2013

You never know what question you are going to answer: creating effective tension for effective learning using business case studies

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**Publication Details**

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Abstract
Case studies in business management have been used as an effective approach and tool for enhancing students' critical thinking and problem-solving skills by providing opportunities for students to apply appropriate theories, concepts, and models for real-world issues faced by organisations. Despite the popularity of the case study approach in business and management education, it is self-evident that the effective use of case studies to achieve the above-mentioned benefits is challenging and problematic mainly because case studies are misused and abused in different ways, including just adopting a popular method, just asking students to read and answer the questions, or not creating a conducive environment for interactive and active learning sessions. This challenge has been widened and deepened as there is very limited empirical research on improving students' learning and performance by effective utilisation of case studies. Research that does exist has primarily focused on student perceptions of their learning rather than actual learning outcomes (Yadav, Shaver & Meckl, 2010). This paper explores some empirical evidence with regard to effective utilisation of case-based tutorial class interactions and on the adoption of case analysis and presentations to improve teaching, learning, motivation, and evaluating of postgraduate students of an international business degree program. We conducted this exploratory study over a period of 3 years (9 semesters) in two campuses of a university in Australia by examining subject outlines, case study discussion practices, performance records, students' feedback and comments, and conducting informal discussion with subject lecturers. As we found different ways and approaches used by several lecturers to discuss case studies, we compared students' learning and performance before and after methodological intervention implemented in 2012. We discovered a high level of impact of changes on students' learning and performance when case studies were integrated into a part of the teaching, learning, and evaluation process by providing equal opportunity for every student to engage in active learning. Our approach consisted of creating a positive tension and competition among both individuals and groups and the announcement of marks and constructive feedback on the same day of presentation (e.g., Jonsson, 2013). Performance data and students' experience revealed that they were engaging in active learning and could add a lot of realism to the class. We therefore argue that the use of case studies needs to be made meaningful and interesting through innovative methods. Our experience also suggests that lecturers and tutors have a critical role in selecting appropriate cases, developing a good tutorial plan, creating effective tension, curiosity, and a moderate level of competition among students for active engagement in learning and participation, providing appropriate support and feedback, and adopting coherent and credible assessment criteria to assess performance. Hence, the use of case studies in teaching and learning requires richness of content, process, and context that inspire students' interest and commitment in their learning aimed at enhancing overall performance.

Keywords
tension, effective, creating, answer, going, question, know, never, you, studies, business, case, learning

Disciplines
Business

This conference paper is available at Research Online: http://ro.uow.edu.au/gsbpapers/409
YOU NEVER KNOW WHAT QUESTION YOU ARE GOING TO ANSWER: CREATING EFFECTIVE TENSION FOR EFFECTIVE LEARNING USING BUSINESS CASE STUDIES

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Case studies in business management have been used as an effective approach and tool for enhancing students' critical thinking and problem-solving skills by providing opportunities for students to apply appropriate theories, concepts and models for real world issues faced by organisations. Despite the popularity of the case study approach in business and management education, it is self-evident that the effective use of case studies to achieve above mentioned benefits is challenging and problematic mainly because case studies are misused and abused in different ways, including just adopting a popular method, just asking students to read and answer the questions, or not creating conducive environment for interactive and active learning sessions. This challenge has been widen and deepen as there is very limited empirical research on improving students learning and performance by effective utilisation of case studies. Research that does exist has primarily focused on student perceptions of their learning rather than on actual learning outcomes (Yadav, Shaver & Meckl, 2010).

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We discovered a high level of impact of changes on students learning and performance when case studies were integrated into a part of the teaching, learning, and evaluation process by providing equal opportunity for every student to engage in active learning. Our approach consisted of creating a positive tension and competition among both individuals and groups and the announcement of marks and constructive feedback on the same day of presentation (e.g. Jonsson, 2013). Performance data and students experience revealed that they were engaging in active learning and could add a lot of realism to the class. We therefore argue that the use of case studies needs to be made meaningful and interesting through innovative methods. Our experience also suggests that lecturers and tutors have a critical role in selecting appropriate cases, developing a good tutorial plan, creating effective tension, curiosity, and a moderate level of competition among students for active engagement in learning and participation, providing appropriate support and feedback, and adopting coherent and credible assessment criteria to assess performance. Hence, the use of case studies in teaching and learning requires richness of content, process and context that inspire students' interest and commitment in their learning aimed at enhancing overall performance.

