Are We Winning?! A Team Challenge to Engage Students in the Large Lecture Introductory Communication Course

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Abstract
The development and implementation of a semester-long team challenge in an introductory level communication course is described. The team challenge was developed to encourage active engagement of students with large lecture material and to build community within lab sections of the course. Teaching assistants were trained to observe and record participation, distraction, and attendance levels in the large lecture portion of a hybrid course, 'Fundamentals of Communication.' Assessment of the team challenge as a case study reveals higher levels of verbal participation and attendance, and lower levels of distractions (i.e. use of cell phones, side conversations, late arrivals to class). In addition, there were other unexpected outcomes related to the way in which students were dispersed in the lecture hall. Results are discussed along with implications pertaining to the role of teaching assistants, the utility of competition versus collaboration in academia, and the definition of participation across all student populations.

Keywords: large lecture, engagement, participation, attendance, basic course

Introduction

The auditorium is filled with 250 students—mostly college freshmen. The professor is teaching an intro-level general education communication course and wants desperately to *engage* the students in the learning process. Instead of talking *to* them and treating them as passive receptacles of knowledge, the instructor wants to talk *with* them, engaging them as active participants in their learning process. However, the professor must fight a few battles in getting students to participate in this large lecture—the perception that because this course is an introductory level class, it should be an 'easy A,' the irritation of students who feel that they should not be required to take this 'gen-ed' course, especially in large lecture format, and the intimidation students feel in participating before 250 other students. Together, these attitudes lead students in the introductory level large lecture to pay closer attention to their incoming texts or to sit and wait for the instructor to 'give' them the information needed for the next exam. So how can instructors of large lecture courses change those perceptions and get students excited about engaging in their learning process?

As an instructor of three large lectures of approximately 250 students each for a general education course, the 'Fundamentals of Communication,' it was my goal to engage students as active participants in their learning process. I wanted students to walk out of my classroom excited about what they were learning and eager to apply it to their experiences. Therefore, I designed a team challenge intended to entice students to engage. Although not originally conceptualized in terms of research, the exercise quickly developed into a case study. Following an exploration of the pertinent literature on the problems and solutions associated with large lecture engagement, I explain the development and implementation of the team challenge. I use the term team challenge since the lab sections were defined as teams who competed in a friendly contest to obtain the highest levels of participation and attendance, and the lowest level of distraction. The purpose of this challenge was to increase the participation and attendance levels of students and to decrease the level of distractions in an introductory communication course at a medium-sized Midwestern university. Though the ideas presented are pertinent to large lectures conducive to topics which encourage discussion, this team challenge may be adapted to work in a large lecture in many content areas, and perhaps, at varying levels of study.

Literature Review

Research suggests that one of the reasons why it is difficult to engage students in large lectures is because students feel anonymous (Biggs, 1999; Carbone and Greenberg, 1998; McKeachie, 1999; Provitera McGlynn, 2002; Ward and Jenkins, 1992). Provitera McGlynn (2002) refers to this as 'de-

individuation,' which is the feeling of anonymity experienced when part of a large group. De-individuation may lead to distracting behaviors: students may engage in side conversations, text friends, or walk in and out of the room at will. Students in large lecture courses may also experience social isolation due to decreased opportunities to interact with other students, and they may feel less motivated to engage with course material (Cooper and Robinson, 2000). Finally, much of the research reveals that students in large courses often experience passive learning, largely due to the sense of anonymity they experience (Biggs, 1999; Carbone and Greenberg, 1998; Ward and Jenkins, 1992). Yazedjian and Boyle Kolkhorst (2007) claim that 'it is imperative for instructors to take well-planned measures to combat students' lack of commitment to learning by decreasing student anonymity in class' (p. 165).

In order to decrease the student anonymity that may result in lack of motivation and passive learning, