

LEAD 2008-2009

Project proposals

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EFS student/alumni event project

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Problem

Many EFS students undervalue their degrees and experience at Macquarie University. They see their degree as less prestigious than equivalent degrees from other institutions. This can effect students' career aspirations and encourage them to think only of fairly limited and traditional career options, rather than exploring the possibilities of where their EFS degree may take them in the future.

Proposal

To organise a series of events at which highly successful EFS alumni speak to current EFS students about their careers.

Initially one event, with three or four speakers, will take place in September 2008, and serve as a pilot for an ongoing series of events.

The events will be organised by a core committee of around seven students from the various EFS affiliated student societies and other student-centred organisations, such as the ERIC Peer Advisers and the Student Representatives, with the assistance of the Student Activities Coordinator.

Any funding received would go towards the administrative costs of organising the pilot event (printing, venue hire, catering, etc).

Although other events featuring Macquarie alumni do already exist and student societies organise careers events for their members, the EFS Student/Alumni Project is unique in that it is cross-disciplinary and aims to attract high profile EFS alumni who will encourage students to imagine careers that they might not have considered and to aspire to a level of success that they may not have thought possible.

An additional benefit would be that students from the different EFS affiliated student societies – ECFS, ASES, SIFE and ASSOC – would work together on one project, something that has not happened before. This would help to provide support and networking opportunities across and among these student groups.

Benefits

- Students attending will be encouraged to broaden their career aspirations and place more value on the degree they are undertaking
- Students organising the event acquire skills and experience; have opportunities for networking, both with fellow students and alumni and add value to their experience at Macquarie University.

Training for EFS tutors

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Class tutors are an important component of learning and teaching at all Universities. Their purpose is to elaborate and explain in a smaller group, what lecturers have imparted to larger classes and to implement that knowledge through discussions, problems and exercises. Tutorials give students the opportunity to read background on and discuss particular elements of the lectures, as well as to exercise the ‘practice’ of the discipline studied. Student exchange is encouraged both between the tutor and the student and between students and tutors are generally the first reference point for a student when it comes to asking for clarification. The tutors who lead tutorials are usually drawn from the ranks of postgraduate research students, or sometimes honours students. The system has been based on a time honoured tradition of training for future academics.

Previously most honours and PhD students completed their undergraduate degree at the same institution and were invited to take on the tutoring for their supervisor’s course. In recent years this has changed because of the pressure on completion times and in the move to gain larger numbers of higher degree students, many new HDR students have not completed an undergraduate degree at the institution or completed a degree in Australia. The result is that the pool from which tutors are now drawn is far broader than in the past. At the same time the number of international undergraduates has increased exponentially. This is particularly so in EFS which has a very high number of international undergraduate and HDR students. The latter students are then asked to become tutors in a foreign language and culture, with no experience at an Australian university and usually with no formal training. This raises the issue of the quality of tutoring for undergraduates, many of whom are directly paying for their education, and the rest of which will be paying off the cost of their degree later.

We propose a LEAD project to develop a short introductory course with a weekly discussion session for new and current tutors. The introduction – say half a day- should be run twice a year one or two weeks before each semester begins. During the semester, weekly discussion sessions would include particular topics and issues which have occurred in the classroom. To develop an appropriate hand book and course outline, we propose that a survey be undertaken of EFS tutors and from that organise a number of focus groups so that the main issues can be highlighted. We also need to research tutoring handbooks at other institutions and MQ material such as “Getting started in teaching at Macquarie” (2008) by the Learning and Teaching Centre. This needs to be a very basic “coal face” tutoring program which is currently not centrally offered on campus. It is appropriate that EFS undertake this tutor training as it has a large number of international undergraduate and HDR students and probably the largest number of student tutors at about 150 a year. An EFS tutoring program could become a model for the rest of the University.

Learning in statistics: Does it get deeper or shallower over the years?

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A brief description of the problem

We have completed a pilot study during the first LEAD run. The only significant difference we observed in study was the difference between the Deep Strategy scores of undergraduate versus postgraduate students. This might be due to the sample size being small.

We would like to take this study further and survey the second and third year statistics students in the largest two statistics units. Students' approaches to learning could be either deep (trying to understand the meaning) or surface (doing the minimum to pass the unit, like rote learning) (Marton & Saljo, 1976; Biggs, 2003; Ramsden, 1992). A deep approach to learning is thought to benefit students in their study and in their careers by helping them to be independent learners. It is possible that this learning approach will help them to decide to do higher level study, such as a research degree in statistics. Our study will be useful identifying the changes (if there is any) in the learning approaches of students from second year to third year. If we find that the students are moving between surface approach to deep approach in their learning or vice versa, we will investigate the underlying reasons for this (e.g. teaching methodologies; assessment methods; a heavy workload).