Keywords: Effective use of Case study method, Business Management Education, Creating effective tension, curiosity and competition, active learning.
1. INTRODUCTION

One of the key challenges of business and management education is transferability of appropriate skills and knowledge to students for applying and succeeding in the world of business. Learning and teaching theories, methodologies and techniques have been changed over the years. However, a significant part of business education is predominantly based on deductive and objective learning and teaching methods. Case study based teaching and learning methods are widely used in business management education but the level of usage and ways of using it in learning and teaching is different and a complex process. As a result, expected outcomes of case method in teaching and learning presents mixed results. For example, some teachers believe that case teaching is not effective way of imparting knowledge while others see that the contribution of case teaching to be principally in the area of skill and attitudes development (Heath, 2006). However, case-based teaching and learning is a popular and extensive form of inductive learning (Newson & Delatte, 2011). Inductive learning is more problem-based and learner centred method which challenges students of their way of thinking and learning and is intended produce active learners than passive learners (Kirschner et al., 2006). This learning orientation is aligned with the higher level of Bloom’s revised taxonomy of learning (Anderson & Krathwohl, 2001). As such, we try to address the issues of how to use case studies effectively in teaching and learning? and how can we measure the effectiveness of learning and teaching with cases?. The practical scenario we used consists of relatively high failure rates of the overall result of a postgraduate level subject offered by a university. The contribution of case study section was worth 40 per cent of overall performance. In addition, the average performance of case study section of the final exam was indicated 41 percent failure rate. In the following sections, we present a brief review of literature, which is followed by methodology, result, discussion and conclusion sections.

2. BRIEF REVIEW OF LITERATURE

2.1 Teaching, learning and case methods

Students have different preferences and reactions to learning approaches. Case study teaching is only one tool in the teacher’s tools kit. The term case method is used to mean any use of cases for teaching and learning. Learning can simply be defined as the acquisition of knowledge, skills, and attitudes. The process of bringing about learning is called teaching (Heath, 2006).

Case study in teaching and learning actively engage students in which they construct their own knowledge and understanding existence of multiple realities that oppose to passive learning through their teachers and textbooks (Newson & Delatte, 2011; Biggs 1999). Case-based teaching method is about ‘true or historical or hypothetical’ stories or situations with issues or problems that require decision-making to solve them. (Herreid, 2001;1994; Prince &
Case study is also known as ‘a complex example to give insight into the context of a problem’ (Fry et al. 1999) and a method of teaching and learning that can be used to apply theory and concepts into real life context.

Case method is heavily used in medicine and also origin of this method itself is in medicine (Newson & Delatte, 2011). Contemporary application of case methods developed by the Harvard Law School and then Harvard Business School and then it was widely spread into other fields such as engineering and Information technology.

As a method of learning and teaching, educators use case studies in many different forms such as discussions, lectures, debates, problem identification and solving, assignment, and twining theory and practice in delivery and assessment tasks. The delivery method and assessment modes determine the different roles of teachers and students in case study teaching and learning. It is important to achieve inductive learning outcomes and graduate attributes and skills by creating authentic contextual environment (cit. in Newson & Delatte, 2011). Business case studies usually are authentic and represent an actual business situation in a real organisations and people within business practice (Keenan & Gilmore 2010).

2.3 Skills and learning outcomes to be developed through case study teaching

Case studies are used in teaching to provide opportunities for learning. In examinations, case studies are used to provide opportunities for students to demonstrate their learning. The use of case studies as a part of or a vehicle for ongoing assessment provides opportunities for both learning and demonstration of learning. In addition, case studies are used in the filed of business and management education to provide students with practical examples and scenarios relevant to the application of theories, concepts, and models they learnt in class room teaching. According to Heath (2006), case studies have proved effective in developing skills such as analytical and critical thinking, decision making, judging between different courses of action, handling assumptions and inferences, presenting a point of view, listening to and understanding others, and relating theory to practice (12p.).

3. METHODS

The approach we adopted to address the issue we presented in the introductory section itself is appropriate for case study method for numbers of reasons. First, we address two “how” questions in this study, which are usually investigated through case studies. Second, we focus on one specific aspect of teaching and learning process that is the use of case study for teaching and learning. Third, we use multi-methods in the process of investigating the issue such as introducing change intervention process (new method of introducing case studies) (Boud & Molly, 2012; Hounsell, 2007; Prince & Felder, 2006), comparing the outcomes before and after effecting changes, use of several indicators of effectiveness such as average overall performance, average performance of case study section of the final exam, and
average failure rate of the subject and some comments made by students voluntarily from
time to time (Knowles, 2011), which facilitates us for possible data triangulation. As such, we
use both qualitative data and quantitative data computed by the researchers in this study.
Frequencies and percentages are used in the quantitative analysis of performance.

