Getting them thinking: The role of the student questionnaire in promoting academic and social integration

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Abstract

This paper reports on the development and administration of a questionnaire whose purpose was to evaluate the effectiveness of teaching/learning by examining students' perceptions of learning. The questionnaire was administered to adult pre-university students. Eighteen mature age students completed nine open-ended questions about how they, other students and the lecturer influence their learning. Participants identified the support and encouragement from other students and the lecturer, and planning, preparation and organisation as key factors influencing their progress. These findings are in line with Tinto's (1993) argument that what happens in the classroom impacts both social and academic integration. The findings also confirm the assumption of needs theories that basic psychological needs such as the need for belonging and self-worth must be met before engagement and learning can take place.

This article has been peer-reviewed and accepted for publication in *Studies in LEID*, an international journal of scholarship and research that supports emerging scholars and the development of evidence-based practice in education. ISSN 1832–2050 © Copyright of articles is retained by authors. As an open access journal, articles are free to use, with proper attribution, in educational and other non-commercial settings.

Introduction

Given that "Over a third of the students who enrol in a university program do not progress to graduate" (Bowser, 2005, n.p.), accessing ways and means to reduce this figure is imperative for the sake of both students and the institution. It can be argued that questionnaires can contribute to the issue of attrition both by identifying student responses to their study experiences and by instilling in them a reflective disposition that might assist in encouraging them to seek appropriate intervention before dropping out of their studies. In this sense, questionnaires play a part in students' academic and social integration into the learning environment. This paper reflects upon the development of just such a questionnaire, focusing on the cooperative approach in which the questionnaire form was generated and on its role in having a positive impact on students' attitudes. We begin with an exploration of the conceptualisation of and debates surrounding student attrition. We then move to a reflection on the development of a particular questionnaire aimed at eliciting information about students' perceptions of their learning and its impact on their academic and social integration. We follow this with a discussion of the results and implications. While a questionnaire has certain limitations, it can contribute significantly to the fostering and maintenance of a cooperative learning environment focused on students' academic and social integration into the university environment.

Student attrition

The issue of student attrition has been considered by practitioners and researchers for several decades. Tinto's (1975) early study posited that academic and social integration influence attrition. Here 'academic' refers to the acceptance and the observation of standards at tertiary institutions and 'social' alludes to "the degree of congruency between the individual students and the social system of a college or university" (Braxton, Bray, & Berger, 2000, p. 215). While Tinto's model has attained widespread acceptance, researchers have called for both wider and deeper research.

To this end, Tinto (1993) isolated specific factors influencing academic and social integration: learning communities and discourses about learning. A learning community is one based on cooperation as opposed to competition. In a cooperative learning environment, people learn together, both with and from one another. Led by the grandfathers of cooperative learning, the Johnson brothers, researchers and practitioners have found that the ability to cooperate depends, amongst other factors, on interaction and organisational skills (Cohen, 1986; Johnson & Johnson, 1994; Kagan, 1994; Sharan & Sharan, 1992). This research also proposes that the development of interaction and organisation skills can be accelerated when people reflect, individually and collectively, on their actions and achievements (Bellanca, 1992; Cohen, 1986; Hubert & Eppler, 1990; Kagan, 1994).

Complementing learning communities and discourse about learning, Richardson and King (1998) isolated engagement as a condition for success and retention. Engagement is "the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes" (Hu & Kuh, 2002, p. 555). It is now well accepted that students' engagement at tertiary level depends not only on the quantity and quality of interaction with their learning partners but also on "students' perceptions of their teachers, of their peers, and of themselves as learners" (Richardson, Long, & Foster, 2004, p. 70). Hence further examination of students' perceptions is essential in the quest to reduce attrition.

