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Student Experiences and Perceptions of Team-Teaching in a Large Undergraduate Class

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Abstract

This paper examines student experiences and perceptions of two models of team-teaching employed at a regional Australian university to teach a large undergraduate marketing subject. The two team-teaching models adopted for use in this subject can be characterised by the large number of team members (ten and six) and the relatively low level of team involvement in the planning and administration of the team-teaching process. The paper examines students' experiences in an effort to identify the strengths and weaknesses of the team-teaching approach from the students' perspective. This paper contributes to our knowledge of teaching practice by identifying, amongst other things, aspects of the team-teaching approach that both facilitate and hinder student learning. Data for this study was collected on each teaching model through two identical surveys. In total, data was collected from 440 student responses. Despite the relatively weak forms of team-teaching adopted to teach this subject, the majority of the students liked the concept of team-teaching. The findings in this study suggest that team-teaching can facilitate student learning through the generation of interest and exposure to 'experts', but can hinder student learning if the team fails to act as a cohesive unit and work together to adequately link learning concepts. This study also argues that the most critical factor in determining the success or failure of a team-teaching effort is the actual composition of the team. A key implication of this study is that a team that comprises of 'good teachers' (perceived as those skilful in teaching large classes) is far more important than a team comprising of 'experts' in different knowledge areas. This aspect of team-teaching is often overlooked in the literature.

Introduction

This paper examines students' experiences and perceptions of two particular models of team-teaching adopted for use in a large undergraduate marketing subject in a regional Australian university. It does this in an effort to identify the strengths and weaknesses of the team-teaching approach from the students' perspective. This paper contributes to our knowledge of teaching practice by identifying, amongst other things, aspects of the team-teaching approach that facilitate and hinder student learning.

As in many Western countries, academics at Australian universities are expected to do more with less. Australian universities face the challenges and consequences of shrinking financial budgets, falling staff numbers and diminishing teaching resources. Despite these negative pressures, faculty members are expected to maintain the highest level of scholarship and teaching. For many individuals and faculties, one way to address this dilemma has been the adoption of alternate methods of teaching that go beyond the traditional model of one teacher, one class. A teaching method that is frequently cited as a means to address the problem of doing more with less is what is interchangeably labelled as 'collaborative' or 'team' teaching (Mason 1992; Booth et. al. 2003).

In contrast to the selection of a teaching method on the basis that it relieves pressures on an academic's time, the literature suggests that the choice of a teaching method should be based on its ability to enhance student learning, and be consistent with the notion of 'good teaching' (Ramsden 1992; Biggs 1999). Ramsden (1992) suggests 'good teaching' involves a combination of a number of elements, which include (i) the recognition that content is more important than method, (ii) the degree of engagement students have in the process of learning, and (iii) the level of responsiveness shown by a teacher to a student's needs (p.176). If student engagement and needs are central to the notion of good teaching (Ramsden 1992), then it is intuitively sensible that student perceptions should be a key element in any reflective practice (Schon 1987) as well as a faculty's decision to adopt one teaching method over another. In essence, student experiences are an important factor in assessing the value of a teaching method and the decision to adopt or continue a teaching method such as team-teaching.

This paper begins with a review of the literature on team-teaching, particularly on what team teaching is, and its advantages. It then describes the team-teaching approach undertaken at a regional Australian university. This is followed by a section on methodology and identification of the major themes that emerged in this research. Finally, the themes are discussed, along with implications, and the study's limitations.

Literature Review

What is Team-Teaching?

There is no one single definition or 'best' model of team-teaching. Bess (2000) defines team-teaching as a process in which all team members are equally involved and responsible for student instruction, assessment and the setting and meeting of learning objectives. Other authors suggest that team-teaching is a model that involves two or more instructors collaborating in the planning and delivery of a subject (Zhang & Keim 1993). Davis (1995) addresses the issue of contrasting definitions by proposing that, in reality, team-teaching involves a continuum of models and practices, distinguishable from one another, primarily on the basis of the level of collaboration within the teaching team.

McDaniel & Colarulli (1997) expand further upon this notion of a continuum by suggesting that models of team-teaching can be described along four dimensions that reflect the necessary elements of collaboration and its potential for student learning, namely:

1. The degree of interaction between team-teaching members and students during the teaching and learning process. This dimension focuses on the degree of learning exchange that occurs among participants. Both team-teaching members and students, as learners with different levels of expertise, contribute to the learning exchange. Further, when team-teaching members interact with each other in the class room, the conversation is enhanced by their expertise and perspectives, and as a result team-teaching members are strengthened as learners and teachers (Gabelnick et. al. 1990).
2. The degree of active learning and student engagement in the learning process. This dimension focuses on how well team-teaching members and students engage together in critical thought about the learning material. Students should not be passive recipients of knowledge, and team-teaching members should not be passive transmitters of knowledge. When students' intellectual dilemmas are shared by their team-teaching members, students are empowered, which leads them to be engaged in their studies (Association of American Colleges 1994).
3. The degree of autonomy or interdependence amongst team-teaching members in the teaching and learning process. This dimension focuses on how well team-teaching members engage within themselves as a cohesive group with respect to discussion, planning, delivery, assessment of student learning, and evaluation of the subject. Real collaboration requires team-teaching members to act responsibly to each other, to be prepared for compromise and share power even if this involves a loss of autonomy, and to be open to new ideas and the teaching styles of colleagues.
4. The degree of integration in the content and the perspectives of the discipline-based knowledge that enhances learning and teaching. This dimension focuses on curricular integration and integrative thinking. Curricular coherence assists in student learning of connectedness of knowledge and integrative learning. Team-teaching can be inspiring, as both team-teaching members and students *"are 'surprised by joy' when they make hitherto unseen connections and experience the lovely rigor of intellectual activity"* (Rinn & Weir 1984, p. 10).

