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Strategies for Effective Case Method Teaching in Large Undergraduate Business Classes

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STRATEGIES FOR EFFECTIVE CASE METHOD TEACHING IN LARGE
UNDERGRADUATE BUSINESS CLASSES

by

Michael Moorhouse

A thesis presented to Ryerson University
in partial fulfillment of the requirements for the degree
of
Master of Business Administration
in the program of
MBA Global, Ted Rogers School of Management

Toronto, Ontario, Canada, 2012

AUTHOR'S DECLARATION

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ABSTRACT

Title: Strategies for Effective Case Method Teaching in Large Undergraduate Business Classes

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This study finds that the case method pedagogy, originally designed for use with graduate students, can also be effective in large, undergraduate business classes. While most of the case method research has historically focused on the graduate level, the method has now become popular for undergraduate teaching. There is a growing need for large class pedagogy and best practices due to the fast growing enrolment in North American business schools, and this study presents a preliminary opinion on how the case method could be adapted to meet the needs of large and diverse classes. The study reviews the challenges of teaching cases, and the challenges of using active learning techniques in large class teaching. The study presents a definition for “large” and “very large” classes in the context of case teaching, and suggests several practices from case-teaching instructors that can be used to teach the method effectively in these environments.

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I.

INTRODUCTION

This study explores whether the case method of teaching can be successfully applied to large size undergraduate business classes, and helps determine strategies and practices that business schools can use to apply the method effectively in a large class environment.

There is a growing need for best practices for teaching large classes driven by the fast growing enrolment in post secondary institutions, and the slower rate of growth for the faculty and funding to support these students (Grant, 2012). In fact between 1998 and 2006, full-time enrolment in Canada grew at 37%, close to twice the rate of faculty growth (Association of Universities and Colleges of Canada, 2007). Large class sizes have become a reality for post-secondary students, especially in junior level courses. While Canadian national statistics on class sizes are not tracked, data from the Higher Education Quality Council of Ontario shows that approximately 40% of first and second year undergraduate classes in Ontario contained at least 60 students in 2011, and 30% of first year classes contained at least 100 students (Kerr, 2011).

The Canadian university enrolment increases have not been uniform across the various fields of study. According to the latest data from Statistics Canada, the programs of Business Management and Public Administration have experienced one of the fastest rates of growth in recent years, with enrolment increasing by over 12% from 2005/06 to 2008/09, twice the rate of overall enrolment growth (Statistics Canada, 2010). This high rate of growth warrants a review of pedagogy within the business schools to ensure the effectiveness of the teaching methods within the large class environment.

One of the staples of the business school pedagogy is the case method, which requires students to analyze and problem-solve a challenge or opportunity faced by managers within an organization (Erskine, Leenders, & Mauffette-Leenders, 2011). The case method has been used as a teaching tool in business schools since at least 1912, when it was reportedly first introduced by the Harvard Business School (Ewing, 1990).

The benefits and drawbacks of case teaching have been the focus of significant research, however most of this research has focused on the graduate level. Conversely, there has been

relatively little exploration of case teaching in undergraduate programs, and whether the case method is relevant for large classes (Booth, Bowie, & Rippin, 2000). This study will review the literature on both case method teaching and teaching in large classes, and will attempt to link the challenges and best practices for each.

While there is no generally accepted definition of a “large class” for case teaching, the study will attempt to define large case classes through the literature review and the opinions of faculty at the Ted Rogers School of Management (TRSM). Once defined, the study will survey TRSM instructors and recent graduates on the challenges of large class case teaching. Through semi-structured interviews with case teaching instructors, the study will document practices that instructors can use to overcome these challenges, and teach the case method effectively in large undergraduate classes.

II.

TEACHING WITH THE CASE METHOD

2.1 THE HISTORY AND PRINCIPLES OF CASE METHOD TEACHING

Harvard University Law School Professor Christopher Langdell was reportedly the first to introduce the case method into classroom teaching in the 1870s, using the accounts of recent court decisions to encourage discussion amongst his students (Osigweh, 1987). The inclusion of this discussion-based “Socratic dialogue” represented a shift from the lecture-based teaching that was prevalent in law schools at the time, and became a critical component of case teaching. The method called for a student to orally summarize the case for the rest of the class, to answer questions that were brought forth by the instructor, and to defend his decisions in relation to the case and other cases (Patterson, 1951). Langdell and his followers believed that the case method helped train better lawyers because they learned to think on their feet and express their opinions, and they gained a deeper understanding of the court decisions that they studied (Moskovitz, 1992).

As the case method grew in popularity at the Law School in the early 1900s, faculty at the recently established Harvard Graduate School of Business Administration (Harvard Business School) recognized its apparent success (Merseeth, 1991). Soon after, it was adopted as the primary pedagogy for the Business School, and since that time many other business schools have followed suit, including Darden School at the University of Virginia, and the Richard Ivey School of Business at the University of Western Ontario. Many more schools use the case method on a course-by-course or class-by-class basis at the graduate and undergraduate levels.

The case method can be broadly categorized as an “active learning” technique. In active learning, students must “do more than just listen” (Bonwell & Eison, 1991), for example reading, writing, discussing, and especially higher order thinking such as analysis, synthesis, evaluation, or problem solving. Proponents of active learning believe that the techniques are not only preferred by the students over lecturing (Bonwell & Eison, 1991), but also help to develop the practical skills (listening, reading, writing) that students will need to succeed in their careers (Auster & Wylie, 2006).

2.2 COMMON TYPES AND METHODS OF CASE TEACHING

Much of the literature on case method teaching has focused on the “traditional” or “classical” case method. The classical case method is discussion-based, and is focused around a ten to thirty page case description of a complex and often-ambiguous “real-world” management situation or problem (Ewing, 1990). Students are required to sort through the information in the case, and ultimately make a decision on the best course of action for the company going forward. Guided by the instructor, students debate and defend their decisions in the class discussion, with participation grades assigned according to the quantity and quality of each individual’s contribution.

Since this method was developed at the Harvard Business School, it is commonly referred to as the Harvard case method (HCM), though it is now popular at most business schools in North America. The HCM method will be explained in more detail in the following section of the paper.

In addition to the HCM method, several other types of cases and methods of case teaching have been developed. Zimmerman (2002) provides a useful summary:

- **Mini-Cases** are often 1-2 pages and tend to focus on a single theory or problem.
- **Role-Playing** and Simulation Games allow students to experience case situations.
- **Descriptive Cases** describe the entire situation including the final decisions.
- **Mousetraps** involve the sequential presentation of three or more situations that each require an acceptance or denial of the same set of standards. Students commit to each situation without being aware of the next, and as they commit, it becomes more difficult to make the same commitment in the next situation without being inconsistent in terms of ethics, values and standards.
- **Student investigated and written cases** involve students performing research on a real company and then writing the content into a case.
- **Non-traditional sources of cases (informal cases)** include real-world and fictional situations gathered from newspapers, magazines, memos, novels and films.

Each of the case types described by Zimmerman have a distinct set of advantages and disadvantages (see Figure 1). The case type that is most beneficial for a certain course will therefore vary according to the specific conditions of each class, and the learning objectives described by the instructor.

Figure 1: Advantages and disadvantages of various case types (Zimmerman, 2002)		
Method	Advantages	Disadvantages
"Classical" HCM Model	<ul style="list-style-type: none"> • Applies theory to real-world management situations • High student participation 	<ul style="list-style-type: none"> • Long preparation time • Oversimplification of issues
"Short case"-mini case	<ul style="list-style-type: none"> • Short preparation time • Demonstrates theories in an efficient manner 	<ul style="list-style-type: none"> • Students cannot practice sorting through facts to find relevant issues
Role Playing	<ul style="list-style-type: none"> • High student participation and level of discussion 	<ul style="list-style-type: none"> • Not effective in a large class • Must be strictly managed
Descriptive Case	<ul style="list-style-type: none"> • Helps illustrate theory 	<ul style="list-style-type: none"> • Decisions are already made for the students
Mousetrap	<ul style="list-style-type: none"> • Illustrates ethics/values • Demonstrates faulty reasoning 	
Student Written Cases	<ul style="list-style-type: none"> • Improves writing and critical thinking 	

Aside from the HCM method, the literature review suggests that the mini-case is the next most popular case style, and so warrants a more thorough description. From the students' perspective, mini-cases seem to satisfy the same desire for "real-world" applicability as do the HCM cases (Chu & Libby, 2010). Although mini-cases do not allow students to practice sorting through data to find relevant issues, Dussange (2008) suggests that mini-cases can be advantageous to full HCM cases because students can prepare them relatively quickly on the day of the class. Since mini-cases are more focused on one key issue or concept, the risk that some students may simply miss the important information is minimized. This makes it likely that all students who prepare a relatively thorough analysis of the case should ultimately arrive at a sound solution.

2.3 THE "CLASSICAL" HARVARD CASE METHOD

Case method experts generally agree that successful HCM teaching places a greater demand on both the student and the instructor than does the traditional lecture. Students of cases must properly prepare the case in advance of class, and are expected to actively participate in the class discussion. Case method instructors must spend significant time preparing for the class and the case discussion, and must evaluate each student's participation following the discussion.

2.3.1 The role of the instructor. The instructor's role in the classical case method can be divided into three stages: before class, during class, and after class.

A. Before Class

Prior to each class, the instructor must prepare both the *content* of the case and the *process* for leading the students through the discussion. Charan (1976) suggests that instructors first prepare the case as a student would, and then go further by consulting with colleagues or with the case writer. After gaining a thorough understanding of the case and the issues to be raised with the students, the instructor prepares her teaching plan with assignment questions and a blackboard plan to track the important insights from each stage of the discussion.

Finally, the physical classroom must be prepared to facilitate an effective class discussion. The layout is extremely important, and should be designed to allow the students and instructor to easily hear and see each other (Erskine et al., 2011). The preferred case method classroom has angled rows at increasing heights to preserve sightlines, and rotatable chairs that allow students to see their classmates behind them.

B. During Class

The role of the instructor in the classroom is to set the stage for the upcoming discussion, deal with any initial questions or difficulties, and lead, direct, and wrap-up the case discussion (Harling & Akridge, 1998). According to Harvard (2012), "a good discussion leader does not seek to *cover* material in the classroom, but instead to guide students toward the *discovery* of critical insights and *uncovering* of broader lessons through thoughtful questioning, listening, and responding".

Unless the class is very small, the instructor must carefully balance the desire to hear from as many students as possible, with the need to provide students enough time to articulate sound, fact-based arguments that go beyond the "sound bytes" that only "scrape the surface of the case" (Kashani, 2008, p. 33). When the instructor strikes the right balance, she creates an energetic and interactive environment where students feel empowered to express their opinions, and learn just as much from the arguments and positions of the other students.

C. After Class

Immediately after class, the instructor records the participation marks for each student based on their contributions to the case discussion (Harling & Akridge, 1998). It is recommended that the instructor also takes note of new ideas brought forth by the students that may be useful for the next time the case is prepared (Charan, 1976).

2.3.2 The role of the student. Mauffette-Leenders et al. (2007) define the role of the student in classical case learning as a three-stage process of individual preparation, small group discussion and large group (class) discussion:

A. Individual Case Preparation

Just as the instructor must thoroughly prepare for the case discussion, so too must the student. Students preparing a case are asked to “take on the role and responsibilities of the decision maker in the case and the task of solving the issue confronting you” (Mauffette-Leenders et al., 2007, p. 20). This requires a thorough analysis of the case issues, and a structured case-solving process assisted by relevant theories and possibly by additional readings. See Figure 2 below for the generic steps in the case analysis process.

**Figure 2. Generic approach to case analysis
(Mauffette-Leenders et al., 2007)**

- | | |
|--|---------------------------------|
| 1. Define the key issue/problem | 5. Assess the alternatives |
| 2. Analyse case data with focus on cause & effects | 6. Select preferred alternative |
| 3. Generate alternative solutions | 7. Develop implementation plan |
| 4. Select decision criteria to assess alternatives | |

B. Small Group Discussion

Case discussion in small groups provides the link between individual preparation and large group (class) discussion. Some instructors mandate small group discussion and require students to prepare group case submissions, but in many instances group discussion is left to student discretion. Mauffette-Leenders et al. (2007) caution against this practice, providing eight reasons why small group discussion should be included in all case study (see Figure 3 below).

**Figure 3. Benefits of small group discussion
(Mauffette-Leenders et al., 2007)**

1. Students teach and learn from each other
2. Students are encouraged to prepare, because they must discuss the case with their group
3. Not every student can speak in each class discussion, but they can speak in their group
4. Students learn communication and listening skills
5. Students learn to recognize good ideas presented by their peers
6. Students practice effective teamwork
7. Students gain confidence from the ideas presented by their peers
8. Students build relationships with their peers

C. Large Group (Class) Discussion

The purpose of large group discussion is to further improve each student's understanding of the case through insights gained from the instructor or the analysis of other classmates. Class discussion also provides students with the opportunity to practice their communication in the large class setting, share and debate their learning, and be evaluated by peers and instructors (Mauffette-Leenders et al., 2007).

2.4 THE BENEFITS OF CASE METHOD TEACHING

To understand the benefits of the case method versus the traditional lecture, it is important to understand the foundations and learning objectives of each method. Ardalan (2008) asserts that the choice between lecture and case study is a matter of educational philosophy.

Instructors with a theoretical focus value the lecture because it is an efficient way to pass on useful knowledge to the students, while those with a practical focus favour the case method because it is experimental and action oriented.

Ardalan asserts that although the lecture method is effective at transferring knowledge, it does not contribute to critical thinking or problem solving skills, both of which are major benefits of case teaching. The Harvard Business School (2012) takes the argument one step further: not only does the HCM case method develop analytical and problem-solving skills, but the interactive nature of the case method is also ideally suited to the retention of knowledge. Many scholars share the belief that the case method and discussion-based teaching result in higher

levels of retained knowledge, including McKeachie (1990) who comments “Lecture tends to be at least equal to, or more effective than, discussion for immediate recall of factual knowledge on a course examination, but discussion tends to be superior for long-term retention” (p. 190).

These scholars may take their view from constructivist theory, which argues that a student’s passive involvement with course content through lectures will not result in a mastery of the subject matter. True mastery occurs when students are able to move the content into their long-term memory, and this can only happen if the students “actively use the material they are learning and construct their own understanding of it” (Cooper & Robinson, 2000, p. 10). In other words, active learning techniques such as the case method allow students to practice the theories they learn in class, which furthers their understanding of the content, and leads to longer-term retention.

In the process of practicing the theories through case studies, students develop the ability to apply the principles learned (Smith, 1987). This ability to apply knowledge to new situations is considered to be an important skill for success in industry, where the market can change very quickly. In a study of graduate students in a Marketing Planning and Control course, Bocker (1987) found that students exposed to the case method slightly outperformed lecture students in tests designed to assess students’ ability to both *reproduce* and to *apply* knowledge and learned skills.