We selected postgraduate teaching and learning situation associated with the practical
scenario we presented above in the introductory section. It was a situation where case studies
are used in lectures and tutorial classes as a means of providing opportunities for
postgraduate level students to understand concepts, theories and real world example and
subsequent evaluation of performance as a part of the final examination.

The period covered in the study was three years. We used lecturer’s experience, information
relevant to case study discussion practices gathered through subject outlines, computing
average the results of case study section at the final exam, and using voluntary feedback and
comments provided by students from time to time. All these information is there with the
lecturers who are also the authors of this paper. As we found different ways and approaches
used by several lecturers to discuss case studies, we compared students learning experience
and performance before and after the methodological intervention affected for two years.

The two approaches used for doing case studies was the basis for comparing results and they
were named as before and after change intervention. We describe below the two approaches.

3.1 Previous approach used for doing case studies

Case study discussion group is formed by the lecturer. An objective was to make each group
as diverse as possible in terms of gender, country of origin, individuals’ backgrounds etc.
Group size will depend upon the total size of each tutorial class and at least 12 case studies
must be covered during a particular session/delivery. Case studies will be allocated to groups
by a ballot. Under this method, different case studies are done by different groups and there is
no chance for doing all case studies by one particular group or student. The failure to present
case study answers on the scheduled date for whatever reason will result in zero marks.
Although, each student in the class is expected to have studied the scheduled case study prior
to the tutorial (Jonsson, 2013; Ellet, 2007), it is not compulsory for them to participate in the
discussion during the Q/A session.

The main problem of the previous method is that there is no assurance of reading and doing
majority of case studies by individual students. This process hampers the achievement of
learning outcomes by individual students, which was reflected in poor performance for case
study section of the final exam. In effective way of doing case studies also affects negatively
on answering other questions at the final exam as they lose the opportunity to find
appropriate examples for their discussion questions.
3.2 New approach used for doing case studies

The changed process consisted of forming three or four member-groups in a class and all teams and every individual student was required to read and analyse the case and answer the questions given at the end of the case and discuss them with other members of the group before coming to the tutorial class each week. During each tutorial class, each group will be informed about the question for which they should provide the answer and each individual student was required play a role in presenting the answer or responding to Q/A. By doing so, we experienced that all students got ready for all the 10 cases and questions given at the end of each case as they never know who would be answering which question at the presentations. As a group, all individual members are required to discuss and prepare for every question (usually four questions given at the end of each case) and coordinate their efforts towards forming a group answer before attending the tutorial class each week. The lecturer’s observation of students and their level of active involvement during the process can be one of the major factors affecting random selection of student/s for responding Q/As. This whole process created a positive tension and surprise in active participation, engagement, and discussion in the process of finding new and innovative analytical and presentations methods and answers. Assessment criteria were developed to capture major aspects of this process, which includes presentation, analysis, critical thinking, participation, application and interpretation of theories, and the effectiveness of Q/A. A feedback was given on the same day of the presentation with the marks earned by each group (Hodgest, 2005). Some students commented about on the new approach itself as follows.

“In this subject, every student prepares for both opening and closing case discussion that is relevant to each week’s chapter. It provides real life examples to the topic that help in understanding and critical thinking. Case study discussion also helps students to actively participate and because of that they gained self-confident and become more and more active each week”.

4. RESULTS

The main objective of this study was to examine the effectiveness newly introduced process of case study teaching and learning at postgraduate level with the hope of reducing the failure rate of the subject by improving performance of case study section at the exam in particular and of discussion questions of the final exam in general. Student could find real life examples from case studies to answer discussion questions effectively and hence improvements in overall performance.

The following comparative results relevant to before and after conditions of adopting the new approach illustrate significant difference in students’ performance after this approach. The failure rate has been computed by considering the number of students who earn less than 20 mark out of 40 (or 50% average) for case study section at the final exam. When there are two classes in one trimester we take the average. It is interesting to see (Table 1) that there is a significant improvement in reducing failure rate of case study performance from 41 percent
to 27 percent to 25% at the final exam. Another remarkable feature of the above performance is the consistency in the reduction of failure rates over period of two years.

