A Strategy For Reaching Students And Increasing Their Motivation

Dr Zlatko J Kovacic, John Steven Green
The Open Polytechnic of New Zealand
School of Information Science and Humanities
Lower Hutt, New Zealand

SUMMARY

Recently, New Zealand government policy has placed a renewed emphasis on students completing courses, by changing the way tertiary institutions are funded. This has resulted in increased importance being placed on this aspect in the administration and teaching of the courses. According to Seidman's retention formula for student success, early and regular tutor contact makes a significant difference in keeping students motivated and bringing them to the classroom. Nowadays communication technology by itself is not a guarantee of a successful learning experience. It is the way we use this technology, the timing of interactions and an optimal mixture of online tools that makes an impact on student persistence and retention. In this paper we are addressing these issues and providing data to show how effective our approach was.

INTRODUCTION

Student retention in higher education has been an important issue for decades. The early works of Tinto (1975) and Spady (1970) triggered a flux of empirical research focused on institutional factors and students' social and academic integration with the academic institution. In the last couple of years there has been an increasing level of interest in student retention rates around the world (for UK see for example Longden, 2002; for New Zealand see Wilson, 2002). We think there are two reasons for this: a significant increase in the number of adult students entering higher education and the exposure of the higher education system to market forces, i.e. the establishment of a stronger relationship between government funding and academic performance at institutional level. The New Zealand tertiary education system is not an exception to this worldwide phenomenon.

New Zealand government policy has recently placed renewed emphasis upon students completing courses rather than enrolling on courses. This has been achieved by foreshadowing changes to the way tertiary institutions will be funded in the

future (Ministry of Education, 2003). The thinking of institutions has been focussed on student retention and performance. This paper forms part of a much larger study of ways of achieving this objective. Our broader study seeks to determine the impact of various aspects of education within our distance environment. We wish to increase and to speed up academic and social integration of students to their new learning environment at The Open Polytechnic. This paper examines the proactive motivation of students prior to the course start and the problems we encountered.

There is a period of time between the student enrolling on a course and receiving the course material. In some cases this is a matter of weeks. For some it is a matter of months due to early enrolment. This period of time is called the "Gap". It could be suggested that we are penalising students for good planning by delaying their receipt of the course materials. Unfortunately this delay may often be caused by course revisions, essential to keep the course materials current. This also affects online students since the course is not usually available to them until the start date of the course.

The paper begins with a description of the learning environments of the computer concepts course and goes on to discuss the theoretical framework we used, based on Tinto's retention model and on Seidman's revised retention formula. There follows a description of "the Gap" in some detail. We describe the institutional and technical constraints we encountered and discuss our proposed strategies for dealing with them, ending finally with a list of recommendations for future action.

LEARNING ENVIRONMENT

This paper presents the results of research with a group of students on a Computer Concepts course at The Open Polytechnic of New Zealand in 2003. The course uses electronic forums and bulk email as the main means of learning support in addition to telephone and mail. Support is provided both by the lecturer and students via the forum. Participation in the forums is an integral part of the assessment. With a semester length of 17 weeks the course attracts upwards of 180 students per semester.

Weekly bulk email focusing on the work the student will be studying in the following week is a key teaching strategy employed in the course. A questionnaire routinely delivered to students at the end of courses confirmed that our students regarded such bulk email as an effective and much appreciated method of student contact. This contact was even preferred over direct contact with the lecturers. This preference for bulk email means classes of 200 students can be dealt with easily, with little additional effort required when this number is increased. In Table 1 we present the results of the survey from Semester 2 and 3 in 2003 (with an average response

rate of 50%). Figures in the last three columns show the mean value of the student preferences for particular methods of communication on the course (measured on a scale of 1 to 5). Surprisingly, in both semesters, the mean value for the weekly bulk email was almost the same (3.84 and 3.81 respectively). Figures in the brackets represent the number of respondents to the particular question in the survey.