Perhaps an even more notable finding from the Bocker study is that the case teaching had a significant positive effect on students’ motivation to learn (as measured by the Thematic Apperception test developed by Murray (1938)). Motivation is an important and often cited benefit of the case method, although students do not necessarily confirm its success. Educators continually strive to find new ways to engage students in the classroom and to motivate them to show interest in learning the subject matter. Researchers have therefore spent considerable time studying students’ perceptions of the benefits and usefulness of the case method as a teaching tool.

In one such study, Ballantine and McCourt Larres (2004) investigated student perceptions of the benefits of case teaching in an Advanced Management Accounting module. Interestingly, the results showed that student motivation and interest were both among the lowest ranked benefits, which the authors attributed to the perceived high workload required for case study. On the

other hand, the highest scores were achieved by benefits that pertained to business decision-making in the real world. This finding was supported by a similar study by Weil, Oyelere, Yeoh and Firer (2001) in which students were asked to indicate the extent to which the use of case studies helped them in realizing or enhancing each of 31 skills. The results showed that the highest ranked skills were those that related to exposure to real-world complexity, particularly with respect to decision-making. Students valued the opportunity to experience how they would use the learned theories and skills in their upcoming business careers.

An additional benefit to the exposure to real-world management issues is an enhanced tolerance for ambiguity (TA). Proponents of the case method believe that learning with cases helps students develop higher levels of TA, another important skill for navigating the ever-changing business environment. Among these proponents is Banning (2003) who found slight improvements in TA in students who were taught with the case method, while a control sample of students who experienced the same course but without the case method did not show a change in TA.

From the literature, there are many more claimed case method benefits, but Osigweh (1987) provides perhaps the best summary (see Figure 4 below).

**Figure 4. Major benefits of the case method
(Osigweh, 1987)**

1. Cases apply knowledge tools to problem-solving and decision-making circumstances
2. Cases improve students' communication skills
3. Cases require thinking and analytical skills that help students master subject matter
4. Cases help illustrate the theories in a practical context
5. Cases let students experience true-to-life organizational situations
6. Cases allow a student to explore real world situations in a low-risk environment.
7. Cases promote constructive change in the management of an organization
8. Cases are engaging and motivating for students
9. Cases provide reference points that help students recall specific knowledge

2.5 THE CRITICISMS OF CASE METHOD TEACHING

Despite the numerous benefits of the case method, many business instructors maintain that other methods provide a better learning experience. From Figure 5 below, Osigweh provides a list of case method criticisms as gathered from a literature review.

**Figure 5. Common criticisms of the case method
(Osigweh, 1987)**

1. Cases diminish the teaching role and control of the instructor
2. Cases give a static, neat little picture of the organization that is not true-to-life
3. Cases may inhibit “double-loop learning” – i.e. asking the “why” questions
4. Students learn to make superficial generalizations about management issues
5. Cases encourage “free-riders” through group assessment
6. Students don’t challenge each other because they don’t want their own views criticized
7. Cases may promote “group-think”
8. Cases may reward the quantity rather than the quality of participation

Among the criticisms of active learning techniques such as the case method, the diminished control of the instructor is one of the most cited (Bonwell & Eison, 1991). The case method places a responsibility on the students for taking a leadership role in their own learning and the learning of their classmates (Harvard Business School, 2012). While there are many positives with this situation, critics argue that it relies on the students acting responsibly to ensure the success of each case session. If students come to class unprepared, or if they choose not to actively participate in the discussion, then the instructor is not able to help the students achieve their learning objectives.

Student participation is critically important to the success of the case method, but critics argue that the method places undue pressure on students to speak in class since participation marks can represent up to 50% of a student’s final grade (Ewing, 1990). Participation in class discussion can be a stressful exercise. According to Ewing, the most common complaint of Harvard students is a difficulty speaking in class. In Ewing’s opinion, this difficulty may be due to an inability to think on their feet, an aversion to being the center of attention, or a fear of looking foolish in front of classmates.

According to Mauffette-Leenders et al. (2007), the fear of class participation may stem from two major sources:

1. An inadequate level of individual or small group preparation
2. Cultural, social, or psychological factors causing a reticence to speak out in group settings

While the first problem is easily overcome through a greater dedication to preparation, the second problem is not as easy to fix. To draw out participation, and to help maintain a higher level of control in the class, many case teaching instructors resolve to take a significant leadership role in case discussions. This control can be beneficial in some instances, but it can also inadvertently limit the spontaneous interaction of the students, and hence their ability to learn from each other.

Argyris (1980) observed this phenomenon while documenting a case training session taught by professors from Harvard, Virginia, and Stanford to executives of a large company. From Argyris' observation, the number of instructor-student interactions were at least twice the number of student-student interactions, suggesting that the instructors wanted to remain in control of the learning. According to Argyris, the consequences of this control are that some issues that are important to students will be overlooked, and the level of dependence on the instructor for learning may increase.

An additional observation from the Argyris study is that very few attempts were made by the faculty to relate the executives' behaviour in the classroom to their behaviour in the business. This limited the executives' ability to recognize errors in value or policy, and inhibited their "double-loop" learning. Double-loop learning is asking "why" in addition to "what" or "how", and is another oft-cited drawback of the case method. Rather than learning to question the motives of management, students take managers' decisions and actions at face value, according to the details given in the case.

In addition to the criticisms listed above, critics cite several other limitations of case teaching, many of which directly dispute some of the claimed case method benefits. For example, the counterargument to the benefit of 'real-world applicability' is that the situations described in cases may not actually be "true-to-life" because they give an oversimplified and artificial account of the issues. As Ewing (1990) describes it, in real-life fortunes and careers depend on the

decisions made by the participants, but students working on a case don't face that same reality (p. 34). Without the pressure of real-life accountability, students may learn to make "superficial generalizations about management issues" (Osigweh, 1987, p. 128) that will not serve them well in industry.

In a report on case teaching for the European Case Clearing House, Burgoyne and Mumford (2001) interviewed 32 instructors from the United States, Canada and the United Kingdom and found some interesting disagreement in their beliefs on case teaching. For example, a few of the important advantages and disadvantages of case teaching as described by instructors in the Burgoyne and Mumford study (p. 48) are listed below in Figure 6. These disagreements raise the point that, as the authors suggest, it is up to each instructor to make up their own mind when evaluating which benefits and limitations are significant for their own view on case teaching.

**Figure 6: Selected faculty perceptions of cases
(Burgoyne & Mumford, 2001)**

<u>Advantages</u>	<u>Disadvantages</u>
Real	Unreal
Sharpen analytical skills	Only deal with analytical skills
Options identified	Options not tested by implementation
No right answer	No right answer
Unemotional	Unemotional

2.6 ALTERNATE METHODS FOR TEACHING CASES

Case teaching instructors have developed many alternate methods of teaching the Harvard style ten to thirty page case, which they believe can overcome some of the limitations and criticisms of the HCM method. Some of the more popular methods include the MICA method, the "Mode Two" approach, and online case discussion:

2.6.1 The MICA method (McAleer Interactive Case Analysis). Gordon McAleer developed the MICA method in 1976 to encourage greater class participation, and to reduce the burden of case teaching on the part of the instructor. McAleer believed that many students in HCM case discussions were reticent to participate, while many others made trite and repetitive contributions simply to fulfill their expectations for grading (Siciliano & McAleer, 1997). In his

opinion, the HCM assessment model was subjective, and difficult for the instructor to administer while also leading the case discussion.

The MICA method (see Figure 7 below) was designed to overcome these issues by 1) having pre-assigned student teams lead the case discussion based on action steps proposed by each class member, and 2) by applying a pre-established and transparent scoring-criteria that the instructor uses to grade students in real-time.

**Figure 7: Summary of the MICA method
(Siciliano & McAleer, 1997)**

1. Students are divided into teams, and each team is assigned a case to administer
2. Prior to class, each class member submits an “action-step” (i.e. recommended course of action that the case company can take to overcome its issue or problem) to the administering team
3. In the class, the administering team starts the discussion by reading one of the action steps, and asks the student who submitted the step to explain their rationale
4. The students debate the merits of the step and vote on whether it should be accepted
5. The administering team moves on to the other action steps in a similar fashion
6. The instructor sits at the back of the room and grades each comment in real-time according to a MICA scoring criteria that rewards insightful and fact-based comments
7. At the end of class, the administering team summarizes the decisions taken by the class, and the instructor reads out the participation grades that each student achieved

In a comparison of the MICA and HCM methods, Desiraju and Gopinath (2001) found that students who were taught with MICA perceived a higher level of active case participation than HCM students, with statistically significant differences in reading the case more thoroughly, speaking more frequently in class, and using the case details while participating. The MICA class also performed relatively better than the HCM class, with higher scores on the final exam, and better recall of the main focus of case issues.

2.6.2 The “Mode Two” case method approach. While the HCM method, and the MICA method in particular, place a strong focus on decision-making, there is another school of thought that believes that the process of critical thinking and sense-making is more important than the final solution. Rippen, Booth, Bowie, and Jordan (2002) call this approach “Mode Two”,

to distinguish it from the HCM method (“Mode One”).

As the authors describe it, the HCM method is aimed at managerial skills development such as problem solving and decision-making, while Mode Two “sees the world as complex and ambiguous, with no right answers and no single explanation of events” (Rippin et al., 2002, p. 435). Students learn to apply theory and to develop their own frameworks to organize and make sense of the details in the case. Rather than acting as an expert tutor, the instructor is a facilitator, guiding the students through “conceptual development”, and helping them to question and critique the motives of management (Booth, Bowie, & Rippin, 2000). In this way, instructors can contribute to students “double-loop learning”, eliminating one of the weaknesses of the HCM method.

While the Mode Two method helps prepare students for the complexities of real-life work, it may be less preferred by students, who are accustomed to having the ‘right’ answer provided by the instructor. In semi-structured interviews with students at six UK business schools, Rippen et al. (2002) found that students did not appreciate the open-ended process of Mode Two, and the fact that the cases did not resolve in a tangible solution. The finality of the solution taking, and the structured approach to the case analysis seem to make HCM the preferred case method over the Mode Two approach.

2.6.3 Online case discussion. Used on its own or as an extension to in-class case teaching, online case discussion can be used to encourage student participation in case discussion. These discussions are often facilitated through asynchronous online environments such as Blackboard, where students post comments in a running log that can be monitored and assessed by the instructor at their discretion. Rollag (2010) summarizes the advantages and disadvantages of online cases in Figure 8 below.

**Figure 8: Advantages and disadvantages of online case discussion
(Rollag, 2010)**

Advantages

- Students have sufficient time to analyze and formulate quality responses
- Shy students or students with language issues can properly participate
- The online environment is more convenient
- There is a permanent record of the conversation to use for assessment

Disadvantages

- It is very time consuming to monitor and assess each comment
- To manage the quality of the discussion, instructors must direct the conversation online
- It is more difficult to develop a personal connection with students

The major benefit of online case discussion seems to be the level of participation that is generated by all of the students in the course. However, the type and quantity of contribution may vary depending on the nature of the online environment. Paulus and Phipps (2008) found that overall participation levels were higher in a synchronous environment (Blackboard text-based chat) than in an asynchronous environment (Blackboard discussion forum). In the synchronous environment, the students were able to receive immediate feedback from their peers, but they were required to log on at the same time, which created some problems for coordinating schedules.

While many authors agree that online environments lead to high levels of student participation, these environments may suffer from the same drawback of the HCM method in that many students participate simply to achieve participation marks. Chen, Shang, and Harris (2006) experienced this phenomenon, noting that the level of participation in their online case discussion sharply increased toward the later weeks as students attempted to fulfill their requirements for grading.

Students in the Chen et al. study were given a grade for their case discussion, and the researchers found a positive correlation in this grade with the number (quantity) of individual messages posted by students. This confirms one of the criticisms of the case method, that it rewards students who participate most rather than those that participate best. Additionally, in

the Chen et al. (2006) study, the grade for the case discussion was not found to be correlated to the grades achieved in the case reports, the individual assignments or the midterm and final exam test scores. This suggests that the online case discussion may not have contributed to individual learning gains. Based on this finding the authors suggest that online case discussion may be less effective than face-to-face environments in delivering cognitive learning gains.

2.7 SUMMARY OF THE LITERATURE ON CASE METHOD TEACHING

The case method has been an important teaching tool for business schools for the past 100 years. By presenting issues and theories in a practical context, proponents of the case method contend that it contributes both to retained knowledge of course subject-matter, and to the development of critical business skills such as analysis, decision-making, and communication.

One of the important benefits of case teaching is that it provides great flexibility in the type and method of case instruction. However, as has been discussed, no method is without its challenges and criticisms, so instructors must choose the appropriate method according to their preferred teaching style and their desired student learning outcomes. No matter which method is chosen, students on the whole agree that cases are an effective and engaging teaching tool, and one that will help them use the knowledge and practice the skills that they will need upon graduation.

In the next section of the paper, the literature on teaching in large classes will be reviewed, with a particular focus on active learning techniques. The study will document the major challenges and best practices of large class teaching and attempt to link them with the benefits and challenges of the case method.

III.

TEACHING IN LARGE CLASSES

3.1 THE EFFECT OF CLASS SIZE ON STUDENT LEARNING PERFORMANCE

One of the most divisive theories in the teaching profession is the effect of class size on student performance. Many educators are convinced that smaller class sizes are superior to large classes in many respects (McKeachie, 1980). Their belief is that the students studying in smaller classes will outperform the students of larger classes in standardized tests. However, a review of the research returns inconclusive results.

Class size testing has been performed since at least the 1920s, when Edmonson and Mulder (1924) compared the performance results of two sets of education students. While small class students outperformed their large class peers on an essay and mid-term, large class students performed better in quizzes and the final exam. The results of many other studies throughout the 20th century have been similarly inconclusive.

Among the supporters of small class superiority, Glass and Smith (1979) authored one of the most famous and controversial studies. From a meta-analysis of 725 class size studies involving elementary, secondary, and post-secondary students, Glass and Smith concluded “all things being equal, more is learned in smaller classes.” Their conclusion was based on an analysis of student achievement scores from the 725 studies, which showed net positive scores for smaller classes in 60% of the tested cases. However, the achievement score differentials were only particularly significant when the small classes were very small (i.e. 5 students or less), and in fact, the average achievement scores favoured the small classes by only one tenth of a standard deviation.

The Glass and Smith analysis raises an interesting complication to the class size debate, one that leads Follman (1994) to question the validity of the results. Each researcher for the purposes of their own study must define what constitutes a “large” and a “small” class. The result is that the “large” classes defined in many studies might actually be considered quite small by many post-secondary educators. In fact, from the Glass and Smith study, the definitions of “large” classes ranged as low as 2 students in a class (which was compared to a “small” class of 1 student), and almost 40% of the “large” classes contained fewer than 35 students.