Project Description & Plans for Project Implementation

The aim of this study is to investigate the changes in the learning approaches of students in two statistics units and relate these to background variables such as country of origin, gender and work commitments. The second year unit is prerequisite to the third year unit. They both have similar teaching and learning strategies. The main difference between these two units is the number of students in each semester. The second year unit has three times more students than the third year unit almost in each semester. Would this make a difference to learning approaches?

The project will be carried out during the second semester 2008. We will survey the STAT279 and STAT379 students. We expect to have around 450 students for STAT279 and around 150 students for STAT379. All the students will be invited to participate to the survey(s). The survey has two parts: the demographic survey and the SPQ questionnaires. The demographic survey designed by the team members will be used to describe the background of our students while Bigg's Study Process Questionnaire (SPQ) (1987) will be used to identify the students' approaches to learning (deep or surface). The surveys will be administered either in a lecture or in a practical/tutorial class.

The data entry will follow shortly after the surveys. The data will be analysed by calculating scores of learning approaches for each student, and then calculating mean scores for different groups defined by demographic variables collected (i.e. gender, country of birth, undergraduate - postgraduate). Additionally, we will report whether the number of work hours affects the students' approaches to learning in statistics, adjusting for all demographic variables. Finally at this stage, we will compare the patterns of approaches to learning between our students and similar students from other universities (through published research).

We aim to compare the teaching and assessment strategies and methods in each unit so that we can identify the underlying reasons for students to choose certain learning approaches to their learning. The discoveries of the differences will be used to improve teaching and learning strategies and activities in our department.

The results of the study will be discussed among the TLC members of Department of Statistics and presented to all Departmental staff in Departmental Seminar series and/or during the annual Congress of the Department. In addition, we are happy to present our findings in one of the Division TLC seminars and in a university wide seminar or workshop series (i.e. FILT). Finally, we will prepare an article that will be delivered at a pedagogical conference and/or submitted to an international journal.

Improving the scholarly standards of 3rd year students

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MKTG101 attracts a cast of thousands - in reality around 1,000. It is running this year in semester 2 (in addition to S1) for the first time. Another first for this unit is the change in format from 3 hour lectures to 2 hour lectures, along with 1 hour tutorials with 40 students per tut. It is anticipated that this will necessitate only 6 tutorials Semester 2 2008, but some 25 tutorials for Semester 1 2009. What drove this change? Two reasons (1) our HOD, Greg Elliott, has wanted this change for some time and (2) I volunteered because I needed the hours for my workload model, but more importantly, I am so frustrated/dismayed by the low scholarly standards of my current 3rd year students, I see this as a wonderful opportunity to rectify this abysmal situation. Consequently, I am going to include the following in the tutorials:

- a) Academic paper critiques
- b) A literature review for a topic, which will necessitate at least 6 peer-reviewed journal articles, with full and proper referencing.

Students' major assessments, such as the Literature Review, will have to be submitted to Turnitin, which will be important training for the students in terms of alerting them to the consequences of not referencing fully and appropriately. I am also hoping (optimistically?) that, once these initial academic tasks have been given to 1st year marketing students, they will be subsequently reinforced in 2nd year and, by the time I (and others) get them in their 3rd year, we will be able to feel a sense of satisfaction at an appropriate level of academic output by the students!

As an aside, I have 3 honours students who have agreed to take the 6 tutorials next semester. Some of them may continue their studies next year, so will be available for some of the tutorials first semester 2009. I must say I have been struck by their level of enthusiasm by them for this new format and on how keen they are to be involved.

In short, I would like to submit this proposal, which involves making a change in a unit (MKTG101) and evaluating the effectiveness of it and any glitches with its implementation. It is intended that this project will be co-authored with John Shepherd from Actuarial Studies

The effects of emotion on student engagement

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Traditionally psychologists have differentiated three aspects of human learning: cognition, motivation and emotion. Research to date has tended to study these processes separately, and little has been done to conceptualise terms or integrate them into a coherent theoretical model. The role of emotions in learning is an under researched area and has been regarded as a less significant factor in affecting successful learning outcomes than cognition, however more recently the importance of emotion is being emphasised, particularly its' role in understanding motivation. In a previous study by Rowe and Wood (2008a, 2008b) emotions were identified as an important factor influencing perceptions and preferences for feedback. For some students receiving feedback was an indication of the lecturer/tutors level of care, respect and value of the student, and this was more important than knowing what parts of an assignment they answered correctly or what their academic strengths and weaknesses were. Another recent study (Solomonides & Martin, 2008) has found conceptualisations of engagement between lecturers and students, the provision of assessment feedback, and ideas about what constitutes good teaching to differ between students and academics. Student's expectations of engagement were found to have a strong emotive/ affective perspective whereas academic expectations were based more in cognitive frameworks. This study demonstrates the importance of considering both the viewpoints of academics and students. Differences in expectations and conceptualisations may provide insight into the kinds of feelings and emotions that facilitate or obstruct the teaching/learning experience.

