



# Everything We Wanted to Know About Our Course, but were Afraid to Ask: Views from the Student's Perspective

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## ABSTRACT

This paper reports on a serendipitous opportunity that befell our Bachelor of Science degree program at Victoria University, Australia, where we were able to collect 'unsolicited' student feedback on our course offering from both local students in Melbourne and international students studying off campus in Malaysia and Sydney, Australia. The opportunity came about as a useful by-product of a learning outcome, in a third year Computer Science subject, Intelligent Systems. In this elective subject, the assignment task was the creation of an expert system entitled "The Unofficial Course Guide to the Computer Science Degree", in which students authored and collected student surveys to tap the 'unofficial information' about our course.

An insight into issues of importance to students was gained by analyzing student generated surveys at these three locations. At the home campus, this 'unsolicited' feedback highlighted that student choices are motivated by pragmatic mechanisms about fulfilling the course requirements with a minimum of effort. Similar behaviours have also been reported amongst students in New Zealand (Ditcher & Hunter, 2000) and the United States (Wilhelm & Comegys, 2004). However at the two off campus locations, Malaysia and Sydney Australia, the motivations for these full fee paying international students are quite different.

## INTRODUCTION

Like it or not, provision of higher education is increasingly being seen as a global commodity where students shop for their degrees, courses and subjects in what is perceived as a buyers' market (Fullerton, 2005). In such a 'consumer' driven environment, institutions actively seek students' 'stamp of approval' (Harvey, 1999) by extensively surveying and building satisfaction ratings for their institution, faculties, courses, subjects and teaching. These formal evaluations are used as a performance indicator by the Australian Universities Quality Agency (AUQA) in their quality audits of higher education institutions (DEETYA, 1997). In fact, currently in Australian Computer Science departments, students' views are the second most important driver for curriculum change (Gruba et al., 2004).

Although, various authors (Smilkstein, 2004; Wyche-Smith, 2004; Palermo, 2004; Leckey & Neill, 2001) attest to the usefulness of canvassing student opinion, Harvey (2001) and others (Lane & Yaman, 2005) warn that student feedback can indeed be a blunt instrument when used to drive change. Equally, as pointed out by Yorke (2000), staff and students weigh aspects of a course or subject quite differently. Given the current political importance of collecting student feedback, how does one, evaluate a course, subject or lecturer performance without predisposing or tainting the outcome?

This paper reports on a serendipitous opportunity that befell our Bachelor of Science degree program at Victoria University, Australia, where we were able to collect 'unsolicited' student feedback on our course

offering. The opportunity came about as a useful by-product of a learning outcome, in a third year computer science subject, Intelligent Systems. In this elective subject, the assignment assessment set students, in groups of two, the task of creating an expert system entitled "The Unofficial Course Guide to the Computer Science Degree". An expert system is "a computer program that represents and reasons with knowledge of some specialist subject with a view to solving problems or giving advice" (Jackson, 1999), and an automated academic advising system for university courses is a typical example of an expert system application (Kiernan et al, 1987; Grupe, 2002; Siegfried et al., 2003). In such systems, information about course structure, subject content and prerequisites is combined with suggestions from academics to provide advice to students. In the creation of "The Unofficial Course Guide to the Computer Science Degree", students were instructed that their system should dispense similar 'official' information and advice to the student cohort, but also where required, it should assist student decision making by the inclusion of 'unofficial' information. As instructors, we hoped that this 'unofficial' information in the assignments would capture what really was important to students about our course, subjects and teaching. We presumed that this 'unofficial' information was the collectively owned body of knowledge that most students seem aware of, and use in their decision making about course selection. It was this 'unofficial' knowledge that we hoped to tap for 'unsolicited' feedback on our degree program.

One of the necessary first steps in the creation of any expert system is the collection of information and knowledge that will eventually be coded as rules for the system. This collection involves researching the 'official' information that can be easily located by students in various public university documents. However, the 'unofficial' information needed to be extracted from the domain experts, being in this instance, fellow students in the degree program. To this end, each student group were told to create their own survey instrument of at least ten questions and then to complete this survey with at least five of their associates. The design of the survey was entirely up to the students and the only instructions given were to ask whatever questions they thought users of their system would need the answers to, when making a decision about subject selection. The surveys were submitted as part of the assignment documentation for the resulting expert systems.