As Follman summarizes his disdain for the state of class size research:

Thus, there seem to be basically only two research options, either little or no research, the apparent current option, or else replicate the early approach and identify incidental sample classes of different sizes, arbitrarily define some as "large" and some as "small," contrast the achievement of the "large" class size students with the achievement of the "small" class students on a rigorous measure, preferably a standardized achievement test, and then relate the differences, if any, in achievement to the differences in class size. Needless to say, the rigor of most of the class size research leaves much to be desired.

In his review of the class size research, Follman provides us with a good summary, concluding that unless class size is very small (below 15 or 20 students) it is difficult to demonstrate that large classes influence achievement, especially adversely.

3.2 THE CHALLENGES WITH ACTIVE LEARNING TECHNIQUES IN LARGE CLASSES

Given the inconclusive nature of the class size research, academics have more recently turned their attention to exploring the underlying *characteristics* of large and small classes, in an attempt to determine causality for the student achievement differences found in previous studies. Despite the fact that small class superiority has not been proved, some researchers contend that class size *could* or even *should* have an affect on student performance, for the simple fact that the sheer number of students in larger classes presents several potential challenges for students and instructors.

To explore these challenges, and to identify which individual class characteristics may directly affect student achievement, Scheck, Kinicki, and Webster (1994) studied large and small sections of a Principles of Management course. The study showed that:

- ***Large class size negatively affected teacher behaviour.*** Large classes constrain the teacher's ability to offer both *consideration* (showing concern for a student's personal needs), and *structure* (giving students a clear understanding of expectations).
- ***Teacher behaviour positively influenced student satisfaction and motivation.*** The more an instructor shows individual concern for students and clarifies expectations, the more the students are satisfied with the class and motivated to perform.
- ***Student motivation had a direct positive effect on student performance.***

While Scheck et al. did not find a direct causality from teacher behaviour to student performance, it can be inferred that a change in teacher behaviour necessitated by large classes is one of the

factors that can lead to lowered results. As McKeachie (1990) asserts, instructors teaching large numbers of students are simply not able to provide the same individual attention to each student as they could in a small class. This lack of individual attention may lead to lower levels of student engagement and motivation (Scheck et al., 1994), which ultimately may lead to lower achievement.

This theory is supported by Murdoch and Guy (2002) from their study on the class size impact on active learning mini-case assignments. Small class students in the Murdoch and Guy study outperformed large class students, and the authors attribute the performance difference to the fact that the instructor had more time to facilitate group interaction and attend to individual students in the small classes.

Another important element of active learning is the participation by the students and their interactions with their peers. If the nature of large classes creates difficulty for participation, then this limitation could potentially cause lower levels of student learning. The findings from an Iaria and Hubball (2008) study suggest that students in large classes may be less willing to participate in class and peer discussion. The researchers observed that only 3 students of 150 in a large class fully participated within a small group task, compared to 11 of 17 in the small class. Additionally, 15 students of the 17 in the small class interacted with the instructor during a question period, while no students responded to question prompts in the large class.

Iaria and Hubball suggest that students in larger classes may feel that interactive discussion is inappropriate or intimidating in the large class setting. These feelings may be caused in part by the physical characteristics of the large classroom. According to Gleason, the characteristics of large classrooms create several communication barriers between the students and the instructor (see Figure 9 below). These communication barriers make class discussion more difficult in large classes, and may ultimately result in lower levels of student engagement.

**Figure 9: Communication barriers in large classes
(Gleason, 1987)**

1. Large numbers of students make for an impersonal, anonymous environment where students are easily able to hide
2. The distance between the professor and students in lecture halls is large and impersonal, and theatre seating (which cannot move or swivel) makes it difficult for peer interaction
3. Instructors of large classes may feel distant and removed from the students
4. Theatre set-ups encourage students to take on the role of a spectator who is there to be entertained by a performer (the instructor), rather than participate
5. There is not enough time for every student to participate in class, so if they raise their hand but are not called on, they may lose interest and engagement

3.3 DEFINITION OF A “LARGE CLASS” FOR ACTIVE LEARNING AND CASE TEACHING

The purpose of this study is to document best practices that instructors can use to tailor their case teaching methods to the demands of large classes. To do this, it is important to define a “large class”. From the literature, the only generally accepted opinion of what constitutes a large class is “it depends”. According to the Australian Universities Teaching Committee ‘Teaching Large Classes Project’ (2003), class size is a matter of perception: a class is “large” if the instructor and students perceive the class to be “large”. This perception depends on the interaction of three key factors:

1. the number of students in the class
2. the teaching and learning activities (TLAs)
3. the facilities and physical environment

From this explanation, the definition of a large class varies according to the expectations placed on the students and the instructor. A lecture-based class with 200 students may not be considered large if the instructor is not required to make meaningful changes from teaching a class of 40. However, an interactive discussion-based class of 200 students may be difficult to manage, and likely looks quite a bit different from a discussion-based class of 40 students.

Therefore, it is important to define a large class in the context of case teaching. An important element of the case method is the rich discussion between students with different backgrounds, beliefs, and experience. According to Harvard (2012), the proper facilitation of this discussion

requires instructors to know each student's personal history, and to address them all by name. Erskine et al. (2011) from the Richard Ivey School of Business say it best: "In case discussions a student is not a number. A student is not anonymous. A student cannot be allowed to hide" (p. 29).

For this reason, many case-teaching schools place the upper bounds on class size for case method at 100 students. Ivey suggests that case teaching is appropriate for classes of 12 to 100 students, with the preferred size falling between 20 and 60 students to allow all students to engage in discussion each class (Erskine et al., 2011).

Harvard uses a similar range of 20 to 100 students for case teaching (Barnes, Christensen, & Hansen, 1994), and the writings of several Harvard professors suggest that they consider large classes to contain at least 80 students. Professor Bill Bruns refers to a large class as one with 80-90 students, and argues that these classes make it easier for students to hide since they typically participate in discussion only once every two or three classes (Hill, Bruns, & Rangan, 1996). Professor David A. Garvin similarly makes a distinction of classes containing 80-100 students, reporting that a Harvard faculty committee had explored adding small group discussions to these larger classes to encourage students to work together more closely (Garvin, 2003).

From the Harvard and Ivey literature, we can conclude that a class becomes "large" for case teaching when it reaches at least 60 or 80 students, and that the upper limit for classical HCM case teaching is 100 students. Once a class moves beyond 100 students it is assumed that a new case methodology may have to be employed.

3.4 THE CHALLENGES WITH TEACHING THE CASE METHOD IN LARGE CLASSES

Just as with other active learning techniques, student participation is a critical factor in case method learning, especially for class discussion. Class discussions are designed to help students develop core business skills such as communication and persuasion. Additionally, participation in class discussion is one of the best ways to ensure that students perform a thorough individual case preparation (Mauffette-Leenders et al., 2007). If a student feels that they can hide in a large class, they have less incentive to protect themselves from looking foolish due to lack of preparation.

In one of the very few studies expressly concerned with teaching the case method in large size business classes, Booth et al. (2000) interviewed students and faculty to explore how the use of cases was evolving to meet the realities of the growing and increasingly diverse classes in their undergraduate business programs. Students expressed concerns that the large classes hindered their ability to grasp and learn the case material. The comments stem from a belief that large and anonymous class settings allowed students to “hide”, and created a reluctance to prepare, contribute or to ask questions. Rather than the lively class debates that might be experienced in the typical Harvard (HCM method) setting, many students reported that the large class setting more often lead to a series of fragmented discussions.

In another study on case method teaching in large classes, Doran, Healy, McCutcheon and O’Callaghan (2011) confirmed several of the same large class challenges. While the authors observed some positive case teaching benefits including strong student engagement, the large class size necessitated strict time constraints and structure, which limited spontaneous peer interaction and large group discussion.

The observations of Doran et al. also supported Gleason’s (1987) concern that there is not enough time for all students to participate in a large class. For Doran et al. this caused a challenge for individual assessment, because the time constraint required the instructor to permit only one group member to speak on behalf of each small-group. This forces instructors to evaluate the performance of the entire group based on the participation of only a few individual members, likely leaving some students frustrated with their marks, and questioning the validity of the assessment.

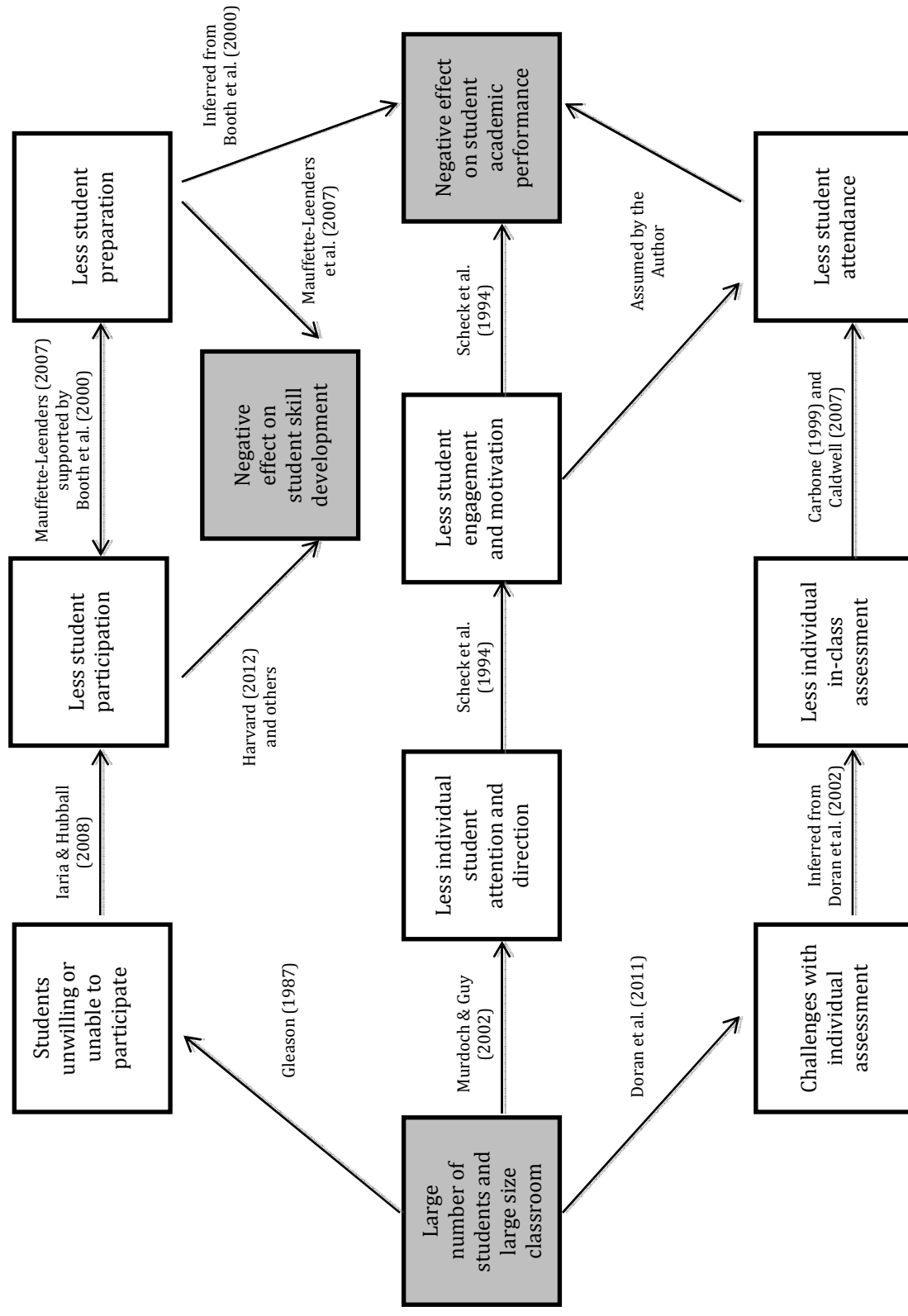
The lack of individual assessment may lead to another consequence. It is generally believed, including for example by Carbone (1999) and Caldwell (2007), that students are likely to attend class each week if they know or suspect that they will be evaluated. Therefore, if a student feels that one of their group members will be able to speak on their behalf to earn them participation marks, they may be less likely to attend. Although a study linking the frequency of class attendance with the outcome of student learning performance was not found in the literature review, it is predicted that this is true. While some students may be able to skip most classes and still achieve top marks, this is not the case for the majority of students. This is likely particularly true for case method teaching which relies so heavily on the opportunity for students to learn from the ideas of their peers during the class discussions.

The large class issues identified from the active learning and case method literature can be distilled into three major teaching challenges:

1. Instructors are unable to provide individual attention and direction
2. Students are unwilling or unable to participate in class discussion
3. Instructors face challenges with individual assessment and feedback

To track the potential outcomes of the three major challenges and their effect on student learning, see Figure 9. From the model in Figure 9, the three major challenges create a situation that may lead to negative learning outcomes both for student performance (to be assessed on standardized tests) and for critical skill development (analysis, problem-solving, decision-making, communication etc.). Left unchecked, the challenges can lead to diminished student preparation, engagement, and/or attendance in class. Logic suggests that these three situations set up the possibility for lowered student performance, because a basic expectation for learning is that a student attends class, is prepared to learn, and is engaged in what she is learning.

Figure 9: The challenges of active learning and case method teaching in large classes



3.5 “BEST” PRACTICES FOR ACTIVE LEARNING AND CASE TEACHING IN LARGE CLASSES

It is important to note that large classes will not necessarily lead to poor performance, especially if instructors are able to take action to overcome the three major challenges identified in the previous section. While there is very little research specifically dedicated to the best practices of the case method in large classrooms, a review of the literature on active learning reveals some techniques to overcome large class challenges, which may also be useful for case teaching.

A common concern about active learning is that it will only be effective in small classes (Auster & Wylie, 2006), though many educators believe that the techniques can be adapted to meet the needs of the large class. A summary of these best practices is outlined below, and has been organized against the three major challenges – ‘individual attention and direction’, ‘student participation’, and ‘assessment and feedback’. An additional section outlines best practices for using technology, specifically classroom communication systems (i.e. ‘clickers’), to promote active learning in large classes.

3.5.1 Practices for individual attention and direction. An instructor’s ability to balance *structure* (i.e. context and direction setting) and *consideration* (individual attention and concern) is an important factor for student motivation (Scheck et al., 1994). Context setting is also important for creating an atmosphere that is conducive to active learning. By establishing ground-rules, expectations and norms, instructors can create a climate where students feel comfortable asking questions and expressing their views (Auster & Wylie, 2006). Klionsky (1999) recommends setting the tone in the very first class by letting students know that they are expected to interact and ask questions, and by assigning an activity that requires them to interact with their peers and the professor.

Instructors in large classes are simply not able to provide guidance to each small group interaction, nor can they be expected to interact one-on-one with each student in every class. However, instructors can take steps to provide the “illusion” of intimacy, despite the obvious impersonal atmospheres of most large classrooms. To make the classroom feel smaller, Carbone (1999) recommends reducing the physical distance between the instructor and the students by moving closer to students when answering their questions and by walking amongst the students during the class.