Method	Total	Semester 2	Semester 3
Weekly bulk email	3.83 (80)	3.84 (48)	3.81 (32)
Interaction with tutors	3.60 (67)	3.74 (38)	3.41 (29)
Discussion forum	3.29 (76)	3.47 (43)	3.05 (33)
Interaction with students	2.65 (54)	2.76 (34)	2.48 (20)

Table 1: Student preferences for the method of communication

Although a simple strategy we encountered several hurdles in its implementation due to both technical and institutional constraints. We first encountered these constraints in the "gap" where we are seeking to motivate and integrate students socially and academically with their peers and the institution prior to the course using bulk email. This strategy is also compatible with Chickering & Gamson (1987) good practice in undergraduate education, which included encouraging contact and cooperation between students and faculty, and communicating high expectations.

THEORETICAL FRAMEWORK

Our gap analysis and strategies to motivate and increase students' early commitment to their study on this computer concepts course were based on Tinto's model of retention (Tinto, 1993) and Seidman's revised retention formula (Seidman, 1996; Simpson, 2003). Tinto's model was initially developed for modeling students' retention in higher education contact institutions. Tinto argued that higher levels of student integration into the academic and social communities lead to greater institutional commitment. That would eventually have a positive impact on student retention. Numerous empirical studies supported his hypothesis. Evans (1999) has provided a detailed list of these empirical research studies that used Tinto's model as a theoretical framework. On the other side, Tinto's model has been questioned as a good conceptual model for adult, part-time students in a distance learning environment. As McCubbin in his 2003 overview of the critiques of the Tinto model summarises, '… while the Tinto model may be a reasonable model of the attrition behaviour of non-traditional students, the social integration aspect of the model may not be a significant predictor of attrition behaviour'. Though there are arguments against using Tinto's model for modeling retention in distance education (McCubbin,

2003) this model has been widely used to describe and test students' behaviour in respect to retention. An attempt to develop a conceptual model of retention for adult learners studying at a distance was made by Kember (1995) with mixed results. His model has been challenged both at conceptual and empirical level (Woodley, de Lange & Tanewski, 2001). Dreaver (2003) also discusses retention models for distance and open learning, giving some insight into the New Zealand context.

Seidman (1996) also used the Tinto model of retention to recommend a set of actions that would eventually increase the retention rate. We are using Seidman's revised retention formula (Seidman, 1996; Simpson, 2003) to summarise proactive and reactive retention activities within The Open Polytechnic in general, and as the basis for our practical approach on this course in particular. According to Simpson (2003) the modified Sediman's retention formula looks like this:

$$\text{Retention} = \text{EId} + (\text{E} + \text{C} + \text{I})\ \text{PaC} + (\text{Inst} + \text{T})\ \text{RaC} + \text{ExtSupp}$$

where R = Retention, EId = Early Identification of vulnerable students,
E + C + I = Early, Continuous and Intensive, PaC = Proactive contact
and Inst + T = Institutional + Tutor, RaC = Reactive contact, ExtSupp = External support.

The early identification of vulnerable students requires a statistical model based on the characteristics of students who were unsuccessful in past semesters. For example, in the UK Open University early identification of vulnerable students is based on a logarithmic regression analysis (Simpson, 2003). Such a model could then be routinely used to identify "at risk" students at a very early stage, usually at the pre-enrolment academic guidance phase. Apart from student past academic performance other factors were also identified as relevant. Evans (1999) provides a review of these factors and the empirical findings of other authors, grouping them into the following categories: student demographic and psychological characteristics, prior performance (secondary school results), social and institutional factors.

At The Open Polytechnic we don't have a formal statistical model for the identification of "at risk" students. For the purpose of this paper, students at the pre-course stage were identified as vulnerable if they did not have working email. In other words, we treat all students as "at risk" if they are not contactable. Contactability is a pre-condition for any communication, administrative and academic support, and building social, institutional and academic integration. Without this ability the lecturer is unable to provide the regular proactive guidance which is particularly important to less able students. Such students are made more vulnerable by being uncontactable.

Proactive contact by the lecturer, with reactive action where problems are found, by both lecturer and the outbound call centre, were key to resolving the problem of uncontactability. This combination of proactive and reactive contact set up the students to receive regular bulk emails throughout the course. This provision was in addition to peer and lecturer support via the discussion forums in our electronic forums.

In this paper we are focusing on proactive contact of both lecturers and the outbound call center during the period before the course starts and before students receive the course material.

