their role in promoting student success. Tinto suggests that Barr & Tagg (1995) capture the essence of this shift by describing it as the movement from an instructional paradigm to a learning paradigm. It involves shifting the focus from how educators instruct and teach students to how they can help the students to learn. The learning paradigm being adopted expands the lens of enquiry about student learning, helping to shape the environment and conditions that promote student progression.

In 2006 the Higher Education Academy funded a large scale review of the literature around the first year experience in the UK demonstrating that the issues of attrition and retention of first year students is high on the list of is priorities (Harvey et al, 2006). This review suggests that a large number of first year students in the UK expressed a considerable dislike for the experience they encountered of being taught or instructed rather than having their learning facilitated. This is significant as it relates directly to the paradigmatic shift described earlier which is perceived by Tinto to be occurring in the USA.

So, why this research?

My research tried to test the hypothesis that students are more likely to succeed if they developed both personal independence and independent study skills: that individual autonomy has a direct relationship with learning autonomy. I took living away from home as a proxy for personal independence and autonomy for the purpose of setting up and testing the hypothesis, with a view to exploring the influence the students' living arrangements have on their study and learning habits. 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. As mentioned earlier the data gathered during these interviews, along with my own personal experiences and knowledge gathered from the research literature on the subject, were used to guide and inform the questions selected for a student survey.

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





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the subsequent student survey provided another perspective. Before presenting the data additional ideas from the literature and brief contextual information is provided to assist the reader.

The study

This research focused on the study habits of first year undergraduate engineering students. Hart (2005) suggests that the search and review of the literature for a research study is a critical evaluation, analysis and synthesis the knowledge that exists around the research problem. The literature review, not only seeks to explore in detail of all aspects of the research question, it also seeks to uncover gaps in the knowledge that exists about the research problem. The initial stages of a literature review for this study helped to inform the selection of the research design and data collection methodology used.

The study was conducted in the College of Engineering and the Built Environment (CoEBE) which now has 9 schools through which it offers 26 undergraduate engineering related programmes. The phenomenon of first year attrition is not unique to the DIT. A study conducted by the Higher Education Authority (HEA) (Mooney et al, 2010) shows that for the academic year 2007/2008 the proportion of first year undergraduate students studying at Irish Institutes of Technology who did not progress to the second year of their programmes was 22%. The non-progression figure across all third level institutes in Ireland was 15% (Mooney et al, 2010). Many initiatives have been put in place by higher education institutions to provide support and guidance to at-risk first year students. Many institutions have put in place student support services staffed by dedicated staff who provide advice and guidance to students on a wide range of issues.

In order to establish if independent study and learning suited the learning styles of engineers a review of the literature around the learning styles of engineering students was conducted. Felder (1998) discussing learning styles in engineering students suggesting the following:

- Active learners learn things by working things out or by working with others
- Reflective learners learn by thinking thing through or working alone

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- Sensing learners are orientated towards facts and procedures
- Intuitive learners are orientated towards theories
- Visual learners prefer visual presentations of presented material
- Verbal learners prefer written or spoken explanations
- Sequential learners learn in incremental steps and
- Global learners are system thinkers who like to learn in large leaps.

O'Dwyer (2008) examined these learning styles in a group of 35 students studying electrical engineering at the DIT. Using the Index of Learning Styles (ILS) (Felder & Soloman, 1991 as cited in O'Dwyer 2008) which is a 44 item questionnaire with multiple choice answers (2 per question), the findings indicated that there is no single specific learning style that can be attributed to engineering students. The foremost learning styles which emerged in the group were the active and sensing followed by visual and sequential learning styles. So, form the perspective of my study, I could factor out learning styles from the list of main reasons for non-progression.

The causes of attrition in first years

Tinto's Integration Model Tinto (1993) is based on the theory that the failure of first year students to integrate into either the social or academic communities in college can often cause them to re-evaluate the goals and expectations they had set for college life. This often results in them withdrawing from college. It is widely accepted that Tinto's work and the research around it resulted in the acknowledgement by third level institutions worldwide that there is a need to ensure that a suitable blend of academic and social experience are accessible to not just first year students, but to all students. Further studies by Braxton et al (2000) and Braxton & Hirchy (2004) as cited in Yorke & Longden (2004) examined the commitment and integrity of institutions, contributing considerably to the recognition of the value and importance of the adherence of teachers and administration staff to mission and values of their institutions. That study resulted in the greater institutional commitment to student welfare and to the support of first year students at-risk of withdrawal or failure.

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The first year experience

Yorke & Longden (2008) tells us that the majority of students who leave first year leave have left by the end of the first semester. It is fair to conclude that the early experiences of these students have a significant influence on whether or not they will stay at college. Transitional issues or factors which contribute to student attrition which can be related directly to the early experiences of these students are generally as follows: unpreparedness, unawareness of the challenges, lack of commitment, lack of integration, and poor attendance. Views about whether or not students are negatively affected academically by being in employment are mixed. Curtis & Sham (2002) suggest that students missing lectures due to being in employment results in lower assessment scores, but that the students do benefit the experience of working by developing transferrable skills, greater understanding of the world of business, and an increase in confidence. Choy (2002) shows that students who worked more than fifteen hours per week had lower persistence rates. Working part-time on Campus for the entire first year in college resulted in significantly higher retention and higher academic achievement. The impact of the student being in employment is discussed further in the next section.

Researcher context

As an Assistant Lecturer with the School of Manufacturing and Design Engineering which is part of the College of Engineering and the Built Environment (CoEBE) at the Dublin Institute of Technology (DIT) since January of 2001, I have been engaged in the delivery of modules on undergraduate Mechanical, and Building Services Engineering programmes. Students are required to complete individual assignments as part of the assessment for these modules. In recent years I have become increasingly concerned about the rising numbers of first year students on these programmes who did not complete and submit the individual assignments. Despite offers of support and regular reminders of the deadlines for completion of the work, many of these students simply did not present any work. The consequences of not completing these assignments were highlighted to the students, to no avail. Many educational theorists cite academic difficulties and lack of commitment to study as causes of non-completion of first year students. As an educator I have a natural curiosity about the reasons why some of these students do not engage in the independent study and learning required for the completion of these assignments, and who subsequently fail to progress. My hunch was that the lack of independent study skills contributed to non-completion of course work and that students who live at home seem less likely to reach learning independence in





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sufficient time to succeed in their continuous assessment assignment. Until that point there were no data to support that hunch. Thus this research.

Research puzzle and aim

In light of the context outlined above the main aim of this research was to closely examine the puzzling relationship between the students' living arrangements and their study habits with a view to establishing if living away from family home has any influence on the students' study habits and how they prepare for individual assessments.

Research objectives

The objective was to examine and compare data gathered from two sample cohorts of first year students: comparing students living in the family home while attending college with students who were not. Among the aspects examined and compared were the following:

- The amount of time the students from each group spend studying per week.
- Where and when the students from each group study
- How the students from each group prepare for assessments and individual assignments.

The limitations of the study and the possibilities for generalising from the data are acknowledged from the outset.

Research design and implementation

Interviews with academic staff teaching the student cohorts under study were conducted between dates, November 2010 and January 2011. While the findings from the interviews were not allowed to have significant influence on the questions, and a strong focus was maintained on the original research question. The student survey was generated in an online format. There were two reasons for this. The first was to take advantage of surveying software which aids the collection and analysis of quantitative data. The second was to facilitate completion by students during a session in a computer laboratory without the need for paper documents and complicated logistics of distribution and collection. An online survey was also considered to be more confidential and more likely to attract higher completion numbers.





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Findings

The full findings of the research are available in the Masters thesis itself. The data extracted for presentation here refer only to the aspect or living arrangements and the cause-effect connection with increased chances of success and progression – the hypothesis being that students living away from home are more likely to become independent learners and to complete course work autonomously.

The research findings provide an interesting insight into the study habits and attitudes to preparation for individual assignments and assessments from both groups of students, those living at home and those who were not, thus bearing out the initial hunch.

As illustrated below in Figure 1 the research tells us that students living away from home spend considerably more time studying alone. The findings concur with both my personal experience and one of the interviewees. When asked if he thought, students living away from home was a barrier to their learning he indicated:

"Students tell me they have a lot of time on their hands in the evenings, I'd imagine that they would use this to do a bit of study or to do assignments".

It could be argued that living away from home takes a considerable degree of maturity and independence. This maturity is reflected in the amount of time spent studying.

| | Living at home | Living away from home |
|-----------------------------|----------------|-----------------------|
| Living Arrangements | 56% | 44% |
| 0 – 2 hours study per week | 46% | 32% |
| 2 – 4 hours study per week | 47% | 50% |
| Over 4 hours study per week | 7% | 18% |

Fig.1

Figure 2 below shows the following:





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- that students living away from home are more likely to spread the work for up-coming assessments and assignments over the time available than students living at home
- that students living away from home study more on week days
- that students living away form home are more inclined to use the college library for study.

| | Living at home | Living away from home |
|---|----------------|-----------------------|
| Spread the work for assignments over the time available | 41% | 59% |
| Study on weekdays | 39% | 61% |
| Use library in college to study. | 45% | 55% |

Figure. 2

What is not in the study is the completion rate since the study groups was still in its first semester. Further follow-up is required to establish of there is an actual correlation between living away from home and likelihood to succeed in assessment and thus to progress.

Concluding comments

So, what can we conclude from a single study such as this? Is there a question about how to facilitate more on-campus time for all students? Should there be obligatory library time to encourage higher rates of submission of continuous course work? Or, is there a more complex question about the second level schooling culture of terminal, high-stakes examination with no fostering of autonomy and self-reliance? If the latter is a major factor then it is probably beyond the giving of higher education to change the culture!

While the research conducted here suggest that, for this sample group, living away from the family home while attending college has had a positive influence on their study habits, it does not provide a solution to the initial problem of non-progression which prompted the research in the first place. It does not necessary answer the **So What?** question. But it might prompt researchers and student support services to



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re-focus away from the obvious and to look for other, less obvious correlations between student life styles and non-progression.

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