Gleason (1987) suggests that instructors must attempt to learn as many student names as possible and to use them in class. If names cannot be learned, Gleason suggests making personal comments on student assignments, and calling out certain students who performed especially well. Carbone recommends the use of 'one-minute papers' (which give students one minute to write down their key questions or answers to specific problems), and if student names are attached, then the instructor can give personal feedback. Grades can be assigned simply for completing the paper, so the instructor does not have to read each submission in detail. However, by reading a few of the more insightful papers in class, the instructor gives the impression that he has thoroughly reviewed each assignment, and is interested in what each student has to say.

3.5.2 Practices for student participation. Proper participation in the case method requires students to thoroughly prepare a case analysis, and to engage in discussion during the class. Introducing the concepts of case analysis and discussion to students in junior-level and introductory courses may be difficult because the instructor must keep the attention of the large class, and does not have the same opportunity for back and forth questioning to check for the understanding of all students.

For this reason, Brown, Schermerhorn and Gardner (1987) recommend a simple and structured "planned fading" approach that students in larger classes can easily follow and understand. The instructor begins by teaching the students the basic steps for case analysis. Brown et al. propose a simplified five-step case analysis that includes 1) inventory of key facts, 2) problem statement, 3) analysis of possible causes of the problem, 4) list of possible alternatives, and 5) justification for chosen solution.

The planned fading technique is then used over the course of multiple cases, with the responsibility for analysis gradually shifting from the instructor to the students. For the first case, the instructor takes responsibility for leading the students through the full analysis, clearly and concisely demonstrating each of the five steps. To encourage participation, the instructor asks students to provide suggestions for each step. For the second case, the instructor leads the first few steps of the analysis, while the students are expected to complete the final steps. For subsequent cases, students complete all of the five steps on their own. Brown et al. believe that this technique ensures that a majority of students in the large class can correctly follow and

practice case analysis, and provides junior level students with a positive first introduction to case teaching.

Teaching students a proper case analysis process is likely easier than encouraging active participation in large class discussion. This is because the physical characteristics of large classrooms make discussions difficult, and there is not enough time to hear from every student (Gleason, 1987). Instead, active learning practitioners recommend using collaborative learning groups (Exeter, et al., 2010). Instructors can call on certain groups to provide the class with a summary of their decisions, and then use these summaries to encourage class discussion.

Small group activities in large classrooms can take many forms (see Figure 11 below).

**Figure 11: Active learning small group activities
(Smith, 1987)**

- *Informal Strategies with Extensions.* Students complete individual pre-work assignments and use them as a basis for small group discussion in class. Groups come to consensus on the issues, and one group member speaks on behalf of their group in class-wide discussion.
- *In-Class Project Work.* More complex and longer-term exercises that students work on together both inside and outside of class.
- *Jigsaw Strategies.* Each student within the small group is responsible for learning a portion of course material and teaching it to the rest of the group.
- *Structured Academic Controversy.* Groups are assigned a perspective on an issue and asked to prepare, present, and defend that point of view.
- *Problem-Based Learning.* Similar activity to case method. Groups are presented with a real-world problem, and work collaboratively toward a solution.

According to McKinney and Graham-Buxton (1993), collaborative learning group (CLG) activities have been shown to increase attendance, reduce the anonymity of large classes, and contribute to student skills development and learning. However, McKinney and Graham-Buxton assert that many students are concerned with ‘free riders’ that do not contribute the same level of effort as the rest of their group members.

To deal with 'free riders', McKinney and Graham-Buxton require students to complete individual CLG assignments first, and to hand in the individual assignments with the group assignments. Individual grades are derived by taking the average of the scores on the individual work and the group work. De Vita (2001) provides another best practice, suggesting that free riders and other group related issues are best dealt with through proactive discussion with students. De Vita recommends that instructors should clarify for students why group work is important, and provide tips for success in the group environment. Additionally, instructors should advise students on potential group related issues, and gain alignment from them on how they should be dealt with.

A final best practice to encourage large class participation can be found in the MICA method and online case discussion. While these methods were not specifically designed for large classes, both have proven to be successful in generating significant participation. The downside to these methods for large classes is that they rely on a significant amount of assessment. If the techniques could be adjusted to reduce the assessment burden, they would likely meet with good success for large classes.

3.5.3 Practices for individual assessment and feedback. The issue of individual assessment in large case classes is a difficult one, since the practice of grading the class participation is such an important pillar of the HCM case method. If this practice is removed, then the case method may lose some of its strength because students may participate less or perform less preparation for the case discussion.

Brown et al. (1987) recommend using multiple-choice exams because of the difficulty with assessing the individual participation of students in a large class. However, this will only be effective if the instructor is able to create objective exam questions that can reasonably be solved by the students that performed a thorough case analysis, and not by students that skipped or glossed over the analysis.

To ensure that students remain motivated to attend class and to participate fully, it is recommended that the practice of in-class grading should be maintained at least in some form. Stork (2003) suggests offering 'bonus' marks for class discussion. Since bonus marks are not a significant part of the final grade, the accuracy of assessment is less important and the instructor is therefore not required to use the same level of rigor.

Bentley et al. (2009) provide a final suggestion from the description of their “hot seat” active learning approach. The participation of the class can be scored on the whole rather than individually, with the contributions of each individual impacting the class score. Class members will be motivated to prepare themselves for the discussion since they don’t want to let down their peers. This approach is only affective if the instructor randomly calls on students for their contribution (as in the “hot seat” method) because it then forces all students to prepare for the possibility of being called on.

3.5.4 Practices for technology: classroom communication systems (clickers). Classroom communication systems (also known as audience response systems or simply as “clickers”) were first introduced by Stanford University in 1966 to help promote student discussion in large classes (Kay & LeSage, 2009). Figure 12 outlines the basic components and steps in the CCS process.

**Figure 12: The basic components of the CCS process
(Nicol & Boyle, 2003)**

1. Using a data projector, the instructor presents a concept test to the students (normally a multiple choice question testing students’ understanding of a concept)
2. Students signal their responses to the concept through a handset (similar to TV remote)
3. The CCS collates the responses and displays them as a histogram for the class to see
4. The results of the histogram are used to trigger either small group or class discussion

Studies suggest that CCS technology can provide several positive benefits for the students and instructors of large classes. Mula and Kavanaugh (2009) report that students who used clickers in their accounting course experienced a more enjoyable learning experience, improved understanding of course content, and increased class participation than students in a separate group that did not use the CCS technology.

The findings on participation are not surprising. By their nature, CCS systems increase participation since students are required to respond to a series of instructor questions (Caldwell, 2007). Clickers are fun and easy to use, and the anonymity of the responses eliminates any fear of speaking up. Instructors can call on students to explain the rationale behind their choices, or they can use CCS to facilitate small group or class discussions. From the literature,

there are two main forms of CCS discussions: Peer Instruction and the PERG approach (Physics Education Research Group).

In “Peer Instruction”, developed by Mazur (1997), students first respond to the concept test or problem question individually, and then discuss their responses within small groups. After the small group discussion, students are retested on the same question to see how the class opinions may have changed. In contrast, the PERG approach (Dufresne, Gerace, Leonard, Mestre, & Wenk, 1996) begins with a small group discussion of the concept question, followed by an individual or group response. The students then engage in a class-wide discussion facilitated by the instructor.

From a study by Nicol and Boyle (2003), Peer Instruction seems to be the student preferred method. The students praised the discussion format because it allowed them to learn from their peers, which strengthened their understanding of the more difficult concepts. Additionally, 90% of the students felt most engaged in the class when they were interacting and discussing the problems with their peers. Nearly all students preferred to start with individual thinking because it forced them to formulate a response on their own rather than just agreeing with the other members of their group.

The response to the class-wide discussion was mixed. Many students felt that they learned from other students during the class discussion, and found it especially appropriate when the histogram showed that the class was clearly divided on an issue. However, most students preferred small group discussion because it was more of a discussion rather than an opportunity to “hear other people’s points of view” (p. 40). Overall, the CCS system was well received, and contributed to significant participation.

Another benefit of CCS technology is that it can be used to facilitate assessment and grading in large classes. Since each individual clicker has a unique ID, the responses can be captured and scored for each individual student (Hancock, 2010). Once the questions have been entered into the system, the process of scoring the marks for each student is relatively quick and painless for the instructor.

Instructors often use this technology to perform summative assessments at the start of each class to assess which students studied the assigned readings (Pritchard, 2006). The

assumption is that more students will have prepared for class by completing the assigned readings or analysis, since they know that they will be graded. However, any student concerns with their grades being tied to CCS will only be compounded if the technology is unreliable. For this reason, it should be tested in advance, and the instructor should ensure that they have a solid understanding of how it works.

Not surprisingly, the use of CCS for student assessment (like other in-class assessment tools) has been shown to increase attendance. Burstein and Lederman (2001) found that student attendance increased “dramatically” when CCS testing accounted for 15% of a student’s final grade. Caldwell (2007) found that attendance could be increased if CCS tests were worth only 10% or even 5-10% of the final grade.

CCS technology therefore represents an interesting option to be explored for its use with case method teaching. For example, it is not a stretch to imagine using clickers in the MICA method to make it easier for students to vote on which action steps that the company should accept. There are likely many other ways that CCS could be used to increase student participation and facilitate discussion in larger case classes.

3.6 SUMMARY OF THE LITERATURE ON TEACHING IN LARGE CLASSES

The effect of class size on student performance is possibly one of the oldest and most researched issues in the teaching profession. Despite, or perhaps owing to, the great amount of research on the subject, one cannot conclude that smaller classes with a lower student to faculty ratio will result in higher levels of achievement for students. Although the link between class size and student performance has not been proved, the bulk of the research on the subject has not focused specifically on active learning or the case method. There is widespread agreement that the participatory nature of active learning presents several challenges for the instructor of a large class, which could ultimately lead to unfavourable student learning outcomes.

Active learning practitioners have documented several practices designed to overcome large class challenges, and which could potentially be exploited for use with case teaching. While there are relatively fewer suggestions for improving student assessment, the research suggests several practices to engage students in discussion both in peer groups and with the broader class. In particular, CCS technology (“clickers”) has been shown to significantly enhance the

levels of student participation in large classes, and may be appropriate for use in case teaching.

While there is no generally accepted definition of a “large class” for case teaching, the literature from Harvard and Ivey suggests that classes of at least 60 or 80 students may be considered large in the context of the classical case method. Ostensibly, this definition is also supported by Doran’s (2011) study, which used classes of 72 and 84 students to test case teaching strategies in large size classes.

An additional definition may be required for classes containing greater than 100 students, since both Harvard and Ivey suggest that their methods are not appropriate for classes larger than 100 students. For the purpose of distinction, we will refer to these classes as “very large classes” for case teaching, and the study will explore whether they may require more significant changes to case teaching methods.

IV.

METHODOLOGY

4.1 RESEARCH DESIGN

The prior literature review of case method teaching and teaching in large classes revealed several challenges and best practices for teaching with active learning techniques in large classrooms. While some of these active learning strategies may also be applicable for case teaching, the literature review found very little research specifically focused on case method teaching in the large class undergraduate environment. This study will contribute to the literature by providing an initial exploratory understanding of the challenges and practices for large class case method teaching.

4.1.1 Research questions. This study will attempt to answer the following three questions:

- i. What constitutes a “large” class for case method teaching?
- ii. What challenges do instructors face when teaching cases in large classes?
- iii. What practices can instructors use to overcome the large case class challenges?

4.1.2 Research method. This study employed a mixed method approach of quantitative surveys and qualitative semi-structured interviews. The premise behind a mixed method approach is that by mixing the datasets, the researcher provides a better understanding of the problem, with more comprehensive evidence, than if either quantitative or qualitative datasets were used on their own (Creswell & Clark, 2007). In this study, the quantitative surveys provided an understanding of the student perspective on large and small class case teaching, and helped to establish the most common challenges faced by instructors when teaching cases in large size classes. The semi-structured interviews were then conducted to add further interpretation and clarification to the survey results, and to document practices that instructors use to overcome the large class challenges identified in the survey.

Primary research for this study was conducted from June to August 2012. The study surveyed business school instructors and recent graduates at a large urban university in Toronto, Canada. Instructors were asked to define a “large class” for case teaching, and to document the most common challenges that they faced when teaching cases to these larger classes. The survey for the graduates explored their perceptions of the characteristics of smaller and larger case

classes at the school, and how these class characteristics affected their behaviour and motivation for learning.

Following the quantitative surveys, semi-structured interviews were conducted with case teaching instructors at the business school to discuss and document the practices that they used to overcome the difficulties of large class case method teaching. The instructors spoke about specific issues from their own experience on large class case teaching, and provided insights, strategies, and tactics that they used to help overcome these issues.

4.2 RESEARCH PARTICIPANTS

Participants for this study included instructors and recent graduates from the Ted Rogers School of Management (TRSM) at Ryerson University in Toronto, Canada. The Ted Rogers School of Management is one of Canada's largest undergraduate management schools, and its urban location attracts a diverse group of domestic and international students. In this way, the school presents a good representation of the "new norms" for university education in North America, and so provides an ideal testing ground for case teaching in large size undergraduate classes.

4.2.1 Recent Graduate Survey. A survey was completed by 31 recent graduates of the undergraduate program at the Ted Rogers School of Management. The participants were recruited by the TRSM Dean's Office, and were limited to those who had graduated in the most recent school year (2011-2012), and who indicated that they had experienced case teaching in their studies at TRSM. The recent graduates were chosen over current students because of the timing of the study (during the summer break between the 2012 and 2013 school years), and to eliminate bias that may have occurred from current students concerned with expressing negative opinions toward the school, and its potential effect on their upcoming classes.

4.2.2 Instructor Survey. A survey was completed by 58 instructors from the five management schools at TRSM: the School of Business Management, the School of Retail Management, the School of Information Technology Management, the School of Hospitality and Tourism Management, and the School of Health Services Management. The participants were recruited through the TRSM Learning and Teaching Committee, and included both tenured faculty members and sessional instructors. The study recruited a mix of both case method supporters

and instructors who did not use cases in their teaching, so that the challenges as well as the perceived challenges of large class case teaching could be properly understood.

4.2.3 Instructor Semi-structured Interviews. Interviews were conducted with 16 case teaching instructors at the Ted Rogers School of Management. The participants were recruited through the instructor survey described above (the final question in the survey asked respondents if they would be interested in participating in a semi-structured interview). The instructors represented a wide range of TRSM Schools and departments, with a diverse level of industry and overall teaching experience, and experience teaching with cases.

4.3 DATA COLLECTION AND ANALYSIS

The quantitative surveys for instructors and recent graduates were administered through the online research tool, Survey Monkey (www.surveymonkey.com). Survey Monkey is confidential and easy-to-use, and was chosen because of its familiarity to both students and faculty at TRSM. Composite data from the surveys was exported to and analyzed with Microsoft Excel.