An outcome of the notion that team-teaching comprises a continuum of practices is that, particular team-teaching models can be described as weak or strong depending on the degree of collaboration and integration between team members, and the level of their engagement in the teaching and learning process. Weak forms of team-teaching are those for which there is little evidence of collaboration and/or involvement by team members in the planning, management and delivery of a subject. An example of team-teaching at this end of the continuum would be one, where the teaching of a subject is divided between faculty members, who may each present only one or two lectures, with one member of faculty acting as the subject coordinator or lecturer-in-charge. Jacob, Honey & Jordan (2002) argue that this form of team-teaching is really not team-teaching at all. Rather, it is more akin to guest lecturing, or at best, a form of sequential teaching, where the material is presented in discrete units, with little integration in the content or collaboration between team members. At the other strong end of the team-teaching continuum are models for which the team members are both intimately and equally involved in all aspects of the planning, management and delivery of a subject (George & Davis-Wiley 2000).

Why Team-Teach?

Despite the potential for problems to arise through a lack of collaboration and cohesiveness within a team, there are potential pedagogical advantages for those willing to adopt this form of teaching. Beyond the advantage of creating additional time for other academic activities, team-teaching can foster a teacher's professional development through the exchange of ideas and knowledge of teaching with other team members (McKee & Day 1992) and by involving outstanding teachers to collaborate in developing and disseminating new instructional materials and holding workshops for practicing teachers through sharing and peer coaching. Those new to the profession can acquire team-teaching experience (Coffland et. al. 1974), the more experienced professor can attain satisfaction from learning new teaching methods (Davis 1995) and hearing fresh ideas from colleagues (Robinson & Schaible 1995). Collaborative teaching keeps instructors from slipping into a style that posits the students as the passive recipients of knowledge and helps to not only create a new style but also to reinforce that style (Robinson & Schaible 1995). There is also an advantage that a supportive team environment can have in overcoming the isolation that is inherent in more traditional forms of teaching (Davis 1995; Goetz 2000; Hinton and Downing 1998; Letterman & Dugan 2004; Robinson & Schaible 1995). Additionally, team teaching can aid in improving morale within a faculty and deepen friendships between faculty members (Buckley 2000). For example, planning, teaching, and evaluating together bring out many facets of an individual's personality that might go unnoticed at school meetings (Buckley 2000).

For students, team-teaching has the educational advantage of combining the strengths of different faculty members (Mason 1992; Buckley 2000). Team-teaching can help students benefit through the opportunity to receive instruction from experts in specific areas of a discipline's knowledge base and exposure to alternate perspectives on issues (Buckley 2000). Students can develop critical-thinking skills by synthesizing multiple perspectives and relating the information to a larger conceptual framework (Davis 1995). In addition, team-teaching provides an opportunity for students to witness the functionality of a collaborative team. This is very relevant for students in a business degree who are likely to be part of collaborative teams in their work environments (Mason 1992). The opportunity to observe how well faculty members interact in a team situation may provide students with a model for their own team endeavours. Further, students are exposed to a variety of teaching styles and approaches, which increase the potential for the team to meet the various learning styles of students (Goetz 2000; Helms et. al. 2005).

Student-experience also benefits from team-taught course structures. For example, Wilson and Martin (1998) found that students who participated in team-taught classes reported improved teacher-student relationships. Similarly, Hinton and Downing (1998) described positive student evaluations towards a newly developed team-taught class with ninety-four percent of the students expressing a preference for team teaching over more traditional teaching methods.

However, it should be noted that these very advantages of team-teaching may, for some students, be disadvantages. Some students may experience feelings of frustration and confusion when exposed to a variety of different teaching styles and viewpoints within a subject (Buckley 2000; Goetz 2000; Helms et. al. 2005).

This paper now describes an evaluation of team-teaching in a large first-year marketing undergraduate class in a regional Australian university, over two successive semesters.

Team-Teaching of Marketing Principles

Since its inception in the mid 1990s, the subject, 'Marketing Principles', at the University of Wollongong (UoW) was taught using a traditional approach in which one teacher was totally responsible for all aspects of the planning, management and delivery of the subject. However, with pressure mounting on academics' time and the burden of one person being responsible for a subject that averages in excess of 500 students per session, the Marketing Discipline decided in late 2003 to adopt a team-teaching approach. The first team-teaching model used was one that involved one faculty member acting as a subject-coordinator and all other faculty members delivering at least one lecture. This resulted in a team of 10 members. In this model, the subject- coordinator delivered three lectures including the first and last lecture in the teaching session. Each member of the team was also required to submit to the subject-coordinator assessment tasks, in particular, examinable questions suitable for their particular lecture. Beyond this, these faculty members had no further involvement in the subject.

In more recent times this team-teaching model has been changed. The most noticeable change is reduction in the team size from 10 to 6. The principal reason behind this change was some faculty members simply did not want to be involved in what they perceived as merely an exercise in 'entertainment'. That is, some teachers perceived team-teaching merely as a mechanism to expose students to a variety of teaching styles in an effort to overcome student boredom in lectures and stop the subject from becoming stagnant. They did not perceive team-teaching as faculty working purposefully and cooperatively to help a group of students learn. One member even stated it is a bad idea to expect students to answer a final exam made up of a mixed set of questions from different perspectives and from different team-teaching members. A further refinement in the second team-teaching model was the appointment of one team-teaching member to act as a 'resource person' and as an 'anchor' to other team-teaching members and students. This team-teaching member acted as a central gateway for student questions on the subject and overall management of the subject's non-teaching activities such as the recording of student grades etc.