The project will adopt a multidisciplinary approach, involving interviews and/or focus groups with teaching staff and students. The aim of the study will be to explore the experience and functionality of feelings and emotions in the teaching/learning context. Specific emotions such as interest will be explored, including consideration of the effects of these emotions on student engagement, self-regulated learning and other dimensions of teaching and learning. It is anticipated that this information will be helpful to facilitating the student/teacher experience and learning outcomes for students.

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Integrating Microsoft Excel into the study of advanced topics in Risk Management

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In financial institutions, a high number of tasks in risk management or determining optimal investments have to be conducted using financial software or applications in Microsoft Excel. Unfortunately, often only little formal training in these applications is provided to students during their university studies. Therefore, graduates have to develop these skills mainly by learning on the job. To overcome the gap between university education and the practice of financial institutions, a modification of the university curriculum might have to put more emphasis on acquiring knowledge by using software applications in the area of quantitative finance.

The project aims to investigate the benefits of integrating Microsoft Excel into the study of topics in risk management and finance. The unit ‘International Investment and Risk’ is an advanced-level course concentrating on the analysis of risk and return, financial risk management, derivatives and international bond and share investments. A strong emphasis is placed upon developing a rigorous analytical skill-base which can then be applied to real-world issues. As part of the study, for selected topics real-world problems will be solved using Microsoft Excel spreadsheets during the lectures and tutorials.

The benefits of the inclusion of the technology into the learning and teaching process will be analysed in two dimensions. On the one hand, using questionnaires, students will be asked to determine the adequacy of the use of spreadsheets for their understanding of the topics. The questionnaire should be designed in a way that will help to examine which parts of the education using spreadsheets were considered to be particularly helpful for understanding complex issues in quantitative risk management. Students will also be given the chance to make suggestions how the teaching and learning process can further be improved by developing spreadsheet skills. On the other hand, a statistical analysis will be carried out to compare the performance of students in the final exam. Hereby, we will distinguish between issues that have been treated using additional spreadsheet exercises with those where the problems were mainly illustrated by using the usual pen and paper exercises. Further, it is intended to offer two sessions of voluntary lab training for the course using Microsoft Excel.

The long-term aim of the study is to equip graduates with skills applicable in the workplace and to improve the learning and teaching of financial theory of investment and risk by using adequate software technology.

Involving students as research participants to enhance learning

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Project Description

The aim of the project is to redevelop a core undergraduate unit, MKTG203 Consumer Behaviour, to incorporate a research participation component to students the opportunity to experience research first hand as informants.

MKTG203 Consumer Behaviour is an ideal unit as it covers many research areas (weekly topics are outlined below). Basically, I would like to develop weekly activities for the students to undertake. Part of the activities would include an online component in which the students would complete a number of survey scales related to that week's topic. For example, in week two when we discuss personality, the students would get online and complete a personality questionnaire, such as the EPQ or the CPI, in week five they would do the Rokeach Values Scale. The students also would be asked to complete consumption diaries at different time points throughout the semester and would participate in different research activities, such as perceptual experiments and decision-making experiments. At the end of the semester, we would have an entire quantitative database of the students' characteristics (personality, lifestyle, demographics) and results from consumption experiments combined with a qualitative database of their reflections on their consumption behaviours. With these databases, the class would then use the information to investigate the different factors related to their own consumption behaviours.

Redeveloping this unit to include all of these research activities, will require a research assistant. The RA would locate the appropriate research articles and scales, create the online surveys and construct the experiments. The learning outcomes would be evaluated through formal LEUs and LETs as well as the reflective diaries that the students will be using to record their consumption experiences. The RA would analyse the quantitative database and also would be needed to analyse the qualitative data learning outcomes at the end of the semester.

Writing like an expert in EFS: What it takes and how to teach it

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A brief description of the problem

It is generally accepted that argumentation is an important but difficult graduate skill to develop (Toulmin 1958, van Dijk & Teun 1997). Non disclosure as to how scholars acquire argumentation skills may lead to the misconception that it is an innate rather than a learned skill. However, it is not only possible but important to demystify and teach the skills required to “write like an expert“, in particular to Higher Degree Research (HDR) students being apprenticed into the academic research community. We argue that such instruction should be based on a solid understanding of the particular linguistic features that constitute ‘expert texts’, as identified by close textual analysis.