The semi-structured interviews were approximately one hour in length, and were conducted individually with each instructor. Following the best practice identified by Wengraf (2001), an interview guide was prepared in advance, with questions that were sufficiently open so that the subsequent questions could not be planned, and so were dependent on the answers given by each individual instructor. The data from the interviews were recorded in detailed notes, and these notes were used to help form some of the major conclusions of this study.

V.

RESEARCH FINDINGS

The findings from each of the three research instruments will be reported below, beginning with the survey of the recent TRSM graduates, followed by the instructor survey, and finally the semi-structured interviews with case-teaching instructors.

5.1 RECENT GRADUATE SURVEY

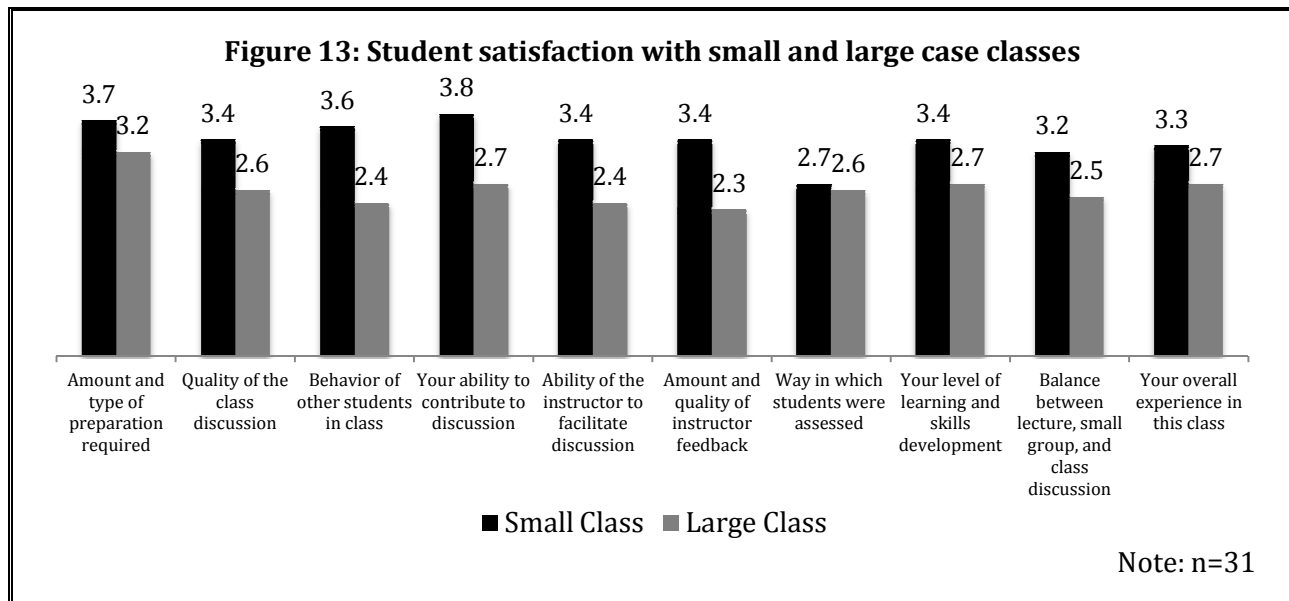
From the literature review, large classes for case teaching were initially determined to be those that contained greater than either 60 or 80 students. Therefore, to evaluate student perceptions of small and large case classes at TRSM, recent graduates of the undergraduate program were asked to assess their experience in case classes that contained fewer than 60 students, and in classes that contained greater than 80 students. The results of these questions have been organized into three main findings, which will be discussed in more detail below:

1. Students are more satisfied with case teaching in smaller classes
2. Students make a greater individual contribution in smaller case classes
3. Students have a high level of concern with group work in case classes

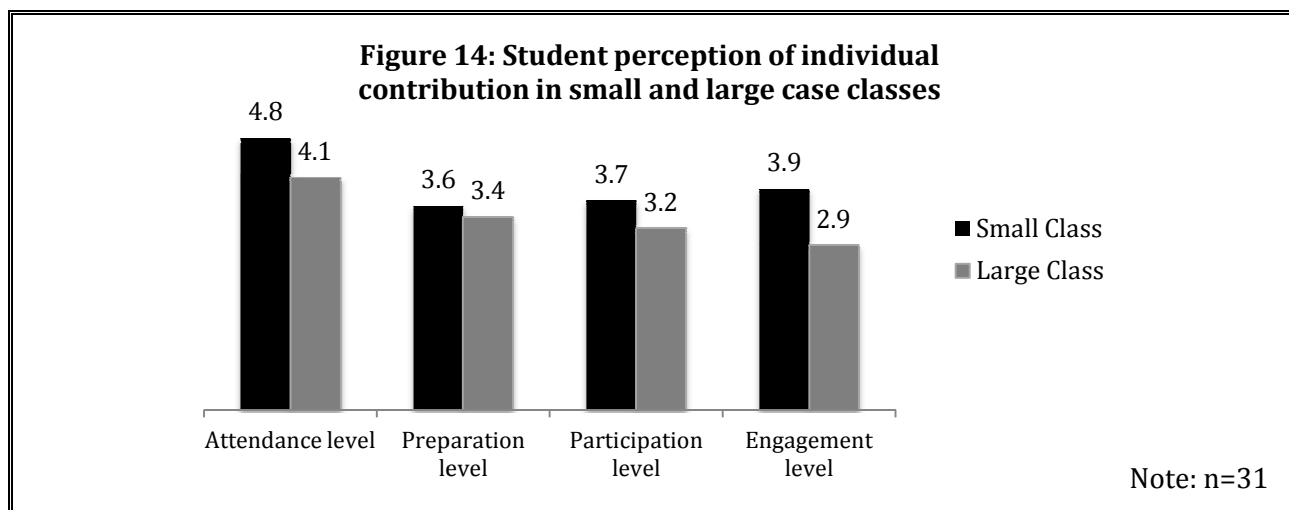
5.1.1 Students' satisfaction level in small and large case classes. Students rated their satisfaction with several class characteristics on a five-point Likert scale from "5 = very satisfied" to "1 = very dissatisfied". The resulting satisfaction scores were higher for the small classes on all measures. The students perceived especially large disparities between smaller and larger classes in the following class characteristics (see Figure 13 below):

- the behaviour of other students in the class
- the students' ability to contribute to the class discussion
- the instructor's ability to facilitate the discussion
- the amount and quality of instructor feedback

The only variable that measured higher than the mid-point (i.e. neither satisfied nor dissatisfied) for large classes was students' satisfaction with the amount and type of preparation required for class. For this variable, and also for students' satisfaction with the way in which they were assessed, students did not score the smaller classes significantly better than larger classes.



5.1.2 Students' contribution level in small and large case classes. Students rated their level of attendance, preparation, participation, and engagement on a five-point Likert scale from "5 = very high" to "1 = very low". Students perceived their own contribution to be lower in larger case classes than in smaller classes across each of the four variables. In particular, the level of engagement in large case classes achieved the lowest overall score (2.9 of 5), and had the largest gap between the large and small class results (see Figure 14 below). Students also rated their attendance level significantly lower in large classes, but similar to the previous question, students did not report a significantly lower level of personal preparation in large classes compared to small classes.



5.1.3 Students' perception of group case assignments. Only half of the students who experienced group assignments with case teaching had a positive or somewhat positive experience, and the students reported several group challenges. On average, students felt that when the group work was assigned, their instructors provided only a moderate amount of direction on common group work challenges, and on practices for resolving group related issues.

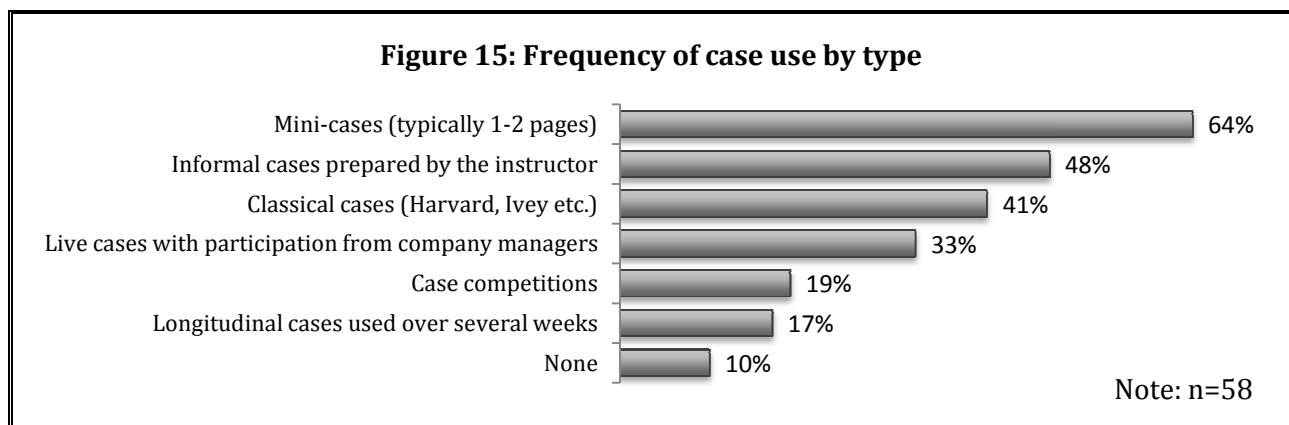
During the course of group work, nearly all of the students (95%) felt that one or more group members did not contribute as much to the assignment (i.e. "free riders"), while 85% of students sub-divided group tasks and worked on them independently. Interestingly, over half of the students (55%) felt that their individual grade was negatively impacted by the performance of their group, showcasing a concern that many students have with group assessment.

5.2 INSTRUCTOR SURVEY

Nearly all of the TRSM instructor survey respondents (90%) teach cases at least occasionally in their classes, and many instructors use multiple case types. The survey responses from these instructors have been organized into five main findings to be discussed below:

1. Mini-cases are the most used case type
2. The choice of case type is influenced by the level of the course
3. Real-world applicability and student engagement are the most important case benefits
4. Most instructors do not believe that it is appropriate to teach cases in large classes
5. Large classes present several challenges especially for class wide discussion

5.2.1 Types of cases used by each instructor. From Figure 15, the most common case type (used by 64% of respondents) is the mini-case, followed by informal cases (48%) gathered from news articles or other materials. Classical HCM cases are used by 41% of respondents.



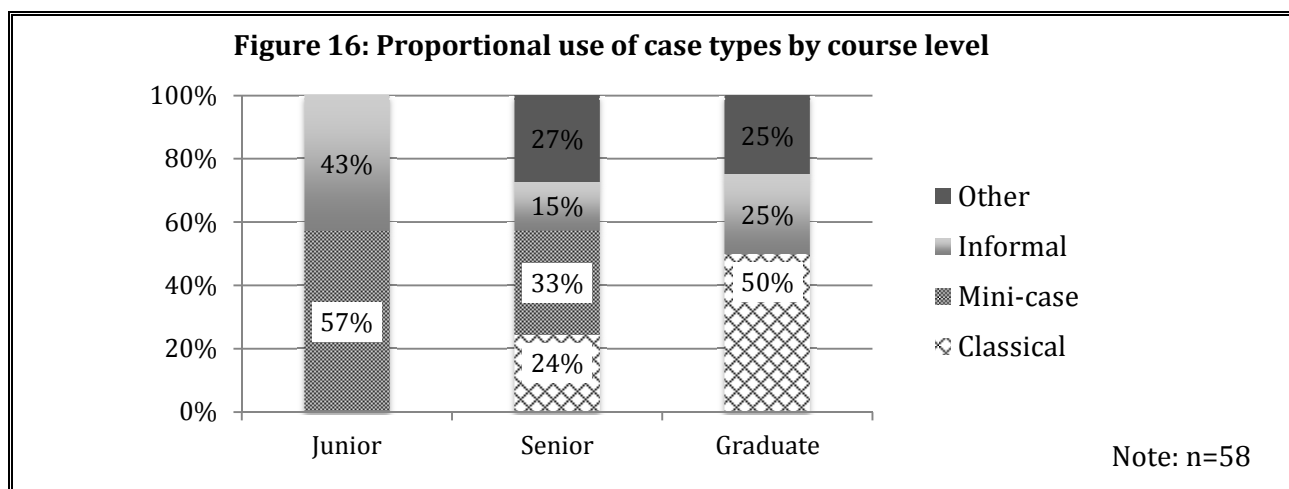
5.2.2 Types of cases used at each course level. The choice of case type appears to be influenced by the course level that the instructor is teaching. From Figure 16, the survey results were filtered into 3 groups according to the level of courses taught by each individual instructor:

- i. Junior level undergraduate only (i.e. first year and second year)
- ii. Senior level undergraduate only (i.e. third year and fourth year)
- iii. Graduate level only

From this analysis, there are some key differences in the preferred case type for the instructors at each course level:

- **Graduate level instructors prefer classical HCM cases.** Instructors at the graduate level are more likely than undergraduate instructors to teach with classical HCM cases, which supports the traditional use of these cases as designed by the Harvard Business School.
- **Junior level undergraduate instructors teach mainly with mini-cases.** These instructors also use a significant amount of “informal” cases gathered from news articles or their own materials
- **Senior level undergraduate instructors use a broad mixture of case types.**

Caution should be used when interpreting this analysis however, since the sample size in each of the three groups is quite small. This is because the three groups are mutually exclusive, and all instructors who taught across more than one of the three course levels were removed from the analysis to ensure that the effect of course level could be accurately assessed.



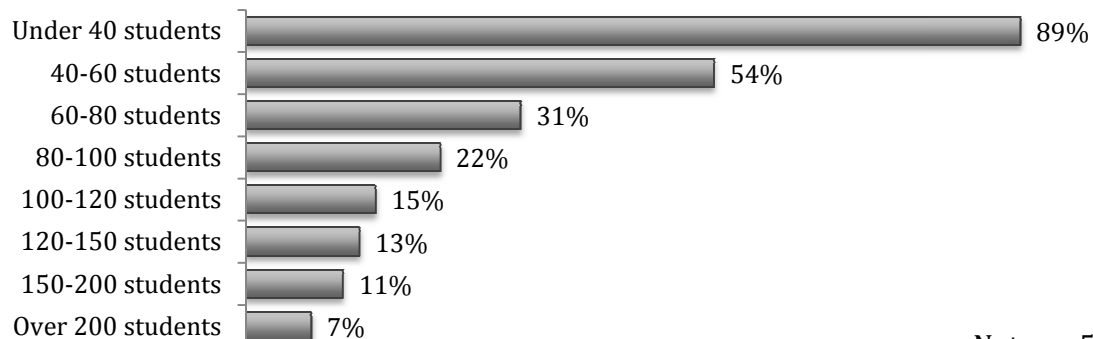
5.2.3 Instructors' perception on the major benefits of cases. Instructors value cases most for their applicability to real-world business situations and their ability to inspire a higher level of student engagement. Most of the instructors agreed that cases provide the following benefits:

- Give students exposure to the types of real-world management issues that they'll face in their career" (88%)
- Increase student engagement and interest in the subject matter (84%)
- Foster an active approach to learning by presenting issues and theories in a practical context (82%)

In contrast to the benefits listed above, the instructors did not rate cases as highly for teaching softer skills such as group collaboration, presentations skills, and effective peer feedback.