Both the models of team-teaching adopted by the Marketing Discipline at UoW are arguably one of the weakest forms of team-teaching that we acknowledge are not very different. In neither model were faculty intricately involved in all the planning and decision making aspects of the subject. However, team members in the second model were, generally, more committed to team-teaching from a pedagogical perspective in that they recognised the potential for improved student learning. Despite this, in both models, collaboration and collegiality was low. This latter point is evident in such matters as issues of conflict that arose within the team, and the lateness of team members in responding to various requests from the subject coordinator for assessment tasks and other teaching related material.

Although issues of conflict arose, both team-teaching models achieved the objective of creating additional time for academics. However, beyond that, what has been the impact of these models on student learning? More importantly, what are the student perceptions of these two models of team-teaching, and how do they consider they have impacted on their ability to learn?

Methodology

Student perceptions of both perspectives of team-teaching adopted by the Marketing Discipline at UoW were gathered using a questionnaire. The literature reviews provided a theoretical framework for the development of a questionnaire that examined various aspects of the subject ranging from their tutorial experiences to their overall experience of the team-teaching model adopted in their subject. A 4-page questionnaire was designed, pretested, revised and used in the study. The questionnaire included open and closed-ended questions to assess their perceptions of the impact of team-teaching on their interest in the subject, their overall satisfaction with the subject, and the degree to which team teaching has assisted learning. The open-ended section of the questionnaire asked respondents to answer such questions as:

- Please take a few minutes to answer good and bad experiences (likes and dislikes) you have had in this subject this semester.
- What improvements would you suggest for this subject? In particular, you are asked to consider improvements to the subject as well as the teaching approach to the subject.

Data for the closed-ended questions were collected using a five-point Likert scale, where 1 represented 'strongly disagree' and 5 represented 'strongly agree'. Five point scales are commonly used in consumer research, mainly because researchers suspect these scales tend to be more easily understood by respondents than scoring systems using more points (Garland, 1990). Indicative of the close-ended questions used in the questionnaire are:

- I prefer team-teaching style than having only one lecturer for an introductory subject.
- The team-teaching approach used in MARK101 has increased my interest in studying marketing.
- I think the marketing department should team-teach Marketing Principles next session.

More general questions on students' level of interest in the subject, and if they were satisfied with their learning experience in the subject were also asked through the use of closed-ended questions. Indicative questions used in this section of the questionnaire are:

- MARK101 is an interesting subject.
- I was satisfied with my learning experience in MARK101.

Sample

The same questionnaire was administered to two separate cohorts of students – one each in two consecutive semesters - during lecture in the final week of each of the semesters. Students in the first cohort (Survey I) experienced the first team-teaching model adopted. The same questionnaire was administered to a second cohort of students who experienced the second team-teaching model (Survey II). Since the survey also asked questions on the subject such as the number of lectures the students had attended, the reasons for attending/not attending the lectures and their tutorial experiences, only the findings from those aspects of these survey forms that inform this study are presented in this paper.

While 870 students were enrolled in the subject across both the semesters, the surveys were distributed to only those who attended the lecture in the final week of the semester. As usually over 90% of the students attend the final lecture, the response rate approximated over 55%. In total, 440 survey forms were obtained and analysed.

It should be noted that although these were first-year students, respondents who completed these surveys were in a position to compare the team-teaching they experienced in this subject with other teaching approaches and models. All the first-year students surveyed had exposure through other subjects to the traditional one teacher–one subject model of teaching, as well as variants of the team-teaching model such as even smaller numbers of team members and team-teaching models where subject management was shared equally amongst team members. In other words, students had experience of team-teaching models from the stronger end of the team-teaching continuum as well as the weaker end.

Data Analysis

Responses from the five-point Likert scale questions were entered into SPSS for descriptive statistical purposes. Although the responses to the closed-ended questions were of interest they do not add greatly to the focus of this paper. Accordingly, data analysis concentrated on the responses to the open-ended questions as these provided rich insights into the student's perceptions of their team-teaching experience. Responses to the open-ended survey questions were analysed in an effort to identify common themes that assisted in providing insights into which aspects of the team-teaching models might hinder or facilitate student learning. To achieve this aim, responses to each open ended survey question were individually coded for key expressions or phrases, a process often referred to as 'open coding' (Strauss & Corbin 1998, p. 32) or 'in vivo' coding (Hutchinson 1986, p. 120). In turn, these codes were then compared to one another in an iterative fashion to identify a series of common themes. In other words, the data was first fractured into descriptive coded units, and then progressively and systematically these codes were collapsed into conceptual themes according to their properties and dimensions using the constant comparative method (Glaser & Strauss 1967; Strauss & Corbin 1998).

Both authors of this paper coded the data separately and then met to discuss and resolve issues of disagreement and to debate the descriptive themes each had identified. The purpose of this step was to both refine and confirm the thematic analyses. Using this method of data analysis, various themes were found to be common throughout the student responses.

Findings

The main aim of the research was to discover student perceptions of team-teaching in the context of the delivery models adopted by the Marketing Discipline at UoW. Figure 1 depicts each of the major themes along with its respective properties or dimensions. The first major theme relates to what it is about team-teaching that students consider facilitates learning. The second major theme provides insights into what aspects of team-teaching do students consider hinder their learning. The third major theme involves what makes a 'good' or 'bad' teacher from students' perspective in the context of a team-teaching environment. Each of the main themes identified in the data, along with its respective dimensions are discussed in the following paragraphs.