Your first thoughts for a solution (if any)

Building on the seminal work of Biber et al. (1999), which compares the linguistic features of spoken and written texts, we will investigate features of ‘expert texts’ in areas relevant to the research concentrations within EFS through the collection and analysis of scholarly journal publications. For instance, we will examine the choice and use of evaluative language, in particular stance markers, which have been found to characterise rhetorically salient portions of text (Hunston and Thompson 2000).

This corpus of scholarly publications will also be used for further comparative analysis with HDR student writing enabling us to ascertain how the skill of written argumentation is mastered. In other words, using the analyses of the expert texts, we shall conduct a tracer study of the writing of five HDR students as they proceed through their PhD program; this tracer study is expected to provide evidence of how written argumentation skills can be developed as the PhD candidates gain confidence in using their own voice (Ivanic 2000) and engaging in critical discourse (Candlin & Plum 1998).

Suggested tools (software) required for analysis

- NVivo8: The use of this software for linguistic (lexical and syntactic) analysis (as opposed to qualitative analysis) of text may in itself be worthy of publication.
- WordSmith: Lexical analysis software, published by Oxford University Press.

The impact of the solution on teaching and learning in EFS

The results of this study will assist those learning, teaching and engaging in research and writing in EFS. The outcomes will help HDR students to acquire the important graduate capability of argumentation, and will equip supervisors and other teachers of HDR students with accessible ways of advising students regarding written (argumentation) skills. Furthermore, because the project will focus on features of expert texts in research areas of particular interest to the Division, its results are also expected to be useful to members of EFS research groups in the process of writing up their own research.

Enhancing students' academic literacy skills in a first year financial accounting unit

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ACCG 101 Accounting 1B, is a core unit for students enrolled in the BCom Accounting and the BCom with a major in Accounting. The unit has a primary focus on developing students' practical skills. It is a pre-requisite for ACCG 323 Financial Accounting Theory and Practice. One of the primary objectives of ACCG 323 is to develop students written communication skills and they are required to read and answer questions in relation to published academic articles (there are 180 pages of reading!). Except for ACCG 223 Contemporary Dimensions of Financial Accounting, which is an elective that relatively few students choose, there is no unit that equips students with the necessary academic literacy skills to undertake this reading.

In 2007, Assoc Professor Evans successfully undertook a LEAD project to equip students to read accounting theory and research in ACCG 223, by presenting them with a series of graded articles that were accompanied by questions and other activities to help them understand the text, and analyse the accounting issues. However, this is an elective unit and only 45 students were enrolled in Semester 2, 2007. Many hundreds of BCom Accounting students are missing out on the opportunity to acquire the academic literacy that they need to read and understand the academic articles at are assessable materials in ACCG 323.

Dr Kym Boon is the unit convenor in ACCG 101 and she will work collaboratively with Assoc Professor Evans to introduce academic literacy skills into ACCG 101 in 2009. The planning phase in Semester 2, 2008 will be very important as the articles to be selected for the Book of Readings need to be at an appropriate level for 1st year students and be relevant for the topics covered in the unit. Also, the major challenge will be how to ensure that student receive timely and consistent feedback. When Associate Professor Evans undertook a similar project in 2007, the student numbers were small and she was able to mark all the assignments and the turnaround was one week. For this to be successfully introduced in ACCG 101 (and extended throughout the financial accounting units from 100 level to 300 level) tutors need training and advice on how to apply marking criteria consistently.

The long term strategy for financial accounting units is to integrate academic writing skills in all units and scaffold them from basic skills in ACCG 100 Accounting 1A to advanced analytic and appreciative skills in ACCG 323, ACCG 310 Corporate Accounting and Reporting and ACCG 350 Financial Statement Analysis, all of which will form part of the revised degree in 2010.

Developing Experiential learning in Business Courses: The efficacy of experiential learning in postgraduate courses

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What is Experiential learning and teaching? Experiential Learning is learning which is done by doing something rather than reading about it or hearing about it. This learning can take place inside or outside the classroom. It is an assignment where students choose from a list of appropriate out-of-classroom experiences. The student then schedules and executes the exposure and writes up the results with reflection upon the learning experience. (John Dewey, 1938). Brain-based learning research has shown that learning is best accomplished when the learning activity is connected directly to physical experience. We remember best when facts and skills are embedded in natural, spatial memory, in real-life activity, in experiential learning. (Koyuluk, 1996).

Problem

- a) To identify the efficacy of the student learning experience through experiential teaching activities with the BUS804 International Business strategy class.
- b) To evaluate the cognitive and affective impact on student learning
- c) The broad aim of this project is to popularize and develop experiential exercises in teaching across the EFS faculty for meeting the learning outcomes of the unit and for enhancing the graduate attributes of:
 - i) communication
 - ii) analytical skills
 - iii) social interaction
 - iv) global perspective
 - v) ethical behaviour

Proposed methodology to be used to investigate the problem/situation

The Postgraduate class of BUS804 International Business partakes in several experiential exercises during the 14 weeks of teaching within in a semester. Some of them are: Cases, role playing, simulations, games and video exercises. Two of these experiential exercises will be selected for this research one will be conducted in the class and the other on the units blackboard website. The first one will be a simulation conducted in class and the second will be a skill building activity conducted on blackboard. After each the activity is performed in class the students will be asked to evaluate the cognitive and affective aspects of the activity through a reflective questionnaire.