GAP ANALYSIS

The period of time between the student enrolling on a course and receiving the course material is called the "Gap" (shaded area in Figure 1). For some students "the gap" is a matter of weeks, even months due to early enrolment. As a part of the orientation process we contacted students using various communication channels such as weekly bulk emails, phone calls, both from lecturers and the outbound call centre, before the course started to help them:

- interact with peers,
- familiarise themselves with the learning environment
- learn about The Open Polytechnic's academic standard
- fix any technical problem that may arise

These early contacts are in the line with Tinto's model of social and institutional integration and our expectation is they will increase student motivation. It is hypothesised that student motivation rises in anticipation from the first time they hear about the course until the course material arrives (motivation curve on the Figure 1). Thereafter student motivation slowly falls as they get to grips with the first piece of assessed work until they receive positive lecturer feedback on the work. After receiving this feedback student motivation receives a welcome boost before it slowly drops off in anticipation of more feedback from the next assessed work. This cycle continues until the final exam, marking the end of the course.

The intended result of our proactive intervention on all fronts, both in "the Gap" and during the course, is to provide extrinsic motivation and guidance as the student begins each weekend, the time when most of our students study. This theoretical curve is shown as "motivation curve target". While we may not achieve this with all students equally, it is intended that overall this will result in an increase in student retention.

A student arriving late in the cycle must hurriedly catch up with the rest of the class to become in phase with it. Unfortunately with the time demanded to achieve this in a course already requiring 10 hours of study per week, this may be too great for some students, even the more able, simply because of the other demands of family and work in their life. We deal with this problem of "late comers" in another paper in the broader study.

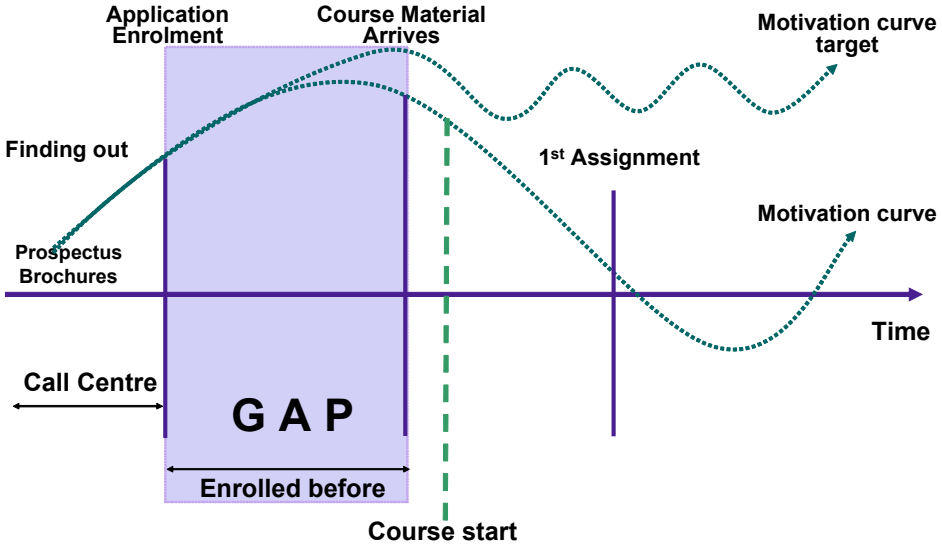

Figure 1 – Motivation curve and the gap

We asked ourselves, what can we provide immediately after enrolment to engage students, prepare them for the course, raise their motivation and generally support them in "the gap"? Bulk email offered the easiest method of communicating with our future students without placing undue pressure on staff already working on earlier courses.

INSTITUTIONAL AND TECHNICAL CONSTRAINTS

Lecturers and learning support group work proactively to increase social and institutional integration and to enhance learner motivation. However, in some cases their efforts may be diminished because of institutional constraints imposed on the national educational system by Government, or because of constraints inherent in the technical infrastructure the academic institution is using for enrolment and student support. These constraints could make "the gap" even wider introducing an entirely new problem, i.e. late comers. These students will receive the course material later, after the course started (on the Figure 1 the right hand side of the shaded area is moved to the right after the course start date). We can hypothesise that the level of motivation of these students is much lower that for other students when they realise the difficulties in catching up with the rest of the class.