## METHODOLOGY

Once the anonymous student surveys were collected from 64 different student groups, the questions were pooled in an effort to uncover the issues of importance to students when making subject selections in the course. In order to sift through the large number of questions in the surveys in a systematic fashion, we decided to use a technique inspired by Stemler's description (2001) of content analysis. Content analysis is useful for examining trends and patterns in qualitative research. We adopted a simplified version of the emergent coding approach in content

analysis as suggested by Haney, Russell, Gulek & Fierros (1998) which we describe below.

First, two researchers independently reviewed a subset of our student surveys to derive a set of categories. Next, the two sets of categories were compared and contrasted until the following five categories were reconciled; Student, Subject, Lecturer, Course and Procedural centered questions. Student questions were focused on student details, areas of interest and personal preferences. Subject responses covered matters such as the perceived difficulty of a subject, its expected workload and subject material covered. Lecturer centered questions were concerned about the person conducting the subject whilst Course related questions were about meeting the course requirements. Finally, Procedurally based questions asked about timetabling issues and the sequence of subject offerings.

## RESULTS & DISCUSSION

Once the major groupings were established, the entire question pool was classified using these distinct categories by means of a simple frequency count reported in Table 1. The number of individual questions within each category was counted, where the authors were different. For example, if two different authors ask the same question, “*Which subjects are easy to pass?*”, both questions were counted for the category Subject.

Assuming that categories with high frequency counts are categories of greatest concern to students. We note that in Table 1, the Subject category has the highest count, being approximately four times the total number of responses for the lowest Lecturer category. Given that the students completed the surveys to create expert systems, then the high frequency counts of questions in Course and Procedure categories is understandable. We observe that many of these questions in the survey need not have been asked if students had gone directly to the ‘official’ information of timetables and course documentation that is readily available.

As academics, we were surprised by the disparity in frequency of the Subject and Lecturer categories. So further analysis of all the categories into subcategories was done, to data mine any hidden issues of importance to students. For instance, in the Lecturer category, the majority of questions concerned good teaching practices. Separate from this, we also detected preferences for (or against) individual academic staff

Table 1. The Preliminary “Unofficial Course Guide” Student Survey Results of 401 questions taken from student generated surveys in an undergraduate elective assessment.

Category	Frequency	Example
Student	77	What year are you currently in? Do you like web designing? At any point, have you had a job outside of university whilst you are enrolled to study? Would being a part time/fulltime student affect the way you choose your subjects at enrolment? What sort of subjects do you like to do? What are the subjects that you would not recommend to others? What do you want to be after graduating?
Subject	120	Which subject did you find most difficulty in 1 <sup>st</sup> year? Which subjects are easiest to pass in second year? Which subjects do you think have a “considerably” heavy workload? Which subjects do you know to have tests as part of the assessment? Which subjects are interesting to students? Which subjects had the biggest assignments?
Lecturer	34	Who do you consider to be good lecturers in terms of teaching and the ability to understand the subject material from? Which subject does the lecturer provides good lecture notes? During your time of study, who are your preferred lecturers? Who are the easy markers? What are the subjects that Anne Venables teaches?
Course	90	What are the prerequisites for Project 1? What are the core subjects of Computer Science? Which second year subjects are compulsory in order to undertake a 3 <sup>rd</sup> year project? What is required to graduate from Computer Science?
Procedures	80	Do I have to study particular modules to complete a certain area? What subjects do you have to complete to do software development? In the second and third year of subject selection, can you rearrange your own timetable?

Table 2. The “Unofficial Course Guide” Student Survey results containing subcategories for the local Melbourne cohort of students. Results were collect from 39 different student generated surveys.

Category	Sub Category	Frequency	Total
Student	Areas of interest	13	77
	Personal details	49	
	Work commitment	1	
	Other, e.g. recommendation of subjects	14	
Subject	Difficulty level	55	120
	Workload	16	
	Assessment	20	
	Academic challenge	11	
	Area of focus	17	
	Popularity	1	
Lecturer	Good teaching practices	26	34
	Provision of course notes	2	
	Who is teaching a particular subject	6	
Course	Course requirements in terms of core and elective units	90	90
Procedures	Timetabling issues	16	80
	Sequencing of subjects	64	

members, so those responses were counted separately. Finally, only two students were concerned about the provision of course notes in subject selection. The results of this further analysis are shown in Table 2.