5.2.4 Instructors' perception on large case classes. Most instructors believe that the case method is only appropriate for use in smaller classes. From Figure 17 below, 89% of instructors believe that case teaching is appropriate in classes with fewer than 40 students, while slightly over half of instructors consider a class of 40-60 students to be appropriate for case use. Instructors were also asked to identify the point at which a class becomes "large" for case teaching in terms of the number of students. The most common responses fell between 40 and 60 students, with over half of instructors (53%) selecting a number in this range. When the results of these two questions are compared, the number of students identified in each individual instructor's "large" class fell in the range of class size that the instructor considered to be appropriate for case teaching in only 31% of the cases. Therefore, only a third of instructors believe that case teaching is appropriate in what they would consider to be a "large" class.

Figure 17: Instructors' opinion on appropriate class sizes for case teaching



Note: n=58

5.2.5 Instructors' perception of the challenges with teaching cases in large classes. The major challenges preventing instructors from teaching cases in large classes are keeping students prepared and engaged in the material, and generating effective class discussion. Preparation and engagement was cited most often (82% of instructors), while the next three most common challenges related to class discussion:

- Students' are reluctant to participate in discussion (73%)
- There is not enough time for each student to participate in discussion (69%)
- Physical classroom characteristics (acoustics, seating etc.) make class discussion difficult (67%)

Roughly half of the instructors also cited assessment challenges in large classes, due to the time required to assess the large number of students, or due to the difficulty of assessing individual student performance within groups, which may support the students' concerns with the fairness of group grading.

5.3 INSTRUCTOR SEMI-STRUCTURED INTERVIEWS

The instructors that participated in the semi-structured interviews spoke at length about their views on case teaching at the undergraduate and graduate levels, and their experiences teaching cases in large size classes. For the purposes of this study, the data from the interviews have been structured into several main findings, which comprise areas of agreement or general consensus between several instructors on items pertaining to the following:

- General perceptions on case teaching and the benefits of cases
- Case teaching at the undergraduate level
- Case teaching in large size classes

The instructors were also asked to describe any "best" practices that they use to address different challenges they have faced when teaching cases to large classes. These individual practices have also been documented within the findings of this study, and have been organized into the areas of preparation, engagement, discussion, assessment, and presentations.

5.3.1 Instructors' general perceptions on case teaching. The common opinions of the instructors on the general use and benefits of the case method can be summarized in the following four points:

- **The definition of a “case” is not completely clear.** Many instructors refer first to classical HCM cases when speaking about case teaching, but are uncertain whether the other materials they use with their classes may also be considered as cases. Often instructors teach with a variety of materials and methods including mini-cases or short scenarios, informal cases gathered from news articles, role-plays, and company analyses that are researched and prepared by the students.
- **Instructors favour a balance of lecture and case method in their teaching.** Lectures are valued for their ability to explain key concepts and theories, while cases can then be used to show the applicability of the concepts and theories to the “real-world”. Many instructors believe that lecture teaching on its own can be “dry”, and that students have difficulty relating some of the more complicated theories to how they would be used in a real management situation. Cases provide the link between theory and application, and help students practice using the concepts to aid in decision-making.
- **The benefit of “real-world applicability” can mean many different things.** Instructors confirmed that real-world applicability is the most important case benefit, but the interpretation of this benefit was often quite different. On one end, cases can be used simply as an illustration of a concept in an actual company situation, while on the other end, some instructors value longer and more ambiguous cases because they give exposure to the complexity of the issues faced by actual organizations, including the impacts of decisions on financial metrics and on multiple different stakeholders.
- **For some instructors, the ability to practice softer skills is the major benefit of case teaching.** While softer skills such as communication skills tend to be valued less on average, some instructors believe that class discussion and case presentations are the key distinguishing characteristics of the case method. Not only do students learn to present clear and compelling arguments, but they also must defend their positions in Q&A sessions following presentations, and with other students during class discussion. These instructors believe that the skills practiced in these activities are critically important for students to learn before they graduate into industry.

5.3.2 Instructors' perception on case teaching at the undergraduate level. Instructors acknowledged that various case types can have different benefits and therefore can be used to serve different purposes. However, on the whole, instructors of graduate level students spoke primarily about the use of classical HCM cases. On the other hand, instructors of undergraduate students described several case activities that involved the use of mini-cases, either formal mini-cases acquired through case publishers, or short informal cases prepared by the instructors specifically for certain courses. The instructors prefer mini-cases for their undergraduate courses for the following reasons:

- **The preparation time for mini-cases is much shorter than classical HCM cases.** Instructors believe that students allocate a pre-determined amount of time to prepare each case (which depends on their course load and other assignments), and won't change this preparation time based on the length of an individual case. Therefore, with longer cases, students spend more time reading the case at the expense of activities that instructors consider to be more valuable such as thinking, analyzing, and problem solving.
- **Mini-cases are short enough that they can be prepared in class.** Many instructors are concerned that students will arrive for class unprepared for the case discussion, and therefore allow the students some time to read the mini-cases in class. The clear focus of most mini-cases often also leads to quicker discussions that allow the instructor to leave more time for lecturing on key theories.
- **Classical HCM cases are too difficult for junior level undergraduates.** Instructors believe that classical cases would be too difficult for junior level students because they have difficulty integrating theories into analysis, and uncovering the root causes of issues. This often leads to decisions that not supportable with data, and superficial class discussions that only scratch the surface of the case. The focused nature of the mini-case on the other hand, helps junior level undergraduates to apply the theories in a simple context where they can see how the theory leads to better decision-making.

While many instructors also use mini-cases with senior level undergraduates, most instructors believe that these students have the capacity to solve the same types of classical cases that would be taught in a graduate program. The only difference is that the expectations are set lower for undergraduates in terms of the number of cases per course, the breadth and depth of analysis, the quality of discussion commentary, and required additional outside research.

5.3.3 Instructors' perception on case teaching in large classes. Most instructors attempt to teach cases in larger classes but suggest that it takes significantly more work to prepare the content and logistics of the class discussion and to assess each individual student for their contribution. When defining a large class, most instructors did not immediately speak to the number of students in the class, but rather suggested a slightly different definition:

- **A class becomes large for case teaching when the instructor is no longer able to learn each student's name.** This usually occurs somewhere between 40 and 60 students depending on the instructor, though some instructors seem to have the capacity to learn almost 100 student names. Instructors mentioned the importance of learning names in a discussion-based method such as case teaching, because it allows them to know each student individually, and to challenge students for their thoughts on the case. Once a class becomes too large to know each student individually, the instructor cannot keep an eye on each student, and begins to treat the class as a collective rather than a group of individuals.

While most instructors have attempted to teach cases in large class, they acknowledge that they face many challenges that often cause them to make adjustments to their case teaching. The major large class concerns and challenges described by the instructors are outlined below, many of which involve difficulties with class discussion:

- **Students don't prepare cases in advance of class because they feel that they can hide.** Instructors believe that large classes encourage "anonymity and passivity" because students know that they won't be required to speak out in class. Unless students think that the instructor may call on them, they often won't spend the time required to read the case, especially for longer cases. The result of a lack of preparation is that the class discussion will fail because the majority of students are not able to provide a meaningful contribution using the facts given in the case.
- **Large classrooms create physical constraints to class discussion.** In large lecture-style classrooms, instructors express concern that students cannot see or hear who is speaking during class discussion, and their seats do not allow them to easily turn to face the speaker. The constraints of the large classroom also apply to group work, because it is difficult to assemble students into groups in class in a way that allows them to easily converse with their group members without also distracting the other groups.

- **5 to 10 students dominate the discussion while the rest sit disengaged from the conversation.** Instructors often use class discussion as a means of student engagement, since most believe that they can't keep the attention of students in a large class simply by lecturing. However, if the instructor is interacting only with a few students during the discussion, and if the physical classroom makes it difficult to hear, the majority of students will often tune out until the instructor continues with her lesson.
- **It is too difficult to assign participation marks for class discussion.** While many instructors believe that assigning participation marks for class discussion is an important part of the classical HCM case method, most instructors do not assess discussion in their large classes. This is because in large classes there is not enough time for all students to speak, it is difficult to keep track of participation when the instructor does not know each student's name, and the instructor may find himself spending too much time assessing participation rather than guiding and facilitating the discussion.
- **The diversity of modern classes creates additional difficulty for class discussion.** As classes continue to become larger, they also continue to become more diverse. This presents an additional challenge for class discussion, due to cultural and language issues of foreign-born students. Instructors believe that many students with language difficulties find it uncomfortable to speak in class, while other foreign-born students, particularly from Asian countries, are unaccustomed to a class environment where they are expected to challenge the views of their classmates and the professor in a public setting. Instructors may need to work harder to get these students to participate in class discussion, and must decide whether and how to lower their assessment expectations for the oral and written case assignments of second-language English speakers.
- **There is not enough time for all students to participate.** Large classes create time constraints due to the large numbers of students. In addition to the fact that there is not enough time for all students to speak in class discussion, many instructors eliminate presentations from their large class case teaching because they don't believe that there is enough time for all students to properly present and receive feedback on their arguments.
- **Assessment is too time consuming.** It takes a significant amount of time to grade each individual assignment in large classes. Instructors acknowledge that teaching assistant support can help, but often choose to evaluate the assignments on their own since the assessment requires an understanding of both the application of theory to the case, and a judgment on the quality of the solution and its support.

5.3.4 Instructors' "best" practices for case teaching in large classes. Instructors have developed several useful practices that they use in their large classes to overcome the challenges identified above. These practices can be considered into five main categories: student preparation prior to class; student engagement in class; student participation in class discussion (both with and without participation grades); student assessment; and group presentations.

1) Practices to encourage student case preparation

- **Do everything in class.** Rather than assigning cases for pre-class analysis, the cases can be read and analyzed by the students in class. Mini-cases can be handed out in class, or students can be directed to find the case in their textbook. The instructor gives the students five to ten minutes to read the case in class, and may also provide some time for the students to discuss the case with their neighbours. All students are then able to achieve a sufficient level of preparation so that they can engage in the discussion.
- **Create short pre-work assignments.** Instructors can ask students to submit a one-page individual case analysis prior to class through Blackboard, or to be handed in at the beginning of class prior to the class discussion. Instructors should provide the students with specific questions to consider during the analysis, and make the analysis short enough that it can be graded relatively quickly. The marks assigned to the analysis will encourage the students to complete the preparation work on the assignment.
- **Assess the pre-work with a multiple-choice test.** When the students arrive for class, they can be given a short multiple-choice test based on the facts provided in the case. The grades for the tests can be considered part of the participation marks for the course, and the tests also provide a measure on the attendance level for each class.

2) Practices to encourage student engagement

- **Make the class feel smaller.** Many instructors believe that the best way to engage students in a large class is to walk around the room and amongst the students. This removes the physical distance between the instructor and the students, and allows the instructor to see if the students are staying on task. To ensure that students can hear and follow along with one another's comments, one or more microphones can be passed by the instructor to students who raise their hand to identify that they would like to make a comment.

- **Test the students on the class discussion.** Instructors can encourage students to remain engaged throughout the course of the discussion by requiring individuals to submit one-page assignments at the end of class, which are based on the content that was discussed during the class. Alternatively, the instructor can let students know that they will be tested the following week on the content of the current class, and then take notes on the whiteboard during the class discussion, which capture the major arguments that will be tested. It is assumed that all students who were engaged during the class will be able to achieve top marks on the test, but the value is not in the assessment but rather that it encourages students to actively listen and follow along with the discussion.
- **Teach interesting cases.** Students will be more engaged in the case if they have an interest in the particular company or industry (e.g. Google or Apple) that is described by the case. Recent cases tend to be better, and Canadian content also helps students to feel closer to the participants in the case.

3A) Practices to encourage class discussion in the absence of participation marks

Many instructors believe that participation marks are not necessary for encouraging students to speak out in class discussion, and provide some useful suggestions:

- **Create a participatory atmosphere.** Instructors should let students know in the first class that questions and comments are encouraged and expected. Ground rules should be set to create an inclusive atmosphere where students are able to challenge each other respectfully.
- **Assign bonus marks for discussion.** Rather than assigning participation marks, bonus marks could be given to any student that gave particularly insightful or valuable comments during the discussion.
- **Use “cold” calls and “warm” calls.** Instructors can create a call list of students to answer questions in each class. Students can also be given name cards so that the instructor could call certain students by name to add a comment to the discussion. For students that may not perform well with a “cold” call, particularly if they have language issues, the instructor can use a “warm” call by telling the student in advance that they will be called upon, so that the student has time to formulate their response.
- **Use small group discussion to start the class discussion.** Classes can be divided into groups of 3 to 6 students to discuss the case. The instructor may then choose a

representative from one of the groups to start the discussion by summarizing their group decisions to the class. To discourage free riders during the group discussions, the instructor should let the class know that he will decide which of the group members will speak on behalf of each group. The logistical problems of getting students arranged within their groups could be improved by having the instructor let the students know before the break in class that when they return from the break they should sit with their group members. That way, when the class reconvenes, the students are already in their groups and are ready to discuss the case.

- **Appeal to students' competitive spirit.** Each of the small groups of 3 to 6 students develops a solution to the case, and defends it in the class discussion. The instructor can choose a winning group for each class, and may decide to give bonus marks to that group. A variation on this concept is to divide the students into two sides, with each half of the class defending opposite sides of an argument or company strategy. Following the debate, the instructor may or may not choose a winning side, and could ask each student to write a short summary of which argument that they found most compelling.

3B) Practices to facilitate the assignment of participation grades

For instructors that feel strongly that participation grades are an important and necessary part of case method teaching, there are several suggestions to facilitate the process in large classes:

- **Assign participation marks only in the last few classes.** To make the assessment process easier, students could be given assigned seats (ordered alphabetically) with name cards. While it may be difficult to learn every student's name in the large class, the instructor could assign participation marks only in the last few classes, once they have had the chance to recognize as many students as possible.
- **Establish clear rules for the discussion.** To give as many students as possible a chance to speak each class, the instructor should establish rules such as the length of time that a student has to make their argument, or to allow students who have not yet spoken to give their comment before a student is allowed to provide a second contribution to the discussion.
- **Assign marks for all students who are prepared to speak.** Since there will likely not be enough time for every student to speak in every class, the instructor could assign participation marks for all students that had their hand raised and were ready to speak if called upon.