The Online Campus is a virtual classroom (virtual learning environment) of The Open Polytechnic. It has a discussion forum, a chat room, electronic submission of assessments, a variety of learning resources and a bulk email facility. For obvious reasons bulk email does not work if the email address is missing, incorrect or the mailbox is not regularly maintained. The Open Polytechnic does not provide students with an institutional email address. Many of our students use Internet based email such as Hotmail or Yahoo, which has limited storage. Students who used this mailbox infrequently, found that their mailbox was filled with spam or junk email and were consequently unable to receive our bulk email, which was then returned to us.

In other cases students had omitted their email address from the enrolment form, did not have email addresses set up, did not provide a home email address or the email address provided was incorrect. Bulk email is normally sent to the students' home email address, but often students only provide a work email. Unfortunately institutional data input clerks did not initially realise the very real importance of entering the work email address into the home field where only one email address was provided. A broader examination of the major courses in the Open Polytechnic revealed that this was a Polytechnic wide phenomenon with up to 31% of the class in one case not having working email addresses (20% on average for the courses in the New Zealand Diploma in Business). This astonishing information was passed to management and the enrolment centre for action. In addition to students' email problems, late enrolling students meant that lecturers had to repeat the process several times to resolve the same problems. It took several weeks to resolve the problem, with some students resisting all attempts to contact them. Again this was drawn to the attention of the management and enrolment centre for action.

PROPOSED STRATEGIES

What did we do to socially and institutionally integrate students, increase their motivation and bridge "the gap"? Figure 2 summarise the type of actions and their timing of both faculty and learning support group.

Faculty

Faculty members sent out an initial bulk email 4 weeks prior to the start of the course. This email is shown below:

Good morning!

My name is John Green and I will be the Course Leader for the 150 Computer Concepts course in Semester 1 2004.

(Contact details for the tutors)
****

(Encourage and instruct)
I've noticed that some of you are already active in the forum introducing yourselves in the study teams. Well done guys this is awesome!

For those of you that might be a little vague on what to do, here are some instructions:

(Initiate first contact with tutors)
You need to send an introduction to your tutor by email. This serves two purposes, first it gives us a copy of your email address, secondly it gives us some idea about who you are and what your study goals are.

(Describe study groups)
We then ask you to post your introduction in your study team (sometimes referred to as "colour group") in the forum. Your study team is assigned to you according to your Internet services provider - so for example if your email address is @xtra.co.nz you belong to Black group. The description in the forum of each group contains the information you need to find your study team (colour group).

We hope you'll really enjoy getting to know each other in this run up to the course, which starts on 22nd February. You will be receiving several emails before the start of the course - so keep an eye out for them. They will contain heaps of useful information, tips and instructions - read them carefully!

(Encourage peer-to-peer contact and support)
Once you have introduced yourself in your study team feel free to continue to chat to each other in the study group, in the casual chat topic, or the chat room. Your mission is to find others who think like yourself, people who come from similar industries, or even people who live in the same geographical area that you could meet up with on a regular basis.

You will be working with your study team for the whole of the course, asking each other questions and sharing your work for each activity with your study team. You'll only move into the other part of the forum if you have a question for one of your tutors. Always ask questions in your study team first of all. If they can't answer you then your tutor will be able to.

In week 12 onwards you will be called upon to discuss all sorts of technologies as part of Project 3. Bear this in mind - it is important that you have an excellent working relationship with the others in your study team.

Remember you CANNOT complete this course on your own. Enjoy the course everyone and best wishes for your future success.

Regards

The intention of the email is to invite and encourage students to interact with each other informally, and to visit the online forum to familiarise themselves with its layout and function. Students whose emails were returned to us often had no home email listed. The students were connected to the rest of the class by moving the work email into the home email field in the database. The remaining students were telephoned to determine where the problem lay. This combination of actions reduced the rogue emails to 4%. It was found to be impossible to reduce this percentage further either by phone or letter contact. It was thought that this percentage represented students who had little intention of actually studying, or people

intending to shortly withdraw or transfer to a different course, for a variety of reasons.

To assist lecturers in their understanding of the students' learning needs and to engage the students with the course, to build understanding for the learning styles of others, students were asked via bulk email, print based newsletter within the course materials, and via a postal mail-out to discover their learning styles profile based on the Felder-Solomon (2003) Index of Learning Styles instrument (an online questionnaire at the North Carolina State University web site). Future emails from the students would include this learning style profile in the signature.