- 1) What were your lived experiences of this experiential-learning activity ?
- 2) How did this activity help you better learning and understand the course material?

- 3) Did you like taking part in this activity? Why?
 - 4) Did this activity involve and engage you whilst teaching you the course material? If yes? How? If Not? Why?
 - 5) What perceived internal changes, for example confidence level, increased knowledge, etc., do you think occurred?
 - 6) Do you perceive the participation of this experiential activity as having impacted your professional future?
 - 7) What was the most interesting thing that you learned in these exercises that you did not know earlier and how has it changed you or your understanding?
- Lastly the students will be asked to suggest ways to improve the activity? Student responses to this question will assist in improving the activity in future sessions.

An indication of the method of evaluation to be used to assess the results of the project

Data analysis will be conducted via spss. This research will help students, educators, and industry personnel gain insight into what students perceive the benefits of participating in experiential learning and thus make decisions on level of participation in and support of such courses. This project hopes to coordinate and collaborate with experiential exercise users in class room teaching within EFS at Macquarie University into a wide variety of courses to enhance the education philosophy of the institution via setting up an experiential exercise lab/library & focus group.

A brief indication of budgeting considerations:

1) Experiential teaching conference at UTS _	\$1000
(11th International Consortium for Experiential Learning (ICEL) Conference at the University of Technology Sydney Australia on the 8 – 12 December, 2008.)	
2) Further Experiential teaching resources _	\$1000
A) Experiential Training and Assessment Packages for International business http://www.mta-international.com/view-package.php?package=mta-mini	
B) Simulations and Text books in experiential exercises	
C) Video cases	
3) Research assistance for data analysis _	\$1000
Total	\$3000

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Does the University know what it tells students? Evaluating student contact management systems

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As it stands at the moment, Macquarie has a student system that records grades, special approvals, other academic notes and credit for previous studies. The system also allows students and staff to manage enrolment. However, there appears to be no system that allows Macquarie to manage student interactions.

Student interactions play a major role in University life. Students start their interaction at enrolment (or even prior) and it continues through to qualification, graduation, alumni contact and possible further study. Interactions can take the form of a casual inquiry at ERIC or the Student Enquiry Service through to academic advice and a student appealing their exclusion from the University. What if a student is given incorrect advice?

Depending on the advice given, the outcome(s) could be serious both for the student and the University. The aim of this study is to identify gaps in the way the University manages process related primary¹ student information transfers and recommend strategies to reduce risk and to improve transfer quality.

Research Methodology

This project will:

1. Survey staff members (face to face / phone interviews) in key student contact points across the campus to identify exactly what Macquarie University currently has in terms of systems to record, use and analyse student contact information
2. Survey students (via a web survey form) to identify particular problems they face as they make 'contact' with Macquarie to solve problems
3. Interview senior management to identify how student contact management system(s) could reduce student 'run around', enhance quality and capture evidence to support university or student claims with respect to important processes
4. Review existing literature on Contact Management Systems – especially in the education area to identify 'best practices'

Evaluation of Results

Current systems to support primary student process related information transfers will be compared and contrasted to industry 'best practice'. Recommendations to improve current practice will be made based on this analysis.

¹ Transfers that are by letter, face to face or via phone, email, fax or chat technologies

Budget

- 5 X \$50 to pay for Co-Op bookshop vouchers for the top five 'most thoughtful and interesting' student survey responses
- Survey Staff Members: 16 hours; Survey Students: 16 hours; Interview Senior Management: 8 hours; Review Existing Literature: 24 hours; Write Up: 16 hours at an hourly rate of \$31.22 = \$2497.60 to be paid to the Department of Accounting & Finance to cover the incumbent's salary while working on the project

Accounting information systems education: persisting challenges and pedagogical solutions

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Project Context

This study will target the challenges students face in ACCG250 (Accounting Systems Design and Development) and ACCG251 (Accounting Information Systems), which are second year undergraduate core subjects in the accounting degree. The failure rates in these units are relatively high, sometimes exceeding 40% of enrolments.