- **Be generous with participation marks.** The goal of participation marks is simply to encourage participation. By giving generous marks, the instructor can reduce the time needed to ensure that they get the participation marks fair and correct for every student. In this way, the instructor can spend less time thinking about assessment, and more time helping to guide the discussion and challenge the arguments of the students.

4) Practices for reducing the assessment burden in large classes

- **Evaluate group submissions rather than individual reports.** Peer evaluations within the groups can add an additional measure to the assessment, and can help reduce the risk of free riders. Instructors can use a “Group Contract” to establish the rules for how the work will be divided between group members, and how group conflicts will be managed.
- **Shorten the length of assignments.** Rather than asking students to prepare a full case analysis, instructors could ask for only the final recommendations with support for why they were chosen. Students will need to do a full analysis of the case issues to arrive at a reasonable conclusion, but the instructor need not spend time grading this part of the analysis. Instructors could also assign different parts of the case to different groups. For example, rather than having each group do a full stakeholder analysis, each group could be assigned a different stakeholder, and be required to analyze the case from this particular stakeholder’s point of view.
- **Replace written reports with multiple-choice tests.** The instructor can develop multiple-choice tests that assess whether the students understand the main issues and most logical solutions for each case.
- **Leverage support and resources to their full extent.** When possible, instructors can use teaching assistants to grade written reports. Instructors could also require students to submit assignments on Blackboard, which gives a permanent record of submissions. The assignments can then be reviewed online, and marks can be linked directly to GradeBook.

5) Practices to save time on group presentations in large classes

- **Reduce the length of presentations to five or ten minutes.** These types of short presentations teach a useful business skill, since industry requires managers to make relatively quick, clear, and concise arguments in meetings.
- **Have multiple group presentations in a single class.** Two groups can present the same case, which is a valuable way to show different points of view and to encourage debate with the rest of the class. An added benefit is that both groups will likely be extremely thorough in their analysis of the case since they know that they can be challenged by the other group, and so that they are not upstaged.
- **Use a random draw to select groups for presentations.** The instructor can ask two or three groups to analyze the same case and to come to class prepared to present their arguments. At the start of the class, the instructor can pull the name of one of the groups at random, and this group will be the only group to present that particular case. The other groups could be given a few minutes after the presentation to discuss their major points of agreement or disagreement with the arguments of the first group, or they could be asked to lead the question and answer session for the group.
- **Use peer feedback to evaluate the presentations.** To reduce the time required for feedback to the presenting group, the instructor can ask the other class members to evaluate the presenters based on a set of predetermined criteria. The class can be given participation marks for their written evaluations, and the presenting group will get valuable feedback on their performance.

4.

CONCLUSIONS AND RECOMMENDATIONS

The following presents the conclusions and recommendations of this study based on the findings from the literature review and the primary research. Firstly, the study will provide a definition of “large” and “very large” classes for case teaching based on the number of students in each class. Next, the study will document the major challenges faced by instructors when teaching cases to large undergraduate classes. Finally, the study will argue cases can be taught effectively in both “large” and “very large” undergraduate classes and will provide recommendations to overcome the challenges of each.

6.1 DEFINITION OF A “LARGE” AND “VERY LARGE” CLASS FOR CASE TEACHING

From the literature review, a large class for case teaching was determined to contain at least 60 or 80 students, while the maximum class size for the HCM classical case method is 100 students according to Harvard, Ivey and other business schools. However, TRSM instructors have a slightly different opinion, with a majority of instructors suggesting that classes with greater than 40 to greater than 60 students should be considered large for case teaching.

Based on these findings, the study recommends the following definitions:

- **A “large” class for case teaching contains approximately 60 to 100 students.**
When a class reaches approximately 60 students, most instructors will not be able to learn and remember each student’s name, making it difficult to call on specific students to answer questions during the class. With 60 or more students, it is also very likely that there will not be enough time in class for each and every student to speak, which further complicates the process of assigning participation marks for class discussion.
- **A “very large” class for case teaching contains over 100 students.** Classes with more than 100 students are likely to require a lecture-style classroom since the traditional Harvard style case classrooms are typically built to support fewer numbers of students. The move to a lecture-style classroom creates additional communication barriers such as acoustics and stationary seating, which make class discussions difficult. There is a higher likelihood that students will be able to “hide” in these classrooms, and they may become disengaged if they cannot hear the comments made by the instructor and their classmates in the discussion.

6.2 THE CHALLENGES OF LARGE CLASS UNDERGRADUATE CASE TEACHING

The majority of TRSM instructors (approximately two-thirds) do not believe that case teaching is appropriate in large classes, due to several challenges brought about by the high number of students. From the semi-structured interviews with case-teaching instructors, the challenges fall into five main categories: student preparation; student engagement; student participation in class discussion; student assessment; and group presentations.

6.2.1 *The challenge of student preparation.* Instructors express concern that students in large classes do not prepare cases in advance of class. However, preparation appears to be a bigger concern to the TRSM instructors than was identified by the literature review or by the recent TRSM graduates. Instructors cited preparation as the number one challenge for large case classes (along with engagement), and many instructors spoke about the need to motivate students to prepare for class so that they could effectively contribute to the case discussion.

In contrast, the results of the TRSM recent graduate survey suggest that students do not perceive a significant difference in the level of preparation required for large case classes, or their own personal level of preparation in large classes relative to smaller case classes. This result disagrees with the findings from the Booth et al. (2000) research, which found that students were reluctant to prepare and contribute in large classes because they were able to remain anonymous.

The lack of concern from students to case preparation may be due to the fact that many instructors have already switched to mini-cases that can be prepared by the students in the classroom. TRSM instructors report that mini-cases are the most used case type at TRSM for undergraduates, and particularly for junior-level (first and second year) courses, which typically contain the highest numbers of students. The widespread use of mini-cases is an interesting new finding, since the research from the literature review focuses almost exclusively on longer Harvard style cases and their use in graduate level programs.

6.2.2 *The challenge of student engagement.* The issue of student engagement is more complex. TRSM instructors cite engagement and motivation as a key benefit of cases, but they also express a concern that this engagement is lost in larger classes. This concern supports the Scheck et al. (1994) finding that student motivation was less in large classes, which he attributed to a change in teacher behaviour resulting from an inability to provide individual

attention and direction to each student in the large class. While the TRSM instructors did not mention the lack of individual attention directly, they did speak about the difficulty with “keeping an eye” on each student in a large class.

The recent graduates of TRSM seem to confirm the concern that engagement suffers in large classes, reporting a significantly lower level of engagement in large case classes compared to small case classes. This is intuitive, due both to the lack of individual attention, and to the communication issues (acoustics etc.) that can occur in large classes.

However, rather than comparing engagement in small case classes to large case classes, a better comparison may be of large case classes to large lecture classes. As TRSM instructors state, lectures can be “dry” and students do not have to actively participate while the instructor is lecturing. In fact, as the literature review has shown, active learning techniques such as the case method are preferred by students over lecturing (Bonwell & Eison, 1991), and students feel the most engaged when they are interacting and discussing problems with their peers (Nicol & Boyle, 2003). This type of peer discussion is possible in “large” and “very large” case classes, though not to the same degree as in smaller case classes, which further helps to explain the lower level of engagement in the larger classes.

6.2.3 The challenge of student participation in class discussion. The issue of student participation is confirmed by both the literature review and by the TRSM instructors. From the literature review, the lack of participation may be due both to students’ unwillingness to participate (and feeling that discussion may not be appropriate in large classes) and inability to participate (because of physical communication barriers or time constraints). It is important to note that these two participation issues (unwillingness and inability) are very different and would therefore require significantly different solutions.

The recent TRSM graduates rate their satisfaction with their ability to contribute to class discussion as significantly lower in large classes than in small classes. This suggests that many students may have wanted to contribute more comments to the discussion but were prevented from doing so. Instructors may therefore wish to consider how to facilitate class discussion in a way that allows more students the chance to express their opinions.

Many of the TRSM instructors have eliminated the practice of assigning participation marks in large case classes, which is partly a function of the difficulty in assessment, but may also suggest that they don't feel the need to use participation marks to encourage discussion. In fact, many instructors provided best practices to promote discussion in the absence of participation grades. This contrasts with the literature review, since the majority of published research has focused on the classical HCM method that promotes the need for assessing participation.

The other new participation concern brought forth by the TRSM instructors is the increasing number of foreign-born students in their undergraduate classes. For these students, there may be a very real reluctance to participate, and this must be considered both in large and in small case classes.

6.2.4 *The challenge of student assessment.*

The issue of student assessment was raised by many TRSM instructors, particularly for the time required to grade each student, and the need to place students into groups to reduce the assessment burden. However, the group assessment creates an additional challenge for many instructors, and causes scepticism and frustration for many students. In fact, over half of the TRSM recent graduates (55%) felt that the group negatively impacted their own individual grade. The graduates also expressed concerns with "free riders" in groups, which supports the work of McKinney and Graham-Buxton (1993).

6.2.5 *The challenge of group presentations.*

While the majority of instructors do not consider presentation skills and communication skills to be the top benefit of case teaching (which supports the findings from the literature review), a sub-set of instructors are very concerned that they are not able to find the time for presentations in large classes. The best practices from other instructors may be able to help for "large" case classes, though it is unlikely that all students will be able to make presentations in "very large" classes.

6.2.6 *Conclusions from the findings on large class challenges.* From the comparison of the findings in the literature review and the primary research, the study offers the following conclusions on the challenges of teaching cases in large classes:

- **The concern with student preparation is overstated.** Students do not express a significant difference in their preparation level for larger case classes. Therefore,

encouraging preparation is something that must be considered in both small and large case classes, and mini-cases provide one good solution since they can be prepared quickly on the day of the class.

- **Lower student engagement should not be a reason to eliminate cases from large classes.** The study acknowledges that students in large case classes are likely less engaged on average than students in small case classes. However, if the alternative in large classes is to use more lectures in place of cases, then the instructor would unwittingly contribute to even lower student engagement since most students have a difficult time keeping engaged in long lecture classes.
- **Most students want to contribute to class discussion but are often prevented from doing so.** Aside from a select group of students who are reluctant to speak in class due to language or other issues, most students want to participate in case discussion either with the full class or in groups. However, the physical characteristics of large classes, and the high number of students can make these discussions very difficult.
- **Assessment in large classes is difficult and time-consuming.** Instructors must allocate more time for assessment in large classes, and they must recognize and accept that group assessment is an imperfect science.
- **Group presentations may have to be eliminated due to time constraints.**

6.3 RECOMMENDATIONS FOR LARGE CLASS UNDERGRADUATE CASE TEACHING

The study acknowledges that case teaching is likely more effective in smaller classes due to the large class challenges described above. However, despite these challenges, the case method can be taught effectively in “large” and “very large” classes if the instructor is willing to put in the extra effort for preparation and assessment. The data suggests that large classes will continue to become more common at post-secondary institutions in North America, especially at the undergraduate level. Therefore, instructors of these classes must make a choice between whether to attempt case teaching in their large classes or whether to use a more traditional lecture based approach. Since the case method has many benefits and is generally preferred by students, instructors should leverage the practices documented in this study to help them teach cases effectively in their large classes.

From the literature review and primary research, the two most important benefits of the case method are:

1. **The applicability to real-world management situations.** TRSM instructors and students agree that this is the most important benefit of cases, and these results are consistent with the results from the Ballantine and McCourt Larres (2004) and the Weil et al. (2001) studies.
2. **The ability to increase engagement and motivation in students.**

Both of these benefits can be achieved in “large” and “very large” classrooms, because they don’t necessarily rely on full class discussion or presentations, which are often difficult to administer in larger classes. To help achieve the top benefit of real-world applicability in large undergraduate classes, the study recommends that instructors use mini-cases as the primary case type, especially for junior-level students. Mini-cases are recommended for the following reasons:

- They help illustrate and explain key theories, and provide a reference point that may help students commit the concepts to their long-term memory.
- They alleviate the most common concern of TRSM instructors with large case classes, in that they are able to be prepared quickly on the day of the class.
- They can serve as a good introduction to case learning because they allow students to practice analysis skills in a relatively controlled environment, helping to build confidence in students’ ability for critical thinking and decision-making.
- They provide an additional practical advantage in that they are usually much less expensive than full Harvard style cases, and are often included free of charge in course textbooks.

For senior level undergraduates, this study suggests a combination of mini-cases and longer Harvard style cases. To help with the introduction of case analysis in more complex cases, instructors should use a “planned fading” approach (Brown et al., 1987) that starts with a relatively straightforward analysis process, and lets the instructor clearly demonstrate each step. Again, this helps the students to gain confidence, and provides a good foundation for learning.

To help achieve the benefit of student engagement in large classes, instructors should follow the advice of both active learning practioners and case-teaching instructors: the attitude and energy of the instructor will rub off on the students. Case method instructors should set the tone early in the course that participation in class discussion is a valuable part of case learning, and should actively attempt to faciliate this discussion by asking questions or calling on specific students. When questions are asked and comments are made, instructors should attempt to remove the physical distance by moving toward the students, and walking down the aisles.

Finally, instructors should try to find cases that the students will want to engage with. Instructors should consider writing “informal” mini-cases because they can gather the information from public sources, and the information found in current news articles will likely be more interesting and motivating for students.

6.3.1 Practices for effective case method teaching in “large” classes. The “best” practices documented in the findings of this study are all useful in their own right, and each one should be considered by instructors depending on the situation in their particular class and the challenges that they face. However, the study recommends the following practices for case classes that contain approximately 60 to 100 students:

- **Instructors should attempt to faciliate a class-wide discussion in a way that is similar to smaller classes.** However, rather than using participation marks which may be too difficult to track in a large class, instructors should consider giving bonus marks for individual participation or for classwide participation based on whether the students represented themselves well in the class discussion and showed that they had performed a sufficient level of preparation for the class discussion. To encourage students with language issues, the instructor can provide a “warm” call that gives students time to prepare their thoughts before entering the discussion.
- **Instructors wishing to use participation marks should consider the MICA method.** Research has shown that the MICA method can help to increase participation, and it allows the instructor to focus strictly on the evaluation rather than trying to faciliate the conversation and evaluate the comments at the same time.
- **Group work is an important activity and instructors must thoroughly explain its benefits.** Group work allows the students to learn from another, and to develop the collaboration skills that they’ll need in industry (Mauffette-Leenders, Erskine, & Leenders,

2007). Group work is especially important in large classes because group assignments limit the amount of assessment required by the instructor. Instructors should provide a very thorough explanation on why the group work is being assigned, and the potential challenges that the students may face in their groups. Instructors should also clearly identify how group conflicts will be managed, including free riders. To discourage free-riders, and to help with individual evaluation within groups, the instructor can use peer evaluation forms for group members.

- **Group presentations should be short enough to allow for several on the same day.**

For instructors that value the skills gained from group presentations, they should consider having more than one group present the same case, and then use the disparities to encourage class discussion. Peer evaluation is also valuable, because it saves time for the instructor, and provides good feedback to the presenters. To help maintain the engagement of the students throughout the class, the instructor may decide to test the students on the arguments that were brought forth in either the group presentations or in the class discussion.

