

USING CASES IN A MIXED LEARNING ENVIRONMENT: MEETING THE CHALLENGES OF HIGHER EDUCATION REFORM

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Abstract

This paper explains the context for the experimental pedagogy in a specific undergraduate course; the comparative benefits of using cases in a mixed learning environment (simultaneous large and small groups); and illustrates one significant way for universities to respond to the increasing demand for delivery efficiency while maintaining high quality learning outcomes. Thus, to achieve objectives of the subject tutorial classes expand on what is taught in the lectures and provide the necessary context to analyse cases in more detail. A small, qualitative study explored experiences of market research tutors with the use of case method teaching reported. Implications of the study for case teaching in higher education are identified.

KEY WORDS: Mixed learning environment, market research classes, case-method teaching

BACKGROUND

Higher education in Australia is becoming increasingly more vulnerable to market pressures. Escalating costs and diminishing government funding for tertiary studies are forcing universities to rethink how these challenges can be met, without sacrificing learning outcomes of students. Higher fees provide one strategy, but fail to offer a long-term solution. Therefore responses to these macro issues are challenging the very environment in which education is delivered. Technology has facilitated has a revolution from face-to-face teaching to online and distance education; nonetheless demand remains strong for traditional (face-to-face) degree programs [Murphy, 1998]. As universities struggle to balance quality pedagogical outcomes and heightened financial constraints, educators continually seek ways of achieving these diverse mandates. Mirroring U.S. hallmarks of better service, lower costs and higher quality, Australian universities must also confront the issue of institutional productivity and curricula reform [Zemsky, 1993].

Increasing class size becomes a decisive way in which universities can cut costs and generate significant economies of scale--evidenced by the increasing number of courses taught using large classes. Of course, mass lectures have been used throughout the world for decades, but their effectiveness and value is highly contested [Murphy, 1998; Scheck and Kinicki, 1994], particularly in a skill and process-based subject such as market research. Among the criticisms of large classes is the view that students lose concentration after a very short time and passive learning is encouraged as

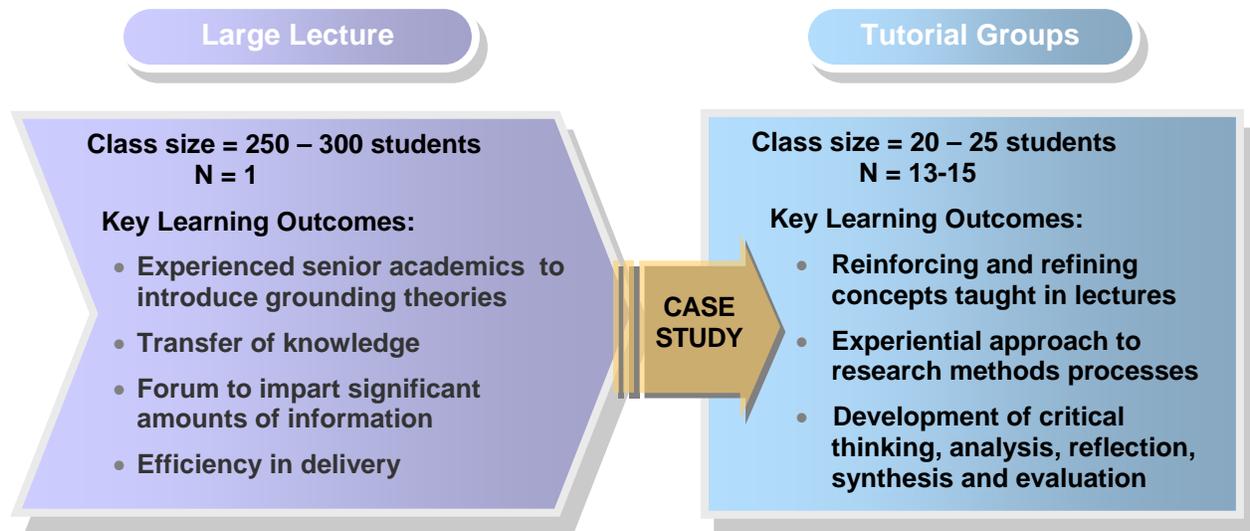
students become dependent on the lecturer for information [Murphy, 1998]. In addition, differences in the way students learn and assimilate information suggest a single method may not facilitate an effective form of teaching. The importance of different teaching methodologies has been the topic of considerable research, investigating the science underpinning how people learn. Be that as it may, teaching in universities has traditionally emphasised abstract conceptualisation and theory over a more applied approach [Kreber, 2001]. Furthermore, mass lectures continue to play an important role in academia, considered by both lecturers and students as useful and valuable teaching and learning experiences [Murphy, 1998].

THE CHALLENGE

In the context of such issues relating to market pressures and class size, The School of Advertising, Marketing and Public Relations at Queensland University of Technology adopted a new structure for an undergraduate market research subject. Historically, this subject is ideally taught in small groups involving as few as 10 or as many as 80 students [Nyden; Takata and Leiting; Winn; cited in Edwards and Thatcher, 2004] and the subject is largely based around building an understanding of the nature of social science research and the research process [Benson and Blackman, 2003]. Small classes provide an important environment to facilitate active learning, unlike large lectures in which learning is more passive. Skills such as problem analysis, critical thinking, judgment, research and investigation, as well as the ability to work and learn independently are not only vital for market research, but underpin future research action in advanced business studies and practical application for employment. So, while lectures enable large amounts of information to be imparted to a large group of people, the addition of smaller tutorials provides a forum that not only reinforces and refines what is taught in these lectures but facilitates the application of a wide range of instructional strategies to cultivate better student learning [Matthews and Barrington, 1998]. As such, the impetus for modifying the delivery structure in the undergraduate market research subject was to incorporate large lectures and capture the interest of students in a difficult and challenging field of study, one sometimes considered to be dull and irrelevant [Edwards and Thatcher, 2004]. The aim to improve learning processes strongly indicated an activity-based, experiential approach that leads to students' internalising and understanding the subject being studied [Bloom, cited in Benson and Blackman 2003].

One solution to these issues was to employ case studies as a means of increasing participation, interest and learning outcomes. Widely used in a broad range of disciplines, case studies are recognised as an effective learning device to develop the type of skills in higher-level thinking, reflection and self-directed learning [Kreber, 2001] as required for a market research subject. When carefully selected, cases also reflect the dynamics and challenges faced by organisations in the external business environment that compliment lessons learned from textbooks and capture current issues that are relevant to students, unlike many examples presented in mainstream texts that are frequently dated and uninspiring [Needham, 2000]. However, the large lecture environment is not conducive to the interactive and participative element required for analysis and discussion of a case. In order to integrate these vital dynamics, a non-traditional approach to teaching cases was trailed. In this approach, the theoretical and conceptual context provided by lectures was linked to specific learning outcomes of small group tutorials by the use of case studies. (See Figure 1) This emphasis resulted in a teaching style that moved from simply delivering subject content to a model that coupled the lecture method for communicating significant amounts of information on research-methods principles and theory to the use of case study method to develop skills [Masoner, 1988].

FIGURE 1
STRUCTURE OF DELIVERING CASES IN A LARGE CLASSES



DEVELOPMENT OF THE SUBJECT

Initial outcomes utilising case studies in the market research subject suggested the interaction between large lectures and small tutorials that focus on refining tools to analyse market research based case studies, had merit. Market research is a highly complex and complicated process, requiring students to be given significant amounts of information in a short time period (13 weeks). Rich learning experiences and deeper understanding by students is often achieved when students are taught by highly experienced senior academics; however, subjects with large enrolment numbers and taught in a small class setting cannot offer this invaluable learning environment. With the propensity for sessional tutors - usually at the start of their academic careers - to conduct small-group classes [Blanchard and Smith, 2001], the value of integrating learning experiences with a skilled practitioner has even greater significance. Large lectures permitted highly experienced teaching professionals to drive course content and introduce grounding theoretical principles, transferring knowledge in cost-effective way.

Nevertheless, a number of learning outcomes cannot be achieved in large lectures, particularly in developing key skills such as “getting the problem right”. Cases facilitated this learning outcome particularly well, but created a number of shortcomings in relation to teaching and learning issues when undertaken in a large lecture environment. Thus, in order to achieve the requisite objectives, tutorial classes expanded on what was taught in the lectures and provided the necessary situation to analyse cases in more detail. Students must engage in higher-order thinking tasks such as analysis, synthesis and evaluation [Eison, cited in Benson and Blackman, 2003] to articulate problems and develop defensible arguments to support those decisions. Similarly, as stated by Benson and Blackman [2003] tutorials “facilitate real engagement with the application of the knowledge rather than a mere learning by rote of method types and returning the responsibility of learning to the learner”, in turn stimulating the proclivity toward self-directed learning. In this way students used theoretical knowledge and applied it to a ‘real life’ situation presented in the case.

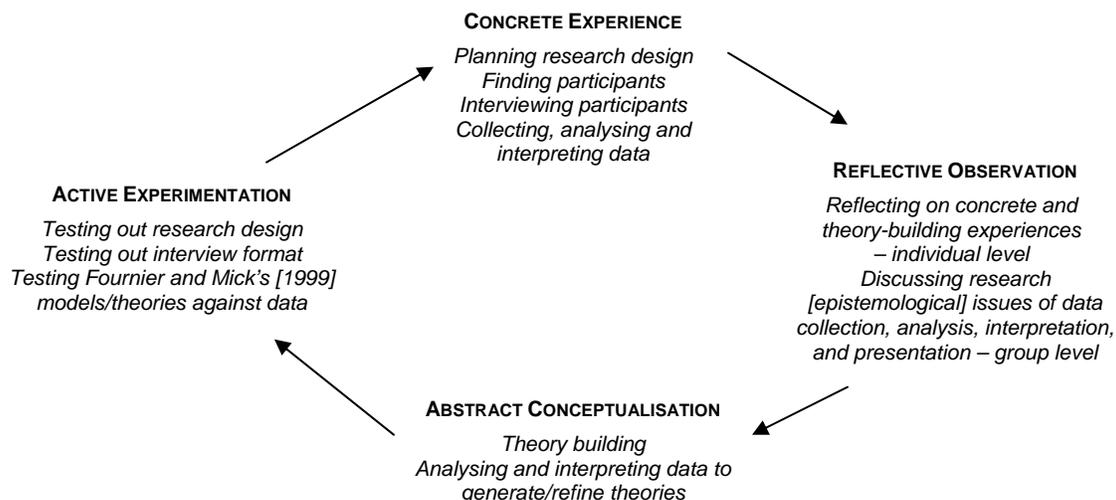
TEACHING AND LEARNING CONTEXT

One of the principle aims of using case studies in education is to link knowledge and application, thereby facilitating critical thinking, reflection and active learning. Hopkinson and Hogg [2004] used Kolb's [1984] model of experiential learning theory as the framework for helping students acquire practical skills for, and applying a proposed relationship between research-based study and experiential learning. Similarly, Kreber [2001] identified connections in regard to case studies with experiential learning, long recognised for the design of instruction in higher education, thereby creating strong support for the integration of case study method in the undergraduate research subject.

In designing this subject it was important to translate the significance of research as a vital core skill underpinning the entire undergraduate program and professional competencies in most work environments. As such, two priorities were identified:

1. Curriculum development meets primary academic objectives:
 - the transfer of knowledge in a large class environment
 - to enhance understanding, analysis and application of the research process, requiring the ability to synthesise information and provide defensible judgments for the proposed solutions and courses of action
 - the development of critical thinking, problem-solving, reflective learning which will encourage self-direction in learning by students
2. The transferability and extension of primary skills to the higher levels required in advanced study of specific business disciplines and articulation of these underlying skills and competencies for employment.

FIGURE 2
RELATIONSHIP BETWEEN KOLB'S EXPERIENTIAL LEARNING
CYCLE AND THE ASSIGNMENT 'DESIGNING, CONDUCTING
AND RE-THINKING QUALITATIVE RESEARCH



Source: Hopkinson, G.C. and Hogg, M.K. "Teaching and Learning about qualitative research in the social sciences: An experiential learning approach among marketing students," *Journal of Further and Higher Education*, Vol 28, No.3 (Aug, 2004), p.308.

As described by Bloom's Taxonomy of Educational Objectives [cited in Hampton and Lawrence, 1995], intended cognitive behaviour can be classified into two broad categories: knowledge and intellectual abilities and skill. In the first category, students are only required to recall specific information without analysing its significance – an outcome readily achieved by a large lecture environment. As such, weekly lectures drove course content, while providing context and structure for the smaller class environment. Hopkinson and Hogg's [2004] study of an experiential learning orientation supported a

combined approach for contact in both lecture and small-group meeting contexts to provide sufficient guidance and structure. This was coupled with group and individual work to expose students more widely to each dimension of learning. Tutorial classes, attended by 20-25 students, played a critical role in the learning process, reinforcing and refining what was taught in the large lecture environment. In turn, this provided guidance, feedback and clarification to stimulate higher levels of understanding and cultivated a positive effect on student learning. The smaller classes were intended to engage intellectual abilities and skills, classified by Bloom [cited in Hampton and Lawrence, 1995] as comprising of five cognitive behaviours of comprehension, application, analysis, synthesis, and evaluation. In this environment cases provided the ideal tool for tutors to shape, develop and refine deeper levels of cognitive activity in order to achieve the high level of intellectual skill and ability required of students [Hampton and Lawrence, 1995]. In turn, this underscored the importance of effective, cohesive tutorials and sessional staff to enhance student learning [Blanchard and Smith, 2001] as a central component of the curriculum design.

Experiential learning and the development of core research skills were cultivated progressively with every student required to study two cases, each introduced at strategically-determined stages of the curriculum. By overtly linking outcomes to the assessment, student learning could be directed and supported. Table 1 provides a summary of the case types and specific objectives to achieve a range of learning outcomes. Nevertheless, assessment for case-study analysis represented a minor component (40%) of the overall assessment for the subject with students required to undertake two (2) multiple-choice exams for rigorous testing of content knowledge and underlying research theory.

The first case study set was relatively straightforward and undertaken as a group task. Intended to introduce students to key concepts embedded in any research study, assessment focused primarily on problem identification and analytical skills to identify a research problem area. This can be likened to the 'prehension dimension' in Kolb's model, when individuals take hold of an event, which may include some intuitive and tacit (implicit) understanding ('concrete experience'), or through comprehension, such as conceptual interpretation and symbolic representation ('abstract conceptualisation') [Kreber, 2001]. Kreber asserted this is where students develop a theory to explain and solve the problem, thereby engaging in the creation of assimilative knowledge. Recognised as a step that often presents a challenge to many learners [Kreber, 2001], the subject coordinator attempted to mitigate these difficulties through the two-case approach. Kreber also cited recommendations by Gross Davis [1993] and Knoop [1984] for the use of case studies in combination with group work, thereby providing further support for this subject design.

The second, more complex case study was introduced after assessment and feedback from the first case study assignment. Students had the opportunity to reflect, question, reassess, confirm and re-evaluate learning of this crucial fundamental stage of the research-learning process to engage higher levels of understanding and knowledge before attempting the more difficult and challenging project. Kolb [cited in Kreber 2001] suggested the 'transformation dimension' takes place when individual learn from such an experience or event through either internal reflection ('reflective observation') or active manipulation ('active experimentation'). Charged with replicating a process where the task was to analyse the case - identifying the underlying problem(s) in order to determine a key research problem - students then applied theoretical knowledge to the 'real' life situation [Kreber, 2001]. Moving through the final stage, students evaluated decisions in research design, data collection and analysis, and selected the best alternative linked to the research objectives. This typifies development of an implementation plan to experiment their solution strategy and propelled students to become involved with 'active experimentation', thereby creating convergent knowledge [Kreber, 2001].

TABLE 1
CASE TYPES AND LEARNING OBJECTIVES

	Learning Objectives						Research Problem Statement (15% of total assessment items)	Research Proposal (25% of total assessment items)
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation		
Case Type							small detail set / short exposure	significant detail / in-depth exposure
Length							3-4 pages	25+ pages
Outcomes:								
Organisational overview; background/market overview	X	X	X	X			10%	15%
Statement of research problem (s)	X	X	X	X	X		25%	20%
Statement of rationale of research problem (s)	X	X	X	X	X	X	25%	
Statement and rationale of objectives	X	X	X	X	X	X	25%	
Statement and rationale of data collection methods	X	X	X	X	X	X	-	40%
Statement and rationale of data analysis methods	X	X	X	X	X	X	-	15%
Writing	X	X	X				15%	10%

EVALUATING THE LEARNING EXPERIENCE

As a means of exploring this approach to the use of case studies in the subject, a small qualitative cross-sectional study was conducted to evaluate experiences of tutors of students understanding and application of the research process through the use of cases. In-depth interviews of 30-40 minutes were conducted with three of the four most-experienced tutors teaching the subject. Six structured questions (see Table 2) explored the use of cases in achieving multiple learning objectives and reflected upon important benefits or challenges faced in using this approach. Specifically, the interviews gathered information regarding:

- experiences with students in the first stage of problem identification in the research process
- type of issues that the tutors encountered with students
- experiences of tutors in students' responses to synthesise information and the use of cases to achieve this level of cognition
- experiences with students' ability to make the link between the problem statement and the research design
- experiences in how beneficial the use of cases to achieve these objectives in terms of other forms of assessment, and
- strengths and weaknesses of using cases in the class.

The interviews were recorded via audio tape. The authors processed and interpreted the interview data. Care was taken to capture interviews' key responses for each question, rather than undertake analysis from a verbatim transcription of each interview. Analysis of the data followed Miles and Huberton's interpretative approach with an orientation that captured the telos (essence) of responses [cited in Mason, 1998]. This approach enabled the researchers to explore experiences by tutors and identified what these findings implied in terms of refinement to using case studies in the context of teaching research methods. Key responses in relation to what works and what doesn't work as experienced by tutors in the research methods subject are outlined in Table 2.

TABLE 2
KEY EXPERIENCES BY TUTORS

Question	Summary
<p>What experience do you have with students in the first stage of problem identification in the research process with case study analysis?</p>	<p>Students experience difficulty with concepts of problem identification and find the idea of defining the problem the most difficult. Many students struggle in distinguishing the difference between symptoms and the true problem, sometimes identifying a problem that they can't actually answer within the bounds of the assignment.</p> <p>Some students don't read the case well. Case study method involves more lateral thinking, whereas students are often used to a more structured, passive style of learning.</p>
<p>What type of issues do you face?</p>	<p>Main issues faced are trying to explain what we mean by a problem. There are two levels of problem definition that are faced by students:</p> <ol style="list-style-type: none"> 1) identifying a critical problem area for the organisation 2) translating an organisational issue into a researchable problem. Students sometimes fail to frame the research proposal well and treat the case study as if the client organisation is their client. <p>English as a second language can also be a barrier for some students with difficulties experienced in trying to translate from English as well as understand the issues imbedded in the case study.</p>
<p>The ability to synthesise information is one of the learning objectives for the subject, utilising cases to achieve this level of cognition. In your experience, how do students respond?</p>	<p>Cases work well to synthesise information giving students a real world situation without putting them into the real world. All the necessary information is presented in the case, but all the risks are gone.</p> <p>Poor preparation by students in reading, synthesising and evaluating information presented in the case is reflected by the quality of work submitted for assessment.</p> <p>Some students struggle with the complexity of research methods as well as being introduced to case method as a form of assessment where theory must then be synthesised and applied.</p>
<p>What experience do you have with students to make the link between the problem statement and the research design?</p>	<p>Students often experience difficulty in linking all parts of the research process to the key problem identified in the case. They want to solve all the company's problems at once, but going too broad makes it more difficult for them to link research objectives and research questions with their</p>

	<p>problem statement, and choose a research design that best achieves those objectives.</p> <p>The link between the problem statement, objectives and research design tends to get a little bit sketchy and often students don't work backwards to make sure that it all fits together.</p>
<p>In your experience, how beneficial is the use of cases in achieving these objectives in terms of other forms of assessment?</p>	<p>In comparison to say short answer and essay-type questions, the information can be copied from a book--it doesn't actually show that students have synthesised or analysed or understood anything. Case study puts them into a real life situation, without the risks and they need to apply it. Students have to make choices and decisions, so they have to actually think and understand.</p> <p>Cases provide a better alternative than students carrying out a live study, shifting the focus from the technical aspects of the process to understanding and defining the problem area, and what the research seeks to achieve--this is a critical factor in market research.</p> <p>The way in which cases are used could even be developed further, for example, students could be required to give conduct an oral presentation on their research proposal. This would develop other valuable skills.</p>
<p>What do you see as the strengths and weaknesses of using cases in the class?</p>	<p>Understanding and experience of students in the use of case method is generally low. The problem is exacerbated by the lack experience and ability felt by tutors in teaching case method. Smaller class sizes allow better participation and interaction in discussion of cases in the tutorial environment, but it is often difficult to engage this level of interaction from students. Methods traditionally taught in high schools encourage rote learning – cases help students prepare for the types of issues they will face with when they are working. Students are impelled to contemplate the grey areas of business – there is no right and wrong, rather how it is interpreted. Students must make choices and then defend those decisions. It is clever the way two cases are used – the first assignment is about being able to ask the right question. The second assignment is about developing the best way to answer those questions – so the whole process is covered.</p>

A cursory review of student evaluations of the unit (SEUs) provided feedback on two different orientations of the curriculum for the subject--both approaches employed the large lecture environment to impart significant amounts of content knowledge, whereas earlier approaches used tutorial exercises to engage students in applying the concepts. Although differences between the two sets of SEUs were not statistically significant, some encouraging indications were noted and suggested the use of cases was viewed favourably by students. Rated on a 1 to 5 Likert scale (where 1 = strongly disagree and 5 = strongly agree), questions such as "the unit content is structured and delivered in ways which assist my learning" scored 3.7 in Oct-04, up from 3.3 in May-03, and "the unit is structured and delivered in ways that help me to understand" scored 3.6 in Oct-04, up from 3.2 in May-03. The 2004 evaluation was also rated for the question "overall, how would you rate this unit?" at 3.7 to the previous year of 3.5. Caution was exercised in drawing inferences from student feedback surveys due to variances in the response rate from 2004 and 2003 surveys (31.60% and 53.19% respectively) and that development of the subject is

still undergoing refinement. Based on student evaluations the researchers acknowledge the need to undertake further research to probe issues relating to teaching and assessment methods and the use of the case method to enrich learning experiences for students.

IMPLICATIONS AND USEFULNESS OF THE CASE EXPERIMENT

In principle, the use of cases in the research method subject was viewed favourably by tutors as an effective tool that pressed students to work through problems and apply theory learnt in the large lecture environment. In the experiences of these tutors, the main difficulties lay firstly in helping students embrace the case method and shift from a passive learning experience to one that engaged higher order skills to synthesise complex theories in a realistic situation. Secondly, was the difficult task of helping students gain an understanding of complex and challenging research concepts, particularly problem identification and defining a researchable problem. Once identified, students were required to apply these to situations posed in the case to generate useful data that translated into actionable solutions for the organisation. In response to these challenges, teaching and learning notes from the cases are supplied to tutors to guide discussion and provoke better participation in the classroom. Some first- and second-year subjects use the large lecture environment to provide an introduction to using cases. This is conducted by a skilled and experienced senior academic to instil a positive and correct understanding of the case method, which can then be built on and refined in the small class environment. The findings also signal strategies to augment teaching skills of tutors. Wood and Anderson [2001; p. 170] contended that, "the role of the instructor is critical in facilitating dialogue and establishing a supportive and challenging climate for the case study classroom." In this way, improving questioning skills of case study teachers can enhance critical thinking of students, intensifying the importance of coaching skills such as effective facilitation, engaging student's verbal interaction and participation, thereby fostering greater enthusiasm in tutorials to improve teaching and learning, which in turn benefits both students and tutors.

The teaching strategy of using the case method in a large class subject is still evolving. Nevertheless, the analysis of this method for a large research subject in an undergraduate business program demonstrated how multiple learning objectives can be achieved in this environment. That is, where cases are coordinated between lectures to a very large audience and then specific learning outcomes are attempted within the small groups (tutorials). Accordingly, this paper discussed practical and educational problems that may be confronted and issues that still need to be addressed in relation to this method to enrich classroom experiences in research-based learning. In general, the approach to using case studies in delivering material to large classes has successfully met the learning objectives for the course. Furthermore, not only are considerable economic benefits realised, but significant learning experiences for students through classes delivered by highly experienced academics. This is an opportunity rarely afforded to undergraduates taught in small class environments. The combination of small classes (tutorials) provided a multifaceted learning milieu, extending concepts introduced in the lecture and using cases to cultivate a broad range of research-focused skills to the higher levels required in advanced business studies and practical application. Clearly, what has been trialled here needs to be tested more extensively to validate the course learning outcomes. As suggested by Kreber [2001], students' critical thinking skills and propensity toward self-directed learning could be assessed by way of pretest/post-test quasi-experimental design to measure skills before and after exposure to the case based approach to teaching large subjects. Finally, examining the effects of this teaching strategy more closely, the application and dissemination of these results may not only provide a valuable contribution to academic teaching in higher education, but can reduce time and resource demands through a more effective, educational experience for students.

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