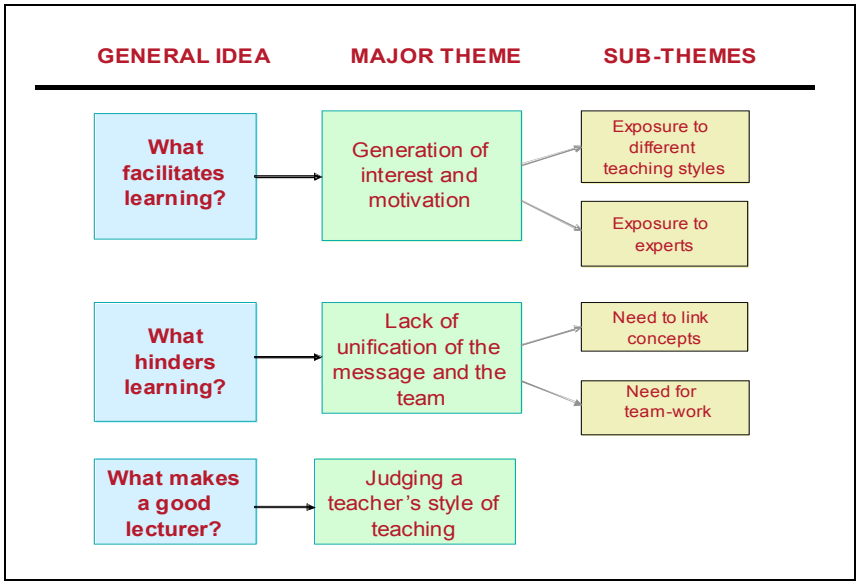

Figure 1: Major Themes and Dimensions

Theme 1: The Generation of Interest and Motivation

Students favoured team-teaching over traditional one-teacher one-subject models, regardless of the team-teaching model used. When asked on a five-point Likert scale (most strongly disagree to most strongly agree) for the statement: 'I prefer team-teaching style than having only one lecturer for an introductory subject', 63% of the respondents in Survey I, and 73% of respondents in Survey II either agreed or strongly agreed. Further support for the argument that respondents preferred team-teaching to other more traditional forms of teaching are evidenced in their response to the question: 'I think the marketing department should team-teach Marketing Principles next session'. On a five-point Likert scale, 65% of respondents in Survey I, and 77% of respondents in Survey II either agreed or strongly agreed. Similarly, responses to the question 'Overall, I was satisfied with my learning experience in MARK101 were higher in Survey II (85% agreed or strongly agreed with the statement) than Survey I (75% agreed or strongly agreed with the statement).

The reasons for why students preferred the team-teaching concept to other teaching approaches and what aspects of team-teaching facilitated their learning are found in their responses to the open-ended questions. Team-teaching exposed students to a variety of teaching styles and a variety of 'experts'. These dimensions are discussed below.

The Variation in Teaching Style Generated Student Interest. Variation in teaching styles and/or the method of presentation by different teachers motivated students to attend lectures and increased their interest in the subject. Student comments also suggested that variation in teaching styles improved the learning environment. The following student responses illustrate this theme:

> *It is enjoyable to see a different lecturer [teacher] each week – it is motivating. Further, you don't know what to expect and it is like a surprise. Team-teaching enhances appeal of lecturers [teachers]. Team-teaching lecturers [teachers] seem to be more enthusiastic than lecturers [teachers] who teach 13 weeks straight. Team-teaching prevents 'lecturer-burnout'.*

> *Team-teaching is good for a student who finds a particular style of teaching unsuitable. [The student] will not have to persist with this style through the whole semester. I think [team-teaching] stops Marketing Principles from becoming stagnant and boring. Some of them are interactive and optimistic about what they are teaching.*

The relationship between different teaching styles that results from a team-teaching situation and student learning styles is well documented in the extant literature. As Jacob *et. al*. (2002) point out, the greater the number of members teaching as part of a team, the higher the probability that a student will encounter a teacher who matches their learning style (p.3). Brookfield (1990) argues that student preference for variation in teaching styles may be beneficial because their range of learning styles would broaden and they will be more likely to do well in different situations. The results are also consistent with findings in the literature that exposure to more than one opinion allows students to gain a mature level of understanding knowledge, and encourages students to consider the validity of numerous views (Goetz 2000).

However, there is a caveat on the amount of exposure to different teaching styles. Although respondents were overwhelmingly in favour of exposure to a variety of teaching styles, some students felt there were too many variations in teaching style and this was detrimental to the learning environment. This comment was not unexpected considering the size of the two teaching teams. Although students in both sessions commented on the issue of too many variations in teaching style, it was particularly an issue with students from Survey I, (students exposed to the larger, 10-member team). In fact, from the descriptive statistics, only 39% of the students from Survey I agreed that that the team-teaching approach used in Marketing Principles increased their interest in the subject compared to 55% from Survey II. The following is representative of student responses concerning the issue of too much variation in teaching style:

> *The team-teaching approach is, to a certain extent, unfavourable as it provides the students to different teaching techniques. Even though it can pose a positive aspect, various methods of teaching were rather conflicting, and is an added inconvenience to an already long lecture. Some lecturers were not as enthusiastic as others, which hindered the level of my attention.*

> *I like team-teaching, but it is hard grasping the styles and expectations of lecturers… Different lecturing styles mean approaching each new lecture with different mindset. There is no consistency in the style of teaching and no consistency in the way they either pause or continue to the next slide. Some do and others don't. I tend to form favourable impressions towards lecturers who do.*

Students Recognised the Advantages that Arose Through Lectures From 'Experts'. Students surveyed recognised the potential advantages to be gained from having 'experts' in their respective fields deliver the lectures. Interestingly, students perceived that because of their specialised knowledge, teachers are more inclined to be passionate and enthusiastic about teaching a particular topic. The following comments are a selection of student responses on this issue:

> *I like the idea that they give examples from their own field of expertise and from their personal and work experience, which is fascinating. If there were only one lecturer [teacher], I am not sure if he/she would bring so much varied knowledge.*

> *The team-teaching approach is helpful as those lecturers [teachers] who know the most on a topic have the opportunity to deliver it.*

These comments support the notion in the extant literature that team-teaching exposes students to more than one opinion or perspective on the subject matter, and can promote critical thinking skills in students (Buckley 2000, p.15).

Theme 2: The Lack of Unification of the Message and the Team

Two aspects of team-teaching that can hinder learning emerged in this research. First, the need to unify individual lectures together in a cohesive whole; and second, the need for the teaching team itself to be unified into a cohesive unit. These dimensions are discussed below.

The Need to Link Concepts. Both team-teaching models employed in this subject are at the weaker end of the team-teaching spectrum. Subsequently, students identified that the linking of the individual lectures into a cohesive body of knowledge was poor. That is, there was not the necessary integration when one teacher took over from another and this affected students' ability to connect one topic to another. The following student comments reflect this:

> *There seems to be no direction with lectures. I would prefer to learn a subject from start to finish – from one point to the next...I find the team-teaching system to be like chopping and changing unsystematically. It's great to have a variety of well-experienced teachers to learn from, but in a way confuses me.*
>
> *I don't like the fact that each week lecturers [teachers] don't always link their lecture to the previous week's lecture. The lack of continuity in teaching styles and not knowing what to expect at each lecture is what I like least about the subject.*

For students, the lack of cohesion in instruction is a significant issue. As Angelo (1993) states, *"to be remembered, new information must be meaningfully connected to prior knowledge"* (p.4). In the weak forms of team-teaching adopted in this subject, there was little opportunity to facilitate those all-important connections.

The Need for Teamwork. Student comments suggested the weaker models of team-teaching adopted in this subject and the associated lack of cooperation and involvement by all team members in the planning and administration aspects of the subject detracted from their learning experience. The following student comments reflect this:

> *Basically, there doesn't appear to be much consistency in the team-teaching approach. All the teachers should probably discuss it much prior to the [beginning of a] course [subject].*
>
> *Looks like some teaching staff got sucked in to the team rather than truly functioning as part of a team!*

Comments such as those above should not have been unexpected and were typical of responses from 10% of the students in Survey I (i.e. students exposed to the larger, 10-member team). It would appear that some team members who saw their involvement in this teaching activity as a 'job to be done' either implicitly or explicitly communicated their sentiments to students. Of importance, these comments reiterate the need for 'collaboration' within a teaching team. However, the incentives for investment in good instructional development by teachers involved in this weak form of team-teaching are minimal (Jacob *et. al*. 2002). This is because an individual teacher's overall time commitment to the whole unit is fairly minor and they are less inclined to feel individually responsible for the unit's success or failure.

Theme-3: Judging a Good Teacher through his/her Style of Teaching

The third theme to emerge in this research is what constituted a 'good' and a 'bad' teacher in the context of a team-teaching environment. Overwhelmingly, the majority of comments from students related to the teaching skills of individual members of the team. Students appeared to be far more concerned with each individual teacher's style rather than team-teaching itself. In other words, some teaching styles were much more liked than others and this was the main factor on which students judged the overall success or otherwise of the team-teaching effort. The following statement is representative of student comments in this regard:

> *Some lecturers [teacher] were very boring yet some others were fascinating and exciting. Perhaps a method should be considered as to how to 'spice up' each lecture especially it is a mundane topic of marketing. If you get one bad lecturer [teacher], it puts you off attending lectures; likewise, if you get a good lecturer [teacher], you wish they taught all the time.*

Discussion

Many of the themes identified from the student responses in this study are found in the extant literature on team-teaching. To that end, the views of these students support much of the current literature on team-teaching. For example, the exposure to a variety of teaching styles has both advantages and disadvantages depending on the individual student (Buckley 2000, p.13). However, the findings of this study also highlight other aspects of team-teaching that do not receive considerable attention in the team-teaching literature. These are discussed below.

Team-Teaching Should not be Considered as Short Cut to Cover Teaching Loads

The findings of this study suggest that faculties need to be conscious of the need for the adoption of team-teaching models that come predominantly from the stronger end of any team-teaching continuum, that is, models in which all team members make a strong and equal contribution to the various aspects of the team-teaching process. Students appear capable of recognising the need for all team members to be involved in the planning and execution of the subject as this leads to greater integration between the various topics that constitute a subject's knowledge base. However, the need for commitment and a contribution to the team-teaching process creates a potential dilemma for those that see team-teaching as a means through which time can be created for academics to pursue other activities. The adoption of team-teaching as a management tool capable of addressing the current pressure on resources, notably the issue of time, is at odds with the need to invest time and effort into generating the necessary collaboration between team members that lead to successful team-teaching efforts. Subsequently, this paper calls for caution by faculties that may see team-teaching as an outcome in its own right, namely the generation of time for other academic purposes. Rather, team-teaching should be viewed as a way to accomplish explicit learning outcomes.

Importance of Selecting the 'Right' Members

The extant literature stresses the importance of collaboration in the team-teaching process. However, the findings of this study suggest that the success or otherwise of a team-teaching model is not only dependent on the degree of involvement and collaboration between team members or the number of team members, but on who is in the team. Students in this study appear to measure the success of the team-teaching effort on the basis of the teaching skills of the individuals in it rather than any overall impression of what may be gained from a team-teaching approach. The colloquial expression that a 'team is only as strong as its weakest member' appears to have relevance to how students may judge team-teaching efforts. More attention needs to be paid on the selection of the members of any teaching team than may currently exist.