Aims and Objectives

The aim of this study is to investigate the reasons leading to this high failure rate, and to recommend remedial measures that are strongly founded in Learning and Teaching research literature. A preliminary investigation was conducted through several informal discussions with staff involved in these units. This has shed some light over various potential issues contributing to the current outcomes. These issues include: Weak Students, International Students, Late Transition to University, Relatively Different Unit Content, Poor Generic Skills, Students' Perception of Unit, Students' Commitment to Unit, Work-Study Balance, and Prerequisite Subject Knowledge. This study intends to investigate students' perceptions of these factors, the extent to which these factors actually contribute to the poor outcomes, and possible pedagogical avenues to pursue that could improve students' performance on these units.

Proposed Methodology

To fully investigate the issues contributing to the high failures in ACCG250 and ACCG251, and implement continuous improvements, an action research methodology is proposed as an overarching epistemology. Action research aspires to link theory and practice (Wadsworth, 1997) by bridging the gap between the two, and encouraging instructors to engage in critical reflection (Goodnough, 2003) and become more open to change and improvement (Bloomfield, Taylor, and Maxwell, 2004).

Progress to Date

A preliminary review of relevant conceptual and methodological academic literature was undertaken as part of Chadi Aoun's Postgraduate Certificate in Higher Education studies, which were completed in July 2007.

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Case studies of creativity in learning and teaching at Macquarie University

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Aim

To explore and collect examples of creativity in learning and teaching practices.

Background

Macquarie University is currently developing its list of graduate capabilities. ‘Creativity and innovation’ may well become one of the capabilities on the final list. As a result, disciplines would need to identify, develop and provide evidence of creativity within their subject areas. Creativity is a broad concept that requires greater articulation and understanding amongst both staff and students.

Application

Some lecturers already develop creativity within their subject areas – others do not. Locating working examples of subjects where creativity is already being developed would inform subject areas where it is lacking. Collecting unit outlines, activities and assessments that target creativity would contribute to a rich and diverse set of examples to draw from. In addition, interviews with staff and students would provide additional insights into the learning and teaching of creativity. The aim of these interviews is to unveil and share personal, theoretical and practical reflections regarding creativity in learning and teaching practices.

Scope

This project is multidisciplinary so as to extract innovative practice from various discipline areas. This information can then be modified to complement other subject and discipline areas. Creativity is a vital skill that prepares graduates for adapting to changes in work, technology and society.

Proposed methodology

- Develop case studies of creativity in learning and teaching around Macquarie University (for example, the Department of Business, Computing, Physics, and Human Geography). This would involve collecting unit outlines and examples of activities and assessments.
- Interview staff and students so as to broaden the conception, understanding and implementation of creativity in learning and teaching practices.

The benefits/outcomes of this project include:

- Increasing awareness and understanding of learning and teaching practices that develop or incorporate creativity.
- Structuring examples of related examples, theories, activities and assessments into a booklet format.
- Disseminating booklet/ideas to departments so as to inform curriculum design.

Estimated budget expenditure

Interview transcripts	\$2,500
Booklet printing	\$500

Evaluating the use of Wileyplus

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Introduction

ACCG355 Information Systems for Management is a third year elective unit offered by the Accounting Department. The objective of the unit is to increase student's ability to recognise, describe, evaluate, analyse, design and develop information systems from a business professional's viewpoint. The aim is to explore information and communication technologies (ICT's) and how they add value to an organisation. To be able to engage students in the issues and to develop student's skills in understanding the competitive advantage opportunities, the potential social and ethical issues as well as the risks associated with ICT's, we need access to well constructed and contemporary resources. I will be lecturer in charge for this unit for the first time in semester 2, 2008. I have been assessing textbooks and online resources from a number of publishers that could assist with these objectives.

Progress to Date

After reviewing the options, I have chosen to go with the publisher Wiley. The textbook is by Turban, Leidner, McLean and Wetherbe "Information for Management: Transforming Organizations in the Digital Economy 6th edition. The reasons for my choice are:

- The textbook is contemporary and relevant
- The students can choose between buying the textbook in hardcopy or they can go for the ebook option which is about half the price
- The online resources are delivered via an application called Wileyplus. Wileyplus provides resources such as lecture slides, assignment questions/solutions, quizzes and videos (amongst other things). It provides options for the lecturer to provide additional quizzes and assessments that are not necessarily graded by the student can test themselves or use them for revision. These resources provide a mechanism for tracking each student's progress through the course eg. Which assessment items were attempted.

Proposal

I will be evaluating the Wileyplus at several levels. The first will be the implementation phase. In this phase Wiley have agreed to assist me setting up the course using the platform including ensuring students are enrolled in Wileyplus. Secondly, I will be evaluating how effective the material is throughout the semester. Towards the end of the semester, I will survey students to establish how effective they believed Wileyplus was in terms of learning outcomes. I have already discussed this with the Learning and Teaching Centre who are going to be involved in this process. This will be a valuable project for future courses because I understand that publishers are putting a lot of

resources into online capability and this will be the way courses will be taught in the future for quality and efficiency reasons.