Bean and Metzner (1985) found that students' background, their environment and their age influence attrition. This is particularly so for non-traditional students such as those involved in this study: disadvantaged, adult learners. Kember's (1995) model of student progress indicates that entry characteristics lead to either social integration or external attribution. The latter refers to students attributing their learning difficulties and lack of progress to external factors such as insufficient time, distractions and unexpected events. In other words, students' entry characteristics determine, to some extent, their level of both accountability and realistic expectations. Hence external attribution is usually associated with a surface approach to learning, extrinsic motivation, poor language skills and negative course evaluation, all of which are characteristics of students who will not progress (Kember, 1995). Further, studies into academic engagement of marginalised students reveal that negative past learning experiences can result in increased fear of failure and reduced self-esteem (Richardson, Long, & Foster, 2004). In view of Kember's model, the limited number of studies into the perceptions of disadvantaged adult learners and the increasing number of such students at tertiary level, further research into these students' perceptions is imperative.

The instruments of teaching and course evaluation are widespread and well accepted in Australia, Europe and North America. Formal instruments for

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obtaining student feedback include the Students' Evaluations of Educational Quality (SEEQ) and the well accepted Course Perceptions Questionnaire (CEQ) (Richardson, 2005). While the former monitors effective teaching, the latter focuses on students' perceptions and their approach to learning. On the other hand, the Academic Engagement Form (AEF), devised by Foster, Long, and Snell (1999) for examining students with a hearing impairment, addresses the role of the learning partners: the students themselves, their peers and their lecturer. Results confirm that these perceptions influence academic integration. With the exception of the expanded CEQ, which also examines students' perceptions of the learning community, most studies survey students' satisfaction with content or delivery.

This study builds on Tinto's (1993) concept that social and academic integration affects attrition, and on Braxton, Bray, and Berger's (2000) belief that what happens in the classroom influences social interaction. It is also based on the contention that students' perceptions of their learning partners influence their learning. We argue that the administration of a student questionnaire, designed in consultation with students and aimed at generating reflections on their learning partners, can complement instruments of teaching and course evaluation in creating a cooperative educational environment attuned to the academic and social integration of students and their learning partners.

Methodology

Questionnaire development, trials and review

The questionnaire was developed for mature age students enrolled in a preparatory program at an Australian regional university. Great care was given to both the appearance and the format of the questionnaire. First, it had to be pleasing to the eye. Second, it had to be clear and concise. Hence the frame of the questionnaire was a double entry grid. Third, it had to inspire and motivate students. For this reason, the questionnaire was based on the concept of climbing a success ladder with a focus on the support and barriers encountered along the way. Fourth, it had to engage students and appeal to different learning styles; therefore participants were encouraged to draw a ladder and a barrier next to the corresponding words in the header row.

The content of the questionnaire targets the three main categories of learning partners within a learning community at tertiary level: the individual students, their fellow students, and the lecturer. Students were asked to appraise both the support and the barriers encountered while climbing the success ladder and how they and their learning partners could help create a more effective learning environment. More precisely, the template questions were: "What did X do that helped you learn?"; "What did X do that slowed your learning?"; and "What could X do to help you learn?" where 'X' refers to the individual student, peers and lecturer respectively. The questions were open-ended to allow students to think for themselves, and in order neither to limit nor to prompt students' answers.

The questionnaire was trialled with a group of 18 part-time day students. While participants' responses validated the questionnaire, a few changes were made to refine its presentation, administration and data collection. The first change was the inclusion of pictures to replace the hand drawings of ladders and barriers. This change was made for practical reasons should the questionnaire be administered by a person other than the researcher and creator of the questionnaire (the first-named author of this paper); thus, the change eliminated the difficulty of re-creating the

climate intended by the researcher. The second change was the wording of instructions, namely, specifying the quantity of response. Asking students to provide three to five items for each question both ensured a minimum of data and prevented data overload. The third change was the addition of a list of outcome categories such as sense of achievement, belonging, confidence, focus, knowledge, motivation, organisation and self-worth so that students could label their responses to show how they benefited from the behaviours that they had identified. This change was made for two reasons: first, it opens a window on students' perceptions of how and why some behaviours are beneficial; second, it allows participants to clarify and verbalise the relationship between behaviours and outcomes. Awareness of this relationship both reinforces the benefits of helpful behaviours and has the potential to help students develop and maintain new behavioural patterns. In other words, the relationship between behaviours and outcomes might be a crucial factor in students' retention.