Similarly, more attention needs to be paid to improving poor teachers' performance. Professional development programs can contribute significantly to teachers' classroom practices and lead to improved student achievement when it focuses on how students learn particular subject matter, instructional practices that are specifically related to the subject matter and how students understand it, and strengthening teachers' knowledge of specific subject-matter content (Hill and Cohen 2005). In addition, professional development programs that offer intellectual, social and emotional engagement with ideas, materials and colleagues, for team-teaching practices, are likely to be promising. If teachers are to teach for deep understanding, they must be intellectually engaged in their disciplines and work regularly with others in their field (Little 1993). By developing these various teaching skills, these 'poor teachers' are more likely to improve not only their own teaching but also any team-teaching effort they become involved with.

The benefit of team-teaching assumes that expert researchers also make expert teachers who can not only communicate clearly the concepts in their area of expertise, but also supply students with an atmosphere conductive to learning. This is not necessarily so (McKeachie 1994). In this study, students judged the success of the team and the individual on the basis of their ability to teach large undergraduate classes, not on whether they were experts in a specific area of the subject. Students recognise the benefits of having experts provide insights into their areas of expertise, but this was secondary to the ability of the teacher to generate interest in the subject material. Since the subject was taught to a large undergraduate class, teachers skilful in delivering the appropriate level of material in a manner most conducive to learning were rated most highly by the students. Waugh & Waugh (1999) suggest that lectures are most effective when they do not involve the provision of detailed content as their primary objective and advocate the large class lecture as an avenue of supplying students with an atmosphere conductive to learning. This finding suggests that perhaps the ability to be a 'good' teacher is more important than expertise in a specific knowledge area within the context of a team-teaching environment.

The Need for Scaffolding

Students' perceptions of team-teaching highlight the issue of a lack of cohesion in instruction, that is, the integration of individual lectures by different teachers into a cohesive body of knowledge was poor. This is a significant issue that suggests the need to scaffold the content to assist in integrating team-teaching lectures.

Scaffolding is a constructivist approach to teaching and learning, where through social interactions, learning supports, and carefully structured learning settings, more knowledgeable others help the inexperienced learner develop new skills and understandings (Pressley & Hogan 1997). Certainly, the need for teachers to interact with other members of the teaching team while setting the subject design and delivery cannot be emphasised enough. Vygotsky (1978) argues that cognitive development is enhanced through collaboration and social interaction in what he calls the Zone of Proximal Development (ZPD). The ZPD can be defined as the discrepancy between current level of psychological and cognitive functioning and the potential level that can develop with expert guidance (Hung 2002). In other words, the ZPD is seen as the gap between what a teacher learner can accomplish independently and what can be accomplished in collaboration or with guidance of a more experienced other (Clarkson & Brook 2004). Although this concept was originally developed in regard to children, it has acknowledged application to adult learning schematics (Alfred 2002). The ZPD embodies an emphasis on readiness to learn, *"where upper boundaries are seen not as immutable but as constantly changing with the learner's increasing independent competence at each successive level"* (Brown et. al. 1993, p.35). Through increased interactions and involvement, the teacher learner is able to extend themselves to higher levels of cognition (Clarkson & Brook 2004). This guidance provided by the more knowledgeable other in the ZPD is known as scaffolding (Bruner 1984). Scaffolding occurs best in environments where the teacher learner is provided with the opportunity to communicate their thoughts through conversations, the most productive of which are termed learning conversations (Roehler & Cantlon 1997).

Students' perceptions of team-teaching indicated that some lectures were boring or stagnant. Traditional lecturing methods have proved to be problematic in teaching large classes primarily because the attention span of students are difficult to maintain due to prolonged inactivity. A solution to this may be through encouraging team-teaching members to recognise the notion of scaffolding with academics needing to consider and/or re-evaluate how they impart knowledge to a large class of first-year undergraduate students undertaking a core subject. For example, Ash & Levitt (2003) using a Vygotskian theoretical framework and ZPD demonstrated that teachers who strategically and intentionally participate in formative assessment practices can undergo profound transformation in their professional growth across a wide range of teaching practice, from pre-service through experienced teachers, to university professors. They demonstrated an approach where team-teaching members (learners) used a pre-established set of guidelines or standards, that is, scaffolding tools. Teacher learners were made aware of the expectations and jointly negotiated the meaning of the standards with the expert teacher. The tools established expectations that allowed the expert to determine the gap between expected and actual performance of the teacher learner, and provided scope for reflection.

Using the scaffolding tool in these ways could offer the expert support in making pedagogical decisions so learning could occur for teachers as they collaborate with peers to inform their teaching.

Instructional Issues

Students valued teachers that were able to address common instructional issues apparent in teaching any large class and documented in the literature such as engaging students' interest, knowing at which level to pitch the lecture, finding effective presentation methods and varying presentation strategies (Australian Universities Teaching Committee 2001).

Teachers that addressed these issues through such accepted techniques as stimulating active learning and higher order thinking; maintaining interest and varying teaching strategies; selecting the appropriate pace and content for lectures, and performing versus teaching (Biggs 1999) were valued by students. Good teachers in this subject not only recognised and addressed these issues, but also followed the advice of Ramsden (1992) and were capable of combining *"...a number of elements such as the recognition that content is more important than method, the degree of engagement students have in the process of learning and the level of responsiveness shown to student's needs"* (p.176).

In addition to those teachers that were perceived as having the skills of a 'good' teacher, teachers that provided entertainment were also valued highly by students in this study. The emphasis that students placed on teachers who were 'entertaining' raises an interesting issue. While the increasing emphasis on students as clients in higher education has resulted in many teachers shifting the focus of their lectures from content to provision of entertainment value (Ward & Jenkins 1992), being a good performer is not necessarily synonymous with effective teaching (Gibbs *et. al.* 1996). Nevertheless, there is support within the higher education industry for the idea that a lecture to a large class is a performance (Australian Universities Teaching Committee 2001), which place pressure on staff to 'perform' that many academics would find unwelcome. Team-teaching itself though should not be adopted because students find it entertaining.