Graduate employability in financial risk management

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Background

ACST828 “Options Futures and Derivatives” is a postgraduate coursework unit offered by the Department of Actuarial Studies. The objective of the unit is to teach students the methods used in valuation and hedging of various complex financial securities including both standard and exotic options and financial derivative contracts. In practice, when our graduates join the workforce, the ability to implement the methods using computer software is a vitally important skill. In the workforce this is just as valuable a skill as a sound understanding of the mathematical theory and techniques. Tim will be the lecturer in charge of the unit in semester 2, 2008.

ACST865 “Quantitative Methods in Financial Risk Management” is a new postgraduate unit offered by the Department of Actuarial Studies. The purpose of this unit is to teach students about the methods used for the measurement of financial risk for financial institutions such as banks and insurance companies. In particular it focuses on the measurement of market risk, credit risk and operational risk. There is a substantial amount of mathematical and statistical theory involved in the unit. However, in practice, in the workplace, the ability to apply the theory using computers and software is a vitally important skill.

Students enrolled in units such as these would benefit from a well structured program of instruction in the implementation of derivative pricing models in excel / vba and matlab. There are several books available about the use of excel / vba for the development of software / programs for pricing and risk management purposes.

Financial Risk Management and Measurement is a growth area for employment of Mathematicians, Statisticians, Actuaries, Accountants and Finance specialists. Many of our graduates are getting jobs in this area. Financial Sector regulators around the world need staff with the appropriate skills and training. Banks and Insurance companies are actively seeking staff to work in this area.

There is an international market for people with skills in this area and some of the jobs available are very well remunerated. In particular, the Institute of Actuaries of Australia is interested in the Risk Management area and perceives it to be an area of future involvement for the actuarial profession.

The above 2 units cover some of the knowledge graduates would need to gain jobs in this area.

Proposal

We propose to do a study of the factors that influence graduate employability in the area of financial risk management. We intend to seek out the views of recent graduates, employers and academics. The study may use questionnaires / surveys, interviews, and possibly focus groups

The study will investigate

- What types of graduates are getting jobs in the area, e.g. mathematicians, statisticians, actuaries, accountants and finance graduates
- What computer skills training the recent graduates working in financial risk management have had, and whether they learned these skills on the job or at university
- Whether experience as a dealer in financial securities is an important factor in employability in this area
- What level of mathematical / statistical skills are required by employers. Anecdotal evidence suggests that some employers seek staff with PhD level skills while for others, a good bachelors degree is sufficient
- The extent to which employers seek graduates with computer programming skills and what type of computer skills they seek. For instance it may be excel / vba, Matlab, C or C++ or other types of computer skills that are needed.
- What other graduate attributes are significant in influencing employability in this area.

The study may inform policy makers about what changes can be made to the university syllabus to enhance graduate employability in this important new area. Risk Management is also an area where there is much scope for research by the academic community and interaction between industry and academia.

Developing a medium of teaching for first-year accounting students to enhance deep learning of complex threshold concepts underlying accounting

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Problem

Students are having difficulty understanding threshold accounting concepts that underlie practical accounting which constitute most topics that are covered in ACCG105/100. The problem was apparent in the written answers to conceptual questions. Due to the lack of understanding of the concepts students have also resorted to memorizing steps/rules in doing the practical aspects of the unit. This practice is characteristic of surface learning which gives rise to the problems of inability to tackle more demanding practical questions and problem-based exercises.

Contributing Factors to the Problem

- Accounting threshold concepts are complex and difficult to grasp.
- The level of language proficiency of international/NESB students (exceeding 50% of the total enrolment).
- The problem is also exacerbated by the current format of unit requirements which comprise unilateral lecture delivery to hundreds of students and tutorial.
- The textual treatment of accounting concepts in textbooks also makes understanding difficult. Students resorted to reproducing parts of the textbook in their answers.

Intervention and Evaluation

To develop learning materials aimed at promoting student understanding and deep learning of accounting threshold concepts. Features of learning:

- Use non-unilateral forms of learning material, for example, dialogues, role plays, learning by examples, and problem-based learning, to focus on threshold concepts
- Emphasise student learning perspectives, for example, using a dialogue aimed at correcting (common) student misconceptions and providing explanations for the meaningful understanding of the relevant concepts.
- Use audio recordings (CDs or downloadable audio files) where students can listen to the materials at appropriate time of their own learning processes and also repeatedly if necessary.
- The project will be evaluated by assessing student learning (deep/surface) in their written answers to conceptual questions pre and post intervention, and also by student surveys.

Budget items

Marking release to free Milica and Samantha to develop learning materials and to analyse data for project evaluation. 2) Payment for students to participate in role plays. 3) Research assistance to analyse survey data.