While students commented on the creative, bold and helpful approach of the questionnaire, they also accepted the invitation to contribute to its improvement. As a result, the third change was based on students' suggestions for greater clarity of both instructions and questions. For example, one student suggested that the word 'obstacle' replaces the word 'barrier' in the header row as she felt that one could overcome an obstacle more easily than a barrier. Another student felt that the base question "What did you/others/lecturer do that helped you?" would make more sense if it included the word 'learn'. Accordingly, the question was changed to "What did you/others/lecturer do that helped you learn?". Also based on students' suggestions, the last change was the replacement of single valued codes by binary valued codes such as A+ and A-, where + and – signify the presence and absence respectively of a sense of achievement. Thus, the improved questionnaire is the result of a joint effort between the learning partners; it also reflects the lecturer's commitment to developing and maintaining learning communities and to pursuing student-centred teaching/learning activities.

Participants, setting and administration of questionnaire

The target group was a *Tertiary Preparatory Skills* part-time evening class cohort of 18 students undertaking the Skills for Tertiary Education Preparatory Studies (STEPS) program on the Gladstone campus of Central Queensland University. STEPS bridges the gap between students' present skills and the academic skills required for tertiary education. By nature, 'Steppies' are non-traditional university students in the sense that they are older than school-leavers, come from backgrounds with limited experience of university studies, tend to have limited financial resources, are often unprepared for the amount of work required to succeed academically, are in many cases going through or coming out of a life crisis (such as loss of employment or family disruption) and have low self-esteem. Entry to this free program requires the completion of tests in language and mathematics and an interview. While the entry process is thorough, places usually exceed demand; as a result, when students are turned away it is usually because of very limited English skills. In such cases, students are encouraged to complete a Technical and Further Education (TAFE) course before applying again. Overall most applicants are given the opportunity to further their education.

These participants were chosen because the researcher teaches them and she has a commitment to improving the teaching/learning taking place in her classes. Not only was the access to the participants convenient but a trusting and friendly

relationship between students and lecturer had also been established. Furthermore, this was possibly the first time that such students were involved in a study into students' perceptions of learning: namely, their perceptions of how their and others' actions influence their learning.

Although the researcher takes these students for other courses, the *Tertiary Preparatory Skills* class was chosen because of its similarities with learning a second language. Two major objectives of this course are to develop oral communication skills and learners' autonomy. Students learn to structure, prepare and deliver an oral presentation in a tertiary environment. Hence students learn a new language: that of the academic world. The focus of the course on public speaking involves students stepping outside their comfort zone, developing a new identity and acculturating to a new environment, just as a student learning a second language would do.

Teaching/learning activities prior to the administration of the questionnaire revolved around creating a highly effective, cooperative and supportive learning environment. For this reason, students were familiar with positive social/affective strategies such as the power of a smile and the importance of positive feedback. Students also engaged with metacognitive strategies such as goal setting, reflecting, and creating the conditions for learning. The cognitive content of the first five weeks of the course comprised the structure of oral presentations, the basic characteristics of an effective delivery and an overview of needs theory. In addition, all students had delivered a mini speech or part of a speech in every weekly class; they had also provided positive feedback based on the characteristics of an effective delivery.

Administration of both the trial and final questionnaire proceeded smoothly for several reasons. First, the students knew and had a good rapport with the researcher. Second, the students were familiar with the concept of learning strategies, some of which had been discussed in class. Third, students had been exposed to reflective questions since the beginning of the course.