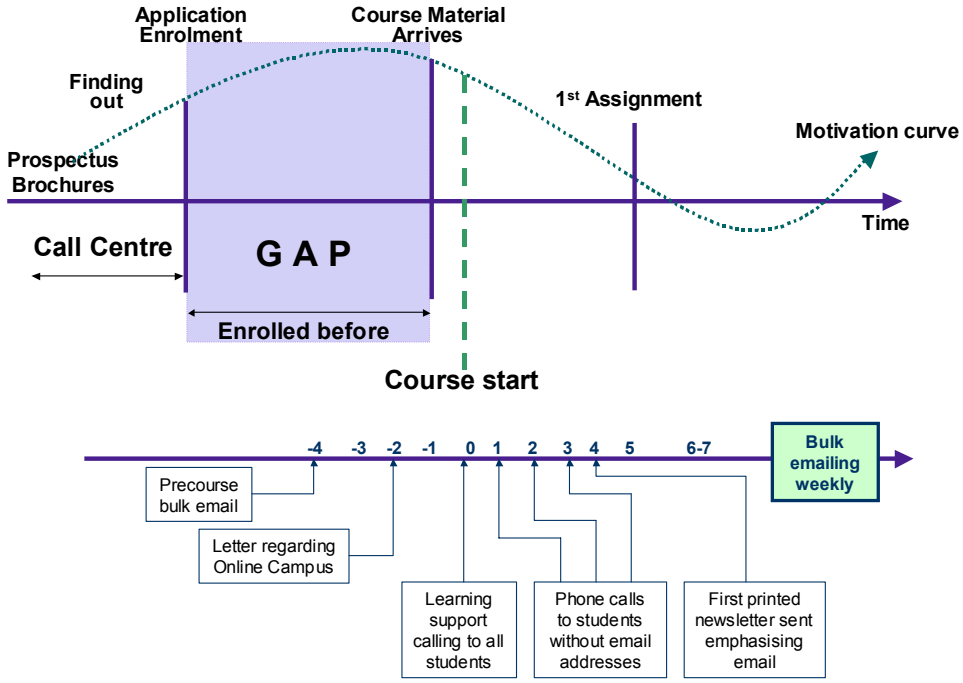

Figure 2 – Proactive and reactive contact (faculty and learning support group)

Learning Support

The Polytechnic's learning support team operates an outbound call centre during weekday evenings when students are at home. Following a script, they perform a series of checks regarding course material, email, providing advice for those who have not yet got an email account. The callers also determine if the students are familiar with the operation of the Online Campus, our online forum, again providing advice where necessary. These calls are the way of integrating the students with the institution and to enhance their motivation.

CONCLUDING REMARKS

The current study emphasise the importance of proactive and reactive contact in "the gap" period to increase motivation, academic and social integration and commitment in the computer concepts course. Early, continuous and intensive proactive contacts both faculty and learning support team resulted in significant, over 16% reduction of students who were not contactable via email. We see the issue of contactability as necessary but not a guarantee of successful learning and teaching.

The following is a list of recommendations and actions we can take to further increase academic and social integration and motivation of students what should result in their better academic performance.

1. Study material should be sent earlier regardless of any financial considerations. Alternatively the first few modules of the course may be posted on the public website of the course. This provides the additional benefit of giving potential students a preview of the course material.

2. Any actions taken must consider the balance of student and lecturer workload with the need to motivate the students. Both students and lecturers will be involved in studying or marking of earlier courses.

3. Generic orientation and induction programmes organised by the learning support team are delivered in the first few weeks of the semester by means of a traveling roadshow format. This is the optimum time as prior to this the students are likely to be focusing on examinations for previous courses.

4. Academic counselling and pre-enrolment advice to continue to be delivered via the Degree and Diploma Coordinators and the Learning Support team.

5. Students attending Learning Support workshops should be given ample opportunity to meet with others in their region in order to establish social networks.

6. Virtual regional study teams should be supported via the Online Campus forums, both during courses and between courses.

7. The learning support team and peer support in regional and other peer support teams enable us to establish 24/7 support.

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