At this stage, the exact amounts of expenditure for the above items have not been ascertained.

Spreadsheet modelling in investment / Finance and Actuarial Science education

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Background

Investment and Finance is very mathematical these days. Actuarial science has always been highly mathematical but these days actuarial education includes a substantial amount of investment and finance material, such as financial economics, asset pricing, options and futures, modern portfolio theory and so on. The traditional approach to teaching this material involves “pen and paper and calculator” and this limits the types of examples that can be used in teaching to those which are relatively simple.

Due to the complexity of much of the mathematical and statistical techniques required, teaching and learning some of the material is difficult. Spreadsheet modelling is ideally suited to the purpose of illustrating many of the concepts, mathematical and statistical techniques used in the theory of investment, finance and actuarial science. In particular techniques such as portfolio optimisation, monte carlo simulation and binomial option pricing methods are very difficult (impossible) to do with a calculator but very feasible to do using spreadsheets.

Spreadsheets have several advantages in this context, such as:

- They can be used to produce graphs and tables
- They have a wide range of built in functions and statistical tools
- They can be used to create monte carlo simulations
- They can be used to create user defined functions
- They can be used to do binomial option pricing
- They are easier to use than calculators for the purpose of doing complex calculations involving multiple variables

Proposal

We propose to do a study of the use of spreadsheet modelling in investment / finance / actuarial science education.

The study will investigate

- The areas in investment / finance / actuarial science education where spreadsheet modelling would be most suitable for teaching students about concepts, methods and techniques
- Whether spreadsheet modelling can assist students overcome “equation phobia”
- The advantages and disadvantages of spreadsheet modelling in this area of education
- The extent of the use of spreadsheet modelling in such courses around Australia

- The views of university teaching staff regarding the issue of where spreadsheet modelling would be most helpful
- Whether spreadsheet modelling should be taught as a separate subject

We propose to seek out the views of recent graduates, employers and academics. The study may use questionnaires / surveys, interviews, and possibly focus groups

The study may inform policy makers about what changes can be made to the university syllabus.

Assessing the effectiveness and efficiency of introducing multiple choice assessment into large student cohort Business Law courses

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The Problem

The Department of Business Law teaches law subjects to students across the university. Most students who enrol in its courses are studying degrees within the Division of Economics and Financial Studies. The Department has experienced significant increases in student enrolments in its undergraduate subjects over the past five years (2002: 2778; 2007:6077) without an equivalent increase in its staffing levels.

The traditional method of learning and assessment in law subjects is through writing research essays and writing advices which answer problem-solving fact-based scenarios. These methods of learning and assessment have struggled to scale with the more than doubling of student numbers over the past five years, causing the department to seek more efficient forms of assessment.

To validly replace tried-and-tested forms of assessment, new forms of assessment must be at least as valid, reliable and effective as the traditional forms. The department is currently experimenting with introducing multiple-choice as a form of assessment in two business law subjects: BUSL250– Business Law and BUSL301- Corporations Law.

This project will attempt to quantitatively assess the effectiveness, validity, reliability and efficiency of introducing multiple-choice assessments in business law subjects and forms part of a larger departmental research program into the use of multiple choice assessment in business law subjects.

Methodology to Investigate the Problem

Demographic data will be gathered on the students to determine whether student performance in either assessment form significantly differs on the basis of: gender, international/domestic status, incoming GPA or TOEFL scores (for international students only). Once student results have been collated and matched with demographic data, the data will be de-identified before being analysed.

After conducting a literature review, the student-results data gathered from a number of trials of multiple-choice assessments in BUSL250 and BUSL301 will be statistically assessed for effectiveness, validity and reliability as compared to student results in problem-solving assessments. The degree of learning (surface/deep) within multiple

choice and problem-solving assessments will be compared using Bloom's Taxonomy of Learning and student performance across the various levels of the taxonomy compared.

How the results will be assessed

The statistical analysis will determine whether overall student performance in multiple choice assessments is at least equal (reliably, validly and effectively) to that in problem-solving assessments. Trends across demographic groups will also be determined (if existent).

Analysis will also be done of the total cost of preparing and marking and giving feedback on multiple choice assessments as compared to problem-solving assessments to determine relative efficiency levels.

If the overall analysis shows equivalence between assessment forms, then a case will be developed to expand the use of the more efficient form of assessment within the Department.

Budget allocations

The \$3000 will be spent on:

- 1) a research assistant to gather, collate and de-identify the student data before undertaking statistical analysis of that data.
- 2) a research assistant to gather, collate and analyse assessment items in BUSL250 and BUSL301 multiple choice and problem-solving assessments using Bloom's Taxonomy of Learning.
- 3) Acquiring a licence of the statistical analysis software for MCQ, LERTAP (<http://lertap.curtin.edu.au>)