Educational Implications

The challenge that faced staff involved in this team-teaching exercise was a lack of decision making and planning that would promote the kind of learning that best suited this group of students. In order to make the kind of decisions necessary, the team-teaching staff needed a better understanding of what is involved in the subject design process.

Systematic approaches to the challenge of designing learning experiences for students have been put forward by various educational researchers (e.g. Kemp 1971; Fink 2003). The basic elements of a good instructional design include:

1. gathering information on any important situational factors;
2. formulating the learning goals for the subject;
3. selecting the teaching/learning activities needed for the goals; and
4. formulating the kinds of feedback and assessment needed.

The key idea behind this model is that the last three should be integrated, i.e. they need to reflect each other after considering the significant challenges and opportunities for the teacher(s) and learners, that is, in a specific context, it is situational factors that influence good instructional design. Amongst the many situational factors documented in the literature, the team-teaching staff should have taken into account the characteristics of the teacher(s) when making choices about the subject design; in particular, each teacher's teaching philosophy, and the level and kinds of teaching skills they have or do not (yet) have. With the pressures for universities to do more with less, and in an effort to share teaching workloads, the process of recognising a good instructional design, and the need to *"put an end to pedagogical solitude"* (Shulman & Hutchings 1995, p.6) was overlooked, though unintentionally.

Conclusion and Further Research

The findings of this study suggest that students recognise the advantages of team-teaching, but this is not how they judge the success or failure of any team-teaching effort. While students are conscious of the need for collaboration within the team, the critical success factor appears to be the composition of a team. If individual members are 'good' teachers, then despite other factors such as the team-teaching model coming from the weaker end of any team-teaching spectrum, the students seem to endorse the team-teaching approach. Therefore, a practical implication emerging from this study that has not received a great deal of coverage in the literature is that in putting together any teaching team, administrators and others need to look beyond what individuals may contribute in terms of expert knowledge and must consider how 'good' an individual teacher is. Further research in this area may be warranted, specifically, into what skills are needed to be a team-teaching member.

This research also suggests that there may be an optimum team-teaching size. Students responded more favourably to the team-teaching efforts when there were fewer team members. Was this because of the individuals in the smaller team or is there an 'ideal' team number? It may be of benefit to consider further research aimed at identifying the factors that determine what an optimum team-teaching number may be, if in fact an optimum number exists.

In presenting the findings of this study, its limitations are acknowledged. The results of this study apply to one substantive area, that is, the students who studied Marketing Principles at a regional Australian university and participated in this study. We also acknowledge the subjective nature of this study and as a caveat to the findings we appreciate the appropriateness of Cialdini's (1984 p.9) statement that *"no matter how careful and thorough I tried to be, [what] I observed [was] seen only through my eyes and registered through the filter of my expectations and previous experience"*. Although bearing this statement in mind and acknowledging the limitations of the study, we also draw attention to the consistency of the student responses and the size of the sample (n = 440). We also suggest that the findings of this study have relevance to any faculty contemplating the introduction of team-teaching to any large undergraduate class.

The literature on collaborative and reflective practice (Schon 1987; Argyris 1993) argues that qualitative improvements in outcomes result when practitioners are able to reflect and evaluate their practice. This paper is written to critically reflect on the team-teaching approach that was adopted at this university.

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References

Alfred, M 2002, 'The promise of sociocultural theory in democratizing adult education'. *New Directions for Adult and Continuing Education*, 96(Winter), 3-13.

Angelo, T 1993, 'A teacher's dozen: Fourteen general, research-based principles for improving higher learning in our classrooms', *AAHE Bulletin*, 45(8), 3-13.

Argyris, C 1993, *Knowledge for action: A guide to overcoming barriers to organisational change,* Jossey-Bass, San Francisco.

Ash, D & Levitt, K, 2003, 'Working within the zone of proximal development: Formative assessment as professional development', *Journal of Science Teacher Education*, 14(1), 23-48.

Association of American Colleges, 1994. *Strong foundations: Twelve principles for effective general education programs.* Washington, DC.

Australian Universities Teaching Committee (AUTC), Teaching and Educational Development Institute 2001, *Teaching and assessment in large classes*, The University of Queensland, Australia.

Bess, J 2000, 'Integrating autonomous professionals through team-teaching' in Bess, J. L. (eds.) *Teaching alone, teaching together: Transforming the structure of teams for teaching*, Jossey-Bass, San Francisco.

Biggs, J 1999, *Teaching for quality learning at university* (1st ed.), SRHE and Open University Press, Buckingham.

Booth, R, Dixon-Brown, M, & Kohut, G 2003, 'Shared teaching models for business communication in a research environment', *Business Communication Quarterly*, 66(3), 23-38.

Brookfield, S 1990, *The skillful teacher: on technique, trust, and responsiveness in the classroom*, Jossey-Bass, San Francisco.

Brown, A, Ash, D, Rutherford, M, Nakagawa, K, Gordon, A & Campione, J, 1993, Distributed expertise in the classroom. In G. Salomon, (Ed.), Distributed Cognitions, New York: Cambridge University Press.

Bruner, J 1984, 'Vygotsky's zone of proximal development: the hidden agenda', in B. Rogoff, & Wertsh, J. (eds), *Children's learning in the 'zone of proximal development'* Jossey-Bass, San Francisco.

Buckley, F 2000, *Team-teaching: What, why and how?* Sage, Thousand Oaks, California.

Cialdini, R 1984, 'Principles of automatic influence' in J.Jacoby and C.S. Craig (eda.) *Personal selling: Theory, research and practice*, Lexington Books, MA, 1-27.