There has been significant and consistence performance improvement in the overall performance of the subject in two years consecutively. The percentage improvement in overall performance between Year 1 and Year 3 is 9 percent (63%-54%). The one exception that (Table 2) is that a relatively low (51 percent) overall performance of class 2 in Years 2. This seems to be a reflection of the fact that overall result of the subject is determined by many factors relevant to characteristics of different intakes and of individual students, which we have observed in relation to some other subjects as well.

It is also interesting to note that gradual improvement of case study marks earned by students from Year 1 to Year 3. As indicated above (in Table 2), there is one exception to this continuous improvement of performance; that is class 2 results in Year 2. This is a reflection of the reliability of our findings because the same increased or decreased level of performance is reflected in more than one indicator.

5. DISCUSSION

In this case study we investigated about how to use case studies effectively in teaching and learning and how can we measure the effectiveness of learning and teaching with cases? We simply found that the effectiveness can be improved by introducing innovative ways of doing case studies in classroom teaching and assessments. We also found that different quantitative and qualitative criteria can be used to asses the effectiveness of case study teaching and learning.

Case studies in business management have been used as an effective approach and tool for enhancing students' critical thinking and problem-solving skills by providing opportunities for them to apply appropriate theories, concepts and models for real world issues faced by organisations. Despite the popularity of the case study approach in business and management education, it is self-evident that the effective use of case studies to achieve above mentioned benefits is challenging and problematic mainly due to the fact that case studies are misused and abused in different ways, including just adopting a popular method, just asking students to read and answer the questions, or not creating conducive environment for interactive and active learning sessions. This challenge has been widen and deepen as there is very limited empirical research on improving students learning and performance by effective utilisation of case studies. Research that does exist has primarily focused on student perceptions of their learning rather than on actual learning outcomes.

We discovered a high level of impact of changes on students’ learning and performance when case studies were integrated into a part of the teaching, learning, and evaluation process by providing equal opportunity for every student to engage in active learning. Our approach consisted of creating a positive tension and competition among both individuals and groups.
and then providing marks and constructive feedback on the same day of presentation. Performance data and students experience revealed that they were engaging in active learning and could add a lot of realism to the class. We therefore argue that the use of case studies needs to be made meaningful and interesting through innovative methods. Our experience also suggests that lecturers and tutors have a critical role in selecting appropriate cases, developing a good tutorial plan, creating effective tension, curiosity, and a moderate level of competition among students for active engagement in learning and participation, providing appropriate support and feedback, and adopting coherent and credible assessment criteria to assess performance. Hence, the use of case studies in teaching and learning requires richness of content, process and context that inspire students’ interest and commitment in their learning aimed at enhancing overall performance.

It was further evident that using cases in teaching and learning did not automatically enhance content acquisition in the past. However, we found that using targeted cases and getting involvement of both individual student and groups to answer all the questions lead them to understand theories and concepts and their applications. Over the years of our usage of case in teaching, assessment and tutorials found that using cases related to students’ interests and relevant to the day to day life can inspire student active engagement (see for more example, Hodgest, 2004). Many comments from students’ feedback revealed this as they asserted that:

“It stimulates me to read case studies every week because I will not be having information enough to discuss it in the class”

“Every case is related to a particular topic and it helps us to review and understand the subject matter”

“Some case studies such as high fashion products, Facebook are impressive as they will drive students feel interesting to learn”

We found that case study method we employed challenge their conventional and functional thinking and facilitate students' critical thinking, demonstrate how to think professionally and practically, and demand students to use theory, concepts and frameworks to analyse and discuss a practical problem in more applicably (Popil, 2011; Dowd & Davidhizar, 1999). A student commented to support this idea as follows:

“Under different cultural background, international students not good at expressing their thinking directly, even when they have different idea..., case study provides a platform for international students to express their ideas directly”.

Our study also shows that case discussion method we employed has contributed to enhancing the listening and cooperative learning skills of the students in working teams, building cohesiveness among learners and teachers, making awareness and sense of assumptions and perspectives, and improved thinking and brainstorming (Yadav, & Meckl, 2010). Following comments made by students show how students engage with case studies as they relate and interested to their lives.
“Case study just like an interesting story, it helps us (to) achieve our learning and (it is) fun (to) study”

“Just study(ing) theory is boring, through different types of cases, we can better understand the subject”

Qualitative data indicate that case studies are helpful to remember stories, details and facts that they can illustrate them in exams. A student commented that:

“It makes students feel enthusiastic to find the answer and retain them our minds as examples”.