Examining these sub-category count frequencies, we found the detailed analysis quite interesting, if not disturbing, particularly when looking at the Subject centred questions. We had expected that students would be most interested in subject content, and subject relevance, reported here as the area of focus sub-category and also in the academic challenge. Rather, our students are more interested in the difficulty level of a subject with the most commonly asked question being if a subject was easy or difficult to pass. Assessment details, such as types of examination and assignments in the subject were also of greater interest. Such results are typical of instrumental-type behaviours as those described by Ditcher and Hunter (2000) at the University of Canterbury, New Zealand. In describing this problem, they quote Snyder (1971) as saying

*“The instrumental student has a pragmatic approach to education.... Such students ask themselves how (or whether) the study of a text or the writing of a paper can help them achieve a higher grade and thus further their specific career or life plans (pg. 16)”.*

Our students were asking questions such as

- Which electives require minimal homework?
- Which subject is easiest to pass?
- Which subject has the least amount of workload?
- Which subjects have easy assignments?
- Which subjects are useful for your career goal?

As instructors, an equally disappointing result was the overall frequency of questions relating to the category Lecturer. This category recorded the lowest value and we interpreted this result as questioning the amount of influence an individual lecturer brings to bear in their respective subject. It seems that to most of our students, the person delivering the content is of least importance. When these questions were asked, they were mostly concerned with good teaching practices. This mirrors indicators such as easiness, helpfulness and clarity that are used to grade lecturers from students’ perspectives on various US websites such as, RateMyProfessor.com (RateMyProfessor, 2005). As well, Wilhelm & Comegys (2004) found that one of the greatest influences on course choice for business major students in the US was “how lenient the instructor is in his/her grading practices”.

Examining the sub-categories of Lecturer, we are surprised to note that the provision of course notes only rated two questions. Considering the effort that most lecturers make to improve their subjects, research and

Table 3. The “Unofficial Course Guide” Student Survey results containing subcategories from offshore program in Malaysia. Results were collected from 15 different student generated surveys (subcategories that appear in this table only).

Category	Sub Category	Frequency	Total
Student	Areas of interest	80	151
	Personal details	65	
	Work commitment	0	
	Others, e.g. recommendation of subjects, achieving career goals	6	
Subject	Difficulty level	9	74
	Workload	2	
	Assessment	40	
	Academic challenge	0	
	Area of focus	1	
	Popularity	0	
	Modes of delivery*	8	
	Others, including usefulness of a subject*	14	
Lecturer	Good teaching practices	10	24
	Provision of course notes	4	
	Who is teaching a particular subject	10	
Course	Course requirements in terms of core and elective units	49	49
Procedures	Timetabling issues	8	8
	Sequencing of subjects	0	

update their course materials, it seems to be of minimal concern for students in our course.

Tempered by warnings from Ditcher and Hunter (1999) that “Any differences between student and lecturer perceptions of the important factors could be used to assist academics to see that students do not necessarily share the same views of studying themselves” we have become painfully aware that student objectives in our local course are not the same as our own objectives for them. We had expected to find small glimmers of interest in independent learning, collaborative tasks, knowledge and skill acquisition and academic challenge. Rather, we found a strong display of instrumental behaviours amongst the students conducting their surveys for the expert system assignment. Is this outcome indicative of all students in our program? To answer this question, warranted further investigation.

As the degree program with the same elective subject, Intelligent Systems, is also offered in two off-campus locations, being Malaysia and Sydney Australia, it was decided to repeat the assignment assessment and analysis process for these student cohorts. In Sydney, students articulate into the undergraduate program with credit for recognition of prior learning equivalent to one full year exemptions. Therefore these students need to complete a further two years of their degree before graduation. In Malaysia the situation is somewhat different where students enter the undergraduate program with advanced standing to complete only the final year of their studies. It is important to note the context that both these groups comprise full fee paying international students, which is a likely factor in contributing diverse views and attitudes towards studies. In contrast, full fee paying international students are a very small minority at our home campus.