Clarkson, B & Brook, C 2004, 'I can't understand why I didn't pass: Scaffolding student activities' in R. Atkinson, C. McBeath, D. Jonas—Dwyer & R. Phillips (Eds), *Beyond the comfort zone*: *Proceedings of the 21st ASCILITE Conference* (pp. 190-196), Perth, 5-8 December. http://www.ascilite.org.au/conferences/perth04/procs/clarkson.html.

Coffland, J, Hannemann, C, Potter, R, 1974, Hassles and hopes in college team teaching. *Journal of Teacher Education*. 25, 166-69.

Davis, J 1995, *Interdisciplinary courses and team-teaching: New arrangements for learning,* ACE/Oryx: Phoenix.

Fink, L 2003, *Creating significant learning experiences: An integrated approach to designing college courses*, Jossey-Bass, San Francisco, California.

Gabelnick, F, MacGregor, J, Mathews, R, & Smith, B 1990, *Learning communities: Creating connections among students, faculty and disciplines*. New directions for teaching and learning, 41. San Francisco: Jossey-Bass.

Garland, R, 1990, A comparison of three-forms of the semantic differential, *Marketing Bulletin*, 1, 19-24.

George, M & Davis-Wiley, P 2000, 'Team teaching a graduate course' *College Teaching*, 48(2), 75-84.

Gibbs, G, Lucas, L & Simonite, V 1996, 'Class size and student performance: 1984-94', *Studies in Higher Education*, 21, 261-273.

Glaser, B & Strauss, A 1967, *The discovery of grounded theory*, Aldine Publishing, New York.

Goetz, K 2000, 'Perspectives on team-teaching'*, Egallery,* 1(4). Retrieved September 1st, 2004 from **http://www.ucalgary.ca/~egallery/goetz.html.**

Helms, M, Alvis, J, & Willis, M, 2005, Planning and implementing shared teaching: An MBA team-teaching case study. *Journal of Education for Business*. September/October, 29-34.

Hill, H & Cohen, D, 2005, 'Teaching teachers: Professional development to improve student achievement', *Research Points*, summer, 3(1), 1-4.

Hinton, S & downing, J, 1998, *Team teaching a college core foundations course: Instructors' and students' assessments*. Richmond, KY: Eastern Kentucky University. ERIC document No. ED 429469.

Hung, D, 2002, 'Bringing communities of practice into schools: implications for instructional technologies from Vygotskian perspectives'. *International Journal of Instructional Media*, 29(2), 171-183.

Hutchinson, S 1986, 'Grounded theory: The method', in *Nursing Research: A Qualitative Perspective*, (eds.) P.L. Munhall and C.J. Oiler. Norwalk: Appleton-Century-Crofts.

Jacob, H, Honey, R & Jordan, C 2002, *Getting the most out of sequential teaching.* Paper presented at the 11th Annual Teaching and Learning Forum, Edith Cowan University, Australia. 5-6 February.

Kemp, J 1971, *Instructional design: A plan for unit and course development*, Fearon, Belmont, California.

Letterman, M & Dugan, K, 2004, Team teaching a cross-disciplinary honors course: Preparation and development. *College Teaching*, 52(2), 76-79.

Little, J, 1993, 'Teachers' professional development in a climate of reform', *Educational Evaluation and Policy Analysis*, 15(2), 129-151.

Mason, J 1992, 'Business schools: Striving to meet customer demand', *Management Review*, 81(9), 10-14.

McDaniel, E & Colarulli, G 1997, 'Collaborative teaching in the face of productivity concerns: The dispersed team model', *Innovative Higher Education,* 22(1), 19-36.

McKeachie, W 1994, *Teaching tips: Strategies, research, and theory for college and university teachers*, D.C. Health, Lexington, MA.

Mckee, S & Day, A 1992, 'The social studies methods course: A collaborative approach', *Social Education,* 56, 183-4.

Pressley, M & Hogan, K 1997, *Scaffolding student learning: Instructional approaches and issues*, Mass: Brookline Books, Cambridge.

Ramsden, P 1992, *Learning to teach in higher education*, Routledge, London.

Rinn, F, & Weir, S, 1984, Yea, team. *Improving college and university teaching*, 32(1), 5-10.

Robinson, B, & Schaible, R, 1995, Collaborative teaching: Reaping the benefits. *College Teaching*. 43, 57-59.

Roehler, L & Cantlon, D 1997, 'Scaffolding: A powerful tool in social constructivist classrooms', in K. Hogan, and Pressley, Michael (Ed), *Scaffolding student learning*, Brookline Books, Massachusetts.

Schon, D 1987, *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*, Jossey-Bass, San Francisco.

Shulman, L & Hutchings, P 1995, 'Starting the conversation', in P. Hutchings (Ed.), *From idea to prototype: The peer review of teaching,* American Association for Higher Education, Washington, DC.

Strauss, A. & Corbin, J 1998, *Basics of qualitative research: Grounded theory procedures and techniques*, Sage, Newbury Park, California.

Vygotsky, L 1978 *Mind in society: The development of higher psychological processes,* Harvard University Press, Cambridge, MA (Original work published in 1934).

Ward, A & Jenkins, J 1992, *Teaching large classes in higher education,* Kogan Page, London.

Waugh, G & Waugh, R 1999, 'The value of lectures in teacher education: the group perspective', *Australian Journal of Teacher Education*, 24, 35-47.

Wilson, V & Martin, K, 1998, *Practicing what we preach: Team teaching at the college level*. Muskingum, Ohio: Muskingum College. ERIC Document No. ED 417172.

Zhang, J & Keim, M 1993, 'Peer coaching, peer tutoring and team-teaching', *College Student Journal*, 27, 288-293.