Furthermore, the questionnaire was administered in the week before the Easter holiday and students were in good spirit. Not only were they looking forward to spending time with their family and friends but they were also experiencing a great sense of achievement after five weeks of juggling work, family and study commitments.

Participants' responses: Quantity and quality

All but two of the 18 students provided answers that met the researcher's expectations in both quantity and quality. For each response, participants listed three to five items; additionally, they presented clear and concise information that reflected the social/affective and metacognitive objectives of the first few weeks of the course. This made for relatively trouble-free, *albeit* time consuming, processing of the data.

The researcher approached the two participants who had provided scant answers because she felt that it could be indicative of difficulties which, at this early stage in the course, could hamper students' progress. While both participants were male and reserved, one was a retiree and the other a younger manual worker. The older participant spoke about several health issues including memory problems, and how this had prevented him from answering the questions more fully. He withdrew after the Easter holiday. The other participant said that he did not understand the

questions. Talking him through the first questions exposed difficulties juggling work and study. The next day, he withdrew from the program.

As the only two students who provided scant answers withdrew from the program, one could question whether there is a link between the students' limited answers and the observed low senses of academic and social integration and, in turn their withdrawal. Hence these two cases will be examined in the discussion section.

Participants' potential lack of cooperation or motivation to provide quantity and quality of responses (Henning, 1987) requires consideration; if undetected, it can introduce misleading results, thus threatening the validity of the questionnaire. Generally students enrolled in the program are highly motivated, and the focus of the questionnaire, 'reaching for success', was selected because of its potential to eliminate threats of validity. The theme of the questionnaire also clearly articulated with the broader theme and objectives of the STEPS program. Creating a positive classroom climate and inspiring students to give their best, as was the case here, is therefore important when administering questionnaires.

As the questionnaire was administered at a time when students' stress levels were at their lowest in the program, threats to person-related reliability were small. In addition, the lecturer's observations of students and of their reflections in the first five weeks of the course indicate a high degree of congruency and thus of person and instrument-related reliability. Trialling the questionnaire allowed for greater clarity of both instructions and question items. In addition, students were accustomed to reflection and evaluation and the layout of the questionnaire was easy to follow. Clarity and familiarity increase reliability (Hughes, 1989); reliability of information is vital as this information guides decisions and future actions (Richards, 1996), especially if the aim is to increase retention.

Processing of the data

For categorising the data, three interrelated categories of learning strategies have been used: metacognitive, social/affective and cognitive strategies. These categories were adapted from Chamot (1999). The authors believe that social/affective strategies potentially provide intellectual stimulation and cognitive gains. Emanating from the Piagetian notion that interaction plays a vital role in the construction of knowledge (Slavin, 1995), this philosophy is based on the premise that knowledge is constructed from within, through social (inter)action. Therefore social/affective strategies constitute the basis for cognitive knowledge. Interaction, however, does not necessarily happen, nor is it always helpful. It needs to be planned and managed using metacognitive strategies. Hence, as far as these three learning strategies are concerned, the whole is more than the sum of its parts.

The results were collated and tabulated using these categories and word coding to merge the responses. Coding is the process by which responses are classified into meaningful categories. Categories should be mutually exclusive and exhaustive so that each response fits into one category only and every response belongs to a category. The only exception was for keeping two very closely related categories, those of support and encouragement, separate. Most students had commented on the value of receiving positive feedback. Some had even expressed that this need for encouragement was rather childish but very real. The coding was inductive, that is, designed with the data collected in mind. As students were familiar with the concepts on which the keywords were based, their responses were easy to identify. Consistency of the coding act was addressed by coding the data three times with

one-day intervals. This exercise revealed a high level of consistency and allowed for fine-tuning.

Participants were numbered to ensure anonymity. For each response, the participants' number was recorded to check for congruency. The tally of participants whose responses fall into a particular keyword category allows for easy identification of issues that are important to a large number of students.

Results

The purpose of the questionnaire was to evaluate the effectiveness of teaching/learning, namely, to examine students' perceptions of what they, other students and the lecturer do that influence their learning. For the purpose of the analysis of the data, the authors followed the format of the questionnaire, that is, examined students' perceptions in three separate sections: perceptions of their own, other students' and the lecturer's actions respectively.

Students' self-perceptions

As a group, participants referred principally to social/affective and metacognitive strategies. In rank order, they identified cooperation, planning, listening and focusing. Cooperation include being supportive and friendly as well as accepting and encouraging. Students also exposed the absence of these strategies as obstacles to their learning. Absence of metacognitive strategies in particular ranked high. For example, students perceived that being distracted, unprepared and disorganised were the main self-inflicted obstacles to their learning. Students also perceived that greater attention to metacognitive strategies such as planning, focusing and self-belief was likely to enhance learning.

Students' perceptions of others

As in the previous subsection, other students' metacognitive and social/affective strategies were exposed as influencing learning. This time, however, social/affective strategies ranked more highly than metacognitive strategies. Students identified that other students' team skills in particular contributed positively to their learning. In addition, a couple of students highlighted being inspired by others. As for the perceived obstacles created by other students, participants highlighted the lack of both team skills and planning. Particularly high on the list are the distractions and inappropriate behaviour of some students. It is therefore understandable that participants would like to see other students develop metacognitive and social/affective strategies such as on task and cooperative behaviours. In particular, as a group, participants would like other students to minimise the chatter, listen, share, participate, support and encourage. In other words, participants have identified some of the basic essential factors necessary for effective learning.

Students' perceptions of the lecturer

Participants clearly identified the lecturer's social/affective strategies as benefiting their learning. For example, they referred to the lecturer as being supportive, approachable/friendly and a team leader. Clear instructions and explanations were also identified as influencing their learning. Three participants identified the lecturer's soft voice and accent as obstacles to their learning. While two

participants felt that the pace was slow, two others felt that the pace was too fast. Most importantly, three participants urged the lecturer to keep the class interest up.

Discussion

The results provide students and lecturer alike with valuable information about students' perceptions of learning. Results highlight the importance of affective and metacognitive strategies even at pre-university levels. Most importantly, results provide valuable information to improve teaching/learning. In particular, the information from participants' self-perceptions that metacognitive strategies such as planning, focusing and self-belief were likely to enhance their learning can guide future teaching/learning. For example, once disclosed to the participants, the results would allow the lecturer to be explicit in helping students both maintain the motivation to continue developing these strategies and monitor progress. When students realise that other students hold perceptions similar to their own, they might feel more comfortable to talk about learning. Further, when students realise that their lecturer listens and responds to create a learning environment that better meets their needs, the student-institution relationship improves.

The results from participants' perceptions of others, namely, the high incidence of distractions and inappropriate behaviours, can serve to generate positive actions. The lecturer can guide students to develop strategies to correct the situation in such a way that the group self-regulates rather than relies solely on the lecturer to address such issues. In other words, this is an opportunity for the lecturer to empower students to take responsibility for their learning and to learn conflict resolution/problem solving skills. When the group self-regulates, students' social integration is likely to improve.

Turning to the two students who withdrew, the older student's main purpose for attending classes was social contact. Even though his social skills promoted support from other students, his resistance to change, compounded by his health, reduced his motivation to complete the course. The younger student lacked both social and academic skills as well as the confidence to try to develop these skills. The lecturer had observed signs of low academic and social integration. For example, the student was reluctant to participate in small group work, in class discussions and even in individual work. Whenever the lecturer approached the student to enquire about his progress, responses were evasive and referred to being behind and/or having left books at home. Any offer of help was dismissed. One could ask whether the questionnaire might have precipitated or crystallised their decision to withdraw; hence they had little interest in completing the questionnaire.

Should this be the case, the questionnaire might have promoted healthy attrition of students who did not have a great deal of ability to complete the program. Of note is the nature of the STEPS program, a bridge to university, and of its targeted audience, that is, people with limited formal education and limited support. One needs to accept that some people are not suited or not ready for tertiary studies. The aim of the STEPS program is to prepare students for university studies, that is, to promote retention. However, attrition at this preparatory stage is not necessarily a negative outcome. Preparatory programs such as STEPS promote self-awareness; as a result, students might conclude that tertiary study is not a viable option to improve their situation, at least at this stage in their lives.

By its nature, the questionnaire has limitations. The simplicity and generality of the questions served the purpose of investigating students' perceptions of learning in

general. However, they did not allow for examination of a specific issue. Similarly, the three categories of learning partners—self, other students and the lecturer provided general information. One could have been tempted to narrow the investigation to one category of learning partners and to allow for more in-depth information. The lecturer's commitment to fostering the development of a learning community called for students' perceptions of all learning partners. In other words, the current needs of the students and lecturer as well as students' potential benefits guided the creation of the questionnaire. As such, this questionnaire is only the first in a series of questionnaires aimed at improving teaching/learning effectiveness. Its results will guide the focus of future questionnaires.

The findings warrant guiding students to consider the cognitive as well as the affective and metacognitive factors influencing their learning. For example, reflection questions throughout the course could ensure that students are familiar with these factors and that they understand the differences between them and can give examples of their occurrences in a learning activity.

The findings also justify administering the questionnaire at different times throughout the program to establish if students' perceptions change. For example, would students be able to identify cognitive skills as influencing their learning as the course progresses? Could teaching/learning based on the results of the questionnaire allow the group to develop effective metacognitive and affective strategies to the point where they can focus more on cognitive issues?

If administering the questionnaire at different times throughout the course, one would need caution. As the pressure of studying increases, so would the threats to reliability of the questionnaire (Henning, 1987); pressure from imminent assignment due dates, past results, self-doubts and outside challenges can influence students' moods and their perceptions of learning.

Similarly, administering the same questionnaire to different class cohorts of students enrolled in the same program might bring different results for several reasons. First, two groups of students are seldom alike and group dynamics can differ accordingly. Second, the lecturer's input might also vary depending on the group dynamic and needs. This is particularly relevant where social/affective strategies are concerned.

Conclusions

The major outcome of this questionnaire is the students' predominant focus on social/affective and metacognitive strategies as influencing their learning. This finding confirms educational theories such as Maslow's (1970) hierarchy of needs, emphasising that basic needs must be met before students can learn. Not only did students perceive support and encouragement from other students and lecturer as beneficial to their learning but they also indicated that greater emphasis on planning, focusing and self-belief would enhance their progress. The findings also strongly indicate that other students' inappropriate behaviours, the lecturer's soft voice and the slow pace of some learning activities are potential obstacles to learning. These findings are a good reminder that lecturers ought to consider students' perceptions when planning future learning activities instead of relying solely on their observations and knowledge, because students' perceptions influence their attitude to learning and their decision to study.

These findings also alert practitioners to a potential link between students' quality and quantity of response to evaluation questions and their decision to withdraw. Further, they potentially indicate that pre-university attrition is not necessarily a negative outcome. In such cases, students might have recognised that the realisation of their potential and destiny lies somewhere else.

The implications of these findings are several. In the short term, they will guide the lecturer's decisions about creating an environment conducive to learning, about explicitly teaching social/affective and metacognitive strategies and about developing students' awareness of cognitive skills. They will also prompt the lecturer to intervene in a compassionate manner when students show signs of poor academic and/or social interaction and guide them with the difficult decision of either continuing or withdrawing. In the long term, the findings will guide future projects aimed at improving the effectiveness of teaching/learning irrespective of subject matter, and preparing students for undergraduate study, thereby reducing attrition at university.

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