The results for the Malaysian and Sydney students are shown in Tables 3 and 4 respectively. For the Malaysian cohort, two subcategories were created in response to the many questions on the modes of delivery and on the usefulness of a subject within the Subject category. These types of questions were absent in our local, Melbourne, and off campus Sydney surveys.

Ranking the sets of frequency counts for both Malaysian and Sydney surveys, we note that the most frequently asked questions are student focused and these are collated in the Student category. Both student cohorts place most emphasis on their own overall interest in the course and its subjects, asking such questions as

- What area are you interested in?
- Do you like mathematical subjects?

Table 4. The “Unofficial Course Guide” Student Survey results containing subcategories from off campus program in Sydney, Australia. Results were collected from 10 different student generated surveys.

Category	Sub Category	Frequency	Total
Student	Areas of interest	24	97
	Personal details	61	
	Work commitment	0	
	Other, e.g. recommendation of subjects	12	
Subject	Difficulty level	9	20
	Workload	2	
	Assessment	3	
	Academic challenge	2	
	Area of focus	0	
	Popularity	0	
	Others, including usefulness of a subject	4	
Lecturer	Good teaching practices	0	10
	Provision of course notes	0	
	Who is teaching a particular subject	10	
Course	Course requirements in terms of core and elective units	2	2
Procedures	Timetabling issues	3	3
	Sequencing of subjects	0	

This is particularly apparent in the Sydney cohort where the frequency in Student Category is at least four times the score of any other category. The difference may be explained by realizing that these students not only commit to full fees but also to studying in a foreign country when enrolling in our course. Therefore in making such a commitment, subject interest could be expected to be the primary motivator.

This pattern seen in both locations is in marked contrast to our local Melbourne responses that ranked the Subject category highest, reflecting a typical instrumental approach. Interestingly, both off campus locations ranked the Subject category as second in importance. However, closer examination of the analysis between these groups reveals a somewhat different focus. Malaysian students studying in their home country are more concerned about the nature of their subject assessments than their Sydney counterparts who worry about the difficulty level of a subject.

Overall, the ranking of the Lecturer category was higher for both Sydney and Malaysia cohorts, being third and fourth respectively instead of being ranked last by Melbourne students. Despite this, the subcategories of good teaching practices and the provision of course notes are completely neglected by the Sydney students concentrating instead on whom the subject lecturer is; whereas in Malaysia and Melbourne alike, equal importance was placed on good teaching practices. We wonder at all locations is it assumed that all course notes and such materials will be of a minimal and acceptable standard and therefore do not rate particular consideration? The off campus low frequency counts for Course and Procedure categories can be explained given the reduced number of electives which impact on the available choices to students.

Reflecting upon our initial responses which resonated with the overseas experiences reported in the literature (Wilhelm & Comegys, 2004; Ditcher & Hunter, 1999), we are encouraged by the Student focused responses of our off campus programs in Sydney and in Malaysia. The lesson learned from our experiences is that different student groups in the same course can have dissimilar focuses and reasons for undertaking particular electives. So when asking, “everything we wanted to know about our course”, it is safer to make no assumptions!

## CONCLUSIONS

An insight into issues of importance in the subject selection for a degree program was gained by analysing student generated surveys in a third year undergraduate elective of the Computer Science program run at three locations. At the home campus, this ‘unsolicited’ feedback highlighted that student choices are motivated by pragmatic mechanisms about fulfilling the course requirements with a minimum of effort. Similar behaviours have also been reported amongst students in New Zealand (Ditcher & Hunter, 2000) and the United States (Wilhelm & Comegys,

2004). However at two off campus locations, Malaysia and Sydney Australia, the motivations for these full fee paying students are quite different.

From these analyses, we concur with Ditcher and Hunter (1999) that students and staff do have different views of studying and we add that different student cohorts do not share common objectives. Given that this evidence supports the notion that the student agenda in our course offerings is very different from our own, can we rely on students as stakeholders for feedback on our subjects- politically correct or not? In the current political climate where currency is given to student feedback about courses and programs to drive curriculum change, our results are a timely warning that student feedback should not be taken at face value. What we teach should be informed by student concerns and balanced with educational goals.

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