6.3.1 Practices for effective case method teaching in “very large” classes. Since classes of more than 100 students are often placed in lecture-style classrooms, class discussion is limited by the physical characteristics of the room. Therefore, if resources allow, the instructor should divide the classes into lectures and tutorials. The lectures can be used to teach the main theories and concepts to the full class, while the cases can be taught in tutorials of 25 to 40 students in the traditional form of a small class discussion.

If resources do not allow for tutorials, then the instructor should take a different approach to case teaching:

- **Rather than class-wide discussion, instructors should focus on peer discussion within collaborative learning groups.** Students can be told to sit with their groups, or to form groups with the students sitting near them, to discuss the case issues. The instructor can call on certain groups to present their decisions and then use these arguments to poll the rest of the class for their agreement and for new ideas. The instructor may also ask each group to prepare a short paper that outlines their analysis. To discourage free riders, individual papers can be prepared in advance of the group discussion, and handed in with the group papers.

- **Clicker technology should be considered to aid discussion and assessment.**

Clickers can be useful because they give the instructor a quick vote on how the class may be divided on certain case issues. Clickers can also be used to facilitate multiple-choice quizzes that test for case understanding and preparation, and the in-class evaluation should encourage more students to attend class.

- **Instructors should keep the assignments short.** To make assessment easier and faster, the instructor should keep the assignments short and focused. This can include having the students answer specific questions about the case either with short answers or multiple-choice, or having the students focus only on certain portions of the case (key issues, recommendations etc.). The assignments can be submitted after the class discussion, or instructors may choose to have students submit them prior to class to ensure that they have adequately prepared each case.
- **Group presentations are not possible due to the sheer number of students.**

However, this is not a critical issue, since the development of “softer” skills is not the primary reason for teaching cases according to most instructors.

6.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The findings from this study are limited by the fact that participants were recruited from only one University, and the number of participants were relatively few. Future research could test the generalizability of the findings by expanding the research to other post-secondary institutions in North America.

While this study was primarily concerned with the challenges and best practices for teaching cases in large size undergraduate classes, the study uncovered two specific issues that may warrant additional research:

- The issue of group work, and the challenges that students face when working in groups, both for case study and other assignments.
- The growing diversity of North American post-secondary classes. Future research could explore the challenges faced by foreign-born students, and how instructors are adapting their teaching methods to meet this new challenge.

Both of these issues are important with the continued growth and diversification of undergraduate education in North America, and therefore may warrant additional study.

APPENDIX A: SURVEY FOR RECENT GRADUATES OF TRSM

The following survey deals with case studies. A “case” for case study refers to an assignment that represents a “slice of reality” of an organization, presenting a management problem or issue that either illustrates a theory or requires a diagnosis, solution, and/or plan of action.

1. Did you experience case studies while studying at TRSM?
 - Yes
 - No
2. What types of cases did you experience at TRSM? *Select all that apply.*
 - Traditional style Harvard or Ivey cases (typically 15-40pgs and often including several charts or tables in the appendix)
 - “Mini” cases (typically 1-2 pgs.) from the course textbook or other sources
 - “Real-life” cases where an outside organization was invited in to the class to be the case target
 - Longitudinal cases where the same case was used over several weeks
 - Case Competitions held internally, locally, nationally or internationally
 - Other. Please explain
3. How would you rate your overall experience with case studies at TRSM?
 - Very Positive
 - Slightly Positive
 - Neutral
 - Slightly Negative
 - Very Negative
4. When thinking about your case study courses that contained FEWER than 60 students in the classroom, how satisfied were you with the following: (5=Very Satisfied, 4=Somewhat Satisfied, 3= Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied)
 - 1) The amount and type of preparation required for each class
 - 2) The quality of the class discussion
 - 3) The behaviour of the other students during the class
 - 4) Your ability to contribute to the class discussion
 - 5) The ability of the instructor to encourage and facilitate class discussion
 - 6) The amount and quality of feedback given by the instructor
 - 7) The way in which students were assessed and graded
 - 8) Your level of learning and skills development in this class
 - 9) The balance between lecture, small group discussion, and class discussion
 - 10) Your overall experience in this class
5. When thinking about your case study courses that contained FEWER than 60 students in the classroom, how would you rate your level of Participation during the class? (5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)
6. When thinking about your case study courses that contained FEWER than 60 students in the classroom, how would you rate your level of Engagement (5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)

7. When thinking about your case study courses that contained FEWER than 60 students in the classroom, how would you rate the breadth and depth of analysis required for success in this class?
(5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)
8. When thinking about your case study courses that contained MORE than 80 students in the classroom, how satisfied were you with the following: (5=Very Satisfied, 4=Somewhat Satisfied, 3= Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied)
 - 1) The amount and type of preparation required for each class
 - 1) The quality of the class discussion
 - 2) The behaviour of the other students during the class
 - 3) Your ability to contribute to the class discussion
 - 4) The ability of the instructor to encourage and facilitate class discussion
 - 5) The amount and quality of feedback given by the instructor
 - 6) The way in which students were assessed and graded
 - 7) Your level of learning and skills development in this class
 - 8) The balance between lecture, small group discussion, and class discussion
 - 9) Your overall experience in this class
9. When thinking about your case study courses that contained MORE than 80 students in the classroom, how would you rate your level of Participation during the class?
(5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)
10. When thinking about your case study courses that contained MORE than 80 students in the classroom, how would you rate your level of Engagement (5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)
11. When thinking about your case study courses that contained MORE than 80 students in the classroom, how would you rate the breadth and depth of analysis required for success in this class?
(5=Very High, 4= Somewhat High 3= Neutral, 2= Somewhat Low, 1=Very Low)
12. We would like you to think of one course that represents your BEST case study experience. Please describe why this was your BEST case study experience. Do not include any information that will identify you, your classmates or individual faculty members.
13. We would like you to think of one course that represents your WORST case study experience. Please describe why this was your WORST case study experience. Do not include any information that will identify you, your classmates or individual faculty members
14. Were you required to do "group work" (typically in small groups of 3-6 students) in any of your case study courses?
15. Please rate your overall experience with the group work
 - Very Positive
 - Slightly Positive
 - Neutral
 - Slightly Negative
 - Very Negative

16. Did the instructor assign the students to each group, or were the students able to form their own groups?
17. When the group assignment was introduced by the instructor to the class, to what extent did the instructor explain the benefits and potential challenges of working in groups?
- Very much
 - Somewhat
 - Not at all
18. When the group assignment was introduced by the instructor to the class, to what extent did the instructor provide best practices for group work and suggestions for how to deal with potential group work issues?
- Very much
 - Somewhat
 - Not at all
19. Did you experience any of the following situations within your small groups? *Please check all that apply.*
- One or more of the group members did not work as hard as the others
 - One or more of the group members tended to dominate the discussion
 - It was difficult to coordinate schedules in order to meet
 - We were reluctant to challenge each other on our ideas
 - It was difficult to determine a leader for the group
 - There was a personality conflict amongst some group members
 - We often sub-divided the tasks and worked on them independently
 - The performance of my group negatively affected my individual grade
 - The group work was too time consuming
20. Please provide any other suggestions for how TRSM could improve its case study teaching or group work. Do not include any information that will identify you, your classmates or individual faculty members.

APPENDIX B: SURVEY FOR TRSM INSTRUCTORS

1. Please indicate your primary department/School.
 - Accounting
 - Economics
 - Entrepreneurship and Strategy
 - Finance
 - Global Management Studies
 - Human Resources Management
 - Law and Business
 - Marketing Management
 - Retail Management
 - Information Technology Management
 - Hospitality and Tourism Management
 - Health Services Management
2. Are you an RFA member?
 - Yes
 - No
3. Are you?
 - Tenured
 - Tenure track
 - Limited Term
4. Please indicate which type of contract you teach under
 - CUPE 1
 - CUPE 2
 - Both CUPE 1 and CUPE 2
5. How many years have you taught at the university level?
 - Five years or less
 - 6-10 ten years
 - More than 10 years
6. Please indicate the course level(s) that you are currently teaching. *Select all that apply.*
 - First year Undergraduate
 - Second year Undergraduate
 - Third year Undergraduate
 - Fourth year Undergraduate
 - Graduate
7. When thinking about **Case Method** teaching, what types of cases do you currently use in your courses or with your students? *Select all that apply.*
 - Harvard or Ivey traditional style cases (typically 15-40pgs)
 - “Mini” cases (typically 1-2 pgs.) drawn from course texts or other sources
 - Informal cases assembled from materials gathered by the professor
 - “Real-life” cases where an outside organization is invited in to be the case target

- Longitudinal cases where the same case is used over several weeks
 - Case Competitions held internally, locally, nationally or internationally
 - Not applicable. I don't use any cases in my course teaching
8. In what proportion of your classes each year do you use some form of case teaching?
- None.
 - I use occasionally
 - Regularly, in a minority of my classes
 - Regularly, in a majority of my classes
 - In all of my classes
9. At what levels do you use case teaching? *Select all that apply.*
- First year Undergraduate
 - Second year Undergraduate
 - Third year Undergraduate
 - Fourth year Undergraduate
 - Graduate
10. Where do you find cases to use in your classes? *Select all that apply.*
- From my main course text
 - From a case book I expect students to buy
 - I copy cases from the books I have on my bookshelf
 - Harvard Publishing
 - Ivey Publishing
 - ECCH (European Case Clearing House)
 - Other _____
11. If you do NOT currently use Case Method teaching in your courses, please indicate the reasons why not? *Select all that apply.*
- The case method is not appropriate for my course level
 - The case method is not appropriate for my area of study or course content
 - The case method is too time consuming
 - The class size is too large
 - Individual feedback and assessment is too difficult
 - I do not feel that I can teach the case method as effectively as other methods
 - In general, I do not believe that the case method is as effective as other methods
 - Other _____
12. If you currently use the case method, what are the reasons or benefits for using cases in your teaching? *Select all that apply.*
- Gives students exposure to the types of real-world management issues that they'll face in their career
 - Fosters an active approach to learning by presenting issues and theories in a practical context
 - Allows students to practice decision making skills in a low-risk environment
 - Allows students to practice effective group collaboration
 - Allows students to practice presentation skills
 - Encourages constructive feedback from peers
 - Increases student engagement and/or interest in the subject

- Other _____

13. What are some of the challenges that you face when teaching with the case method? *Select all that apply.*

- Finding or acquiring suitable cases
- Copyright issues/fees for case copies
- Keeping all of the students engaged and participating
- Helping the students work effectively in groups
- Students concerned with group bias in grading
- Difficulty of individual assessment
- Time required for preparation
- Time required for feedback and assessment
- Solutions to cases are available for students to find online
- Other _____

14. In your opinion, in what size of class is it appropriate to teach the Case Method?

- Under 40 students
- 40-60 students
- 60-80 students
- 80-100 students
- 100-120 students
- 120-150 students
- 150-200 students
- Over 200 students
- Not applicable. I do not believe that it is appropriate to teach the case method

15. How big does a class have to be for you to consider it a Large Class? At what amount of students does a class become a large class?

For the purposes of the next three questions, please consider a large class to be one that contains at least 80 students.

16. What are the challenges that either prevent you from teaching the case method in large classes or require you to make changes to your case method teaching for the large class? *Select all that apply.*

- The physical layout of the large classroom (seating, acoustics etc.) makes class discussion more difficult
- Difficulty keeping all students prepared and engaged in the material
- Students' reluctance to participate in large class discussion
- Not enough time for all students to participate in discussion
- Difficulty in breaking into small groups
- Not enough time for group presentations or debates
- Difficult to assess individual contributions within groups
- Time consuming to assess each individual
- Other _____

17. In your experience, what is the most difficult or important challenge to teaching the case method that is unique to large classes?

- The physical layout of the large classroom (seating, acoustics etc.) makes class discussion more difficult
- Difficulty keeping all students prepared and engaged in the material
- Students' reluctance to participate in large class discussion
- Not enough time for all students to participate in discussion
- Difficulty in breaking into small groups
- Not enough time for group presentations or debates
- Difficult to assess individual contributions within groups
- Time consuming to assess each individual
- Other _____

18. If you use the case method in large classes, please comment on the techniques that you use in order to overcome the challenges presented by the large number of students

19. When thinking about Group Work, when do you use group work with your students? *Select all that apply.*

- I use group work when using the case method
- I use group work when using other methods outside of the case method
- I do NOT use group work in my courses

20. We are currently in the process of setting up a **TRSM Case Learning Centre**. Please let us know what resources or help that you would be interested in. *Select all that apply.*

- Tips and guidance on how to write cases effectively
- Help with finding suitable cases
- Best practices for preparing and teaching the case-method effectively
- Best practices for student assessment and/or case rubrics
- Best practices for teaching cases to large-size classes
- Best practices for teaching effective group collaboration
- Tips and guidance on using Blackboard to facilitate case discussion
- Hands-on training and seminars for teaching the case method
- Tips on how to coach case competitions and strategies for winning
- Help in preparing student teams for case competitions
- Other _____

21. Could we contact you to discuss case teaching in more detail through a personal interview?

- Yes
- No

22. Please provide your name, phone number, and Ryerson email address so that we may be able to contact you for a personal interview.

APPENDIX C: INTERVIEW GUIDELINE FOR SEMI-STRUCTURED INTERVIEWS

1. We would like to get an understanding of how cases are being used for teaching in TRSM, so could you please describe your case teaching in terms of how often you use cases, what types of cases do you currently use in your classes, etc.?
2. What do you see as the major benefits of teaching with cases?
3. What do you see as the major challenges of teaching with cases?
4. Do you use any specific techniques to overcome these challenges?
5. Where do you find your cases? Have you had any issues with this process?
6. Do you write or create your own cases? Where do you find the material etc.?
7. Is there anything preventing you from teaching with cases more often at TRSM?
8. Have you ever coached a student team in a case competition?
9. If you have, what was the experience like? How could it have been improved?
10. Is this something you would be interested in learning more about or may be interested in coaching in the future?
11. As we develop our Case Learning Centre, what help or resources for case teaching would you be most interested in?
12. I'd like to talk now about case teaching with large classes. What do you consider to be a large class for case teaching? Why do you consider XX students to be a large class?
13. Do you use cases in teaching your large classes? If not, why not?
14. You've already described the challenges associated with teaching the Case Method, but are there any other challenges of teaching the Case Method that are unique to large classes?
15. What techniques do you use to overcome these challenges?
16. Do you use different case teaching methods for large classes vs. small classes?
17. Within the classroom, do you use any specific techniques to stimulate or facilitate discussion amongst the larger group of students?
18. Can you describe how the students are assessed in your large case classes?
19. Are there any large class challenges that simply cannot be overcome? How do you deal with these?
20. Is there anything else about teaching with cases that you would like to share?

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