We also learnt that the new way of using cases require us to actively engage with students in the development of answering case study questions by individual student. In our case, students found that the effective use of case studies is useful in answering examination questions.

“Cases can be used as an example in the final exam,(that) helps students to explain their ideas better”

“Reading and studying case study before coming to the class and answering unknown questions make students to use knowledge and skills and learn new things and issues in our world”.

The above qualitative data relevant to students’ feedback clearly consistent with quantitative data relevant to students performance, which is presented in Table 1, Table 2, and Table 3 above. Failure rate of the students were reduced dramatically and interestingly, case discussion has immensely assisted students twining and synthesising theory, concepts and case examples in the exam answers.

Nothing is perfect in teaching methods. Our experience indicates that case method will be a disastrous and they may become frustrating for less prepared teachers and students. Similarly, we found that there are some drawbacks of the new approach we adopted. Few students provided their feedback as follows:

“The only drawback is that when students are in a busy week-assignment submission week, they tend to skip reading case studies before attending the class.”

“Sometimes we cannot design how to present answers of case study because answers from team members do not go in the same way”.

“The only issue I feel is that marks depend on the entire group and some people do not interact effectively”.

We are aware of these issues and we are working on these issues and possible issues to address in our future strategies in using case studies as effective inductive learning and teaching method.

6. CONCLUSION
We have seen empirically that using the new approach to use case studies has improved retention of students’ knowledge, analytical and reasoning skills, higher order skills such as critical thinking, synthesis and competencies relevant to finding context sensitive solutions for problems, the level of motivation to participation actively in class discussion and presentation and the ability to relate appropriate examples and business practices to exam questions. Importantly, identifying business problems and issues in the case, analysing the from multiple perspectives, nicely blending objective and subjective information to address issues were some of the highlights of appropriate use of case studies in this subject. At the start, students did not like very much the idea that ‘you never know what questions you are going to answer’. However, the positive tension developed within the team and moderate level of competition developed between teams has inspired students to contribute positively to a numbers of assessments criteria involving case studies. We also observed that providing a feedback soon after the presentation has led to enhance both motivation and competition among students.

Students’ feedback that we used in this study and their actual performance data revealed that students could have been able to develop their performance in doing case studies, answering examination questions and doing assignments effectively. All these were reflected in lowering filature rates of the subject and improving overall performance of the subject.

We also found that case studies provide experimental learning by providing student-centered education and motivating students through active engagement. Case studies also allowed students to enhance problem solving and decision making skills in a positively developed tension environment. A vast majority of students showed real enthusiasm and excitements to know which question they would get for their presentation. It was also observed that almost every individual student of presenting groups was motivated to provide answers or at least a part of the answer during Q/A session. We are involving in continuous improvement of the methods we use to address to issues reported by students.

<table>
<thead>
<tr>
<th>Session/Trimester</th>
<th>% Failure Rate of Case Study Section of the Final Exam</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
</tr>
<tr>
<td>Class 1</td>
<td>43</td>
</tr>
<tr>
<td>Class 2</td>
<td>50</td>
</tr>
<tr>
<td>Class 3</td>
<td>31</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>41%</td>
</tr>
</tbody>
</table>
Table 2: Average Performance of the final exam before and after Introducing Changes

<table>
<thead>
<tr>
<th>Number of offering per Year</th>
<th>% Failure Rate of Case Study Section of the Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
</tr>
<tr>
<td>Class 1</td>
<td>55</td>
</tr>
<tr>
<td>Class 2</td>
<td>58</td>
</tr>
<tr>
<td>Class 3</td>
<td>49</td>
</tr>
<tr>
<td>Overall</td>
<td>54%</td>
</tr>
</tbody>
</table>

Table 3: Average Marks of Case Study Section Given Out of 40 Percent.

<table>
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<tr>
<th>Number of offerings per Year</th>
<th>% Failure Rate of Case Study Section of the Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
</tr>
<tr>
<td>Class 1</td>
<td>21</td>
</tr>
<tr>
<td>Class 2</td>
<td>22</td>
</tr>
<tr>
<td>Class 3</td>
<td>18</td>
</tr>
<tr>
<td>Overall</td>
<td>20</td>
</tr>
</tbody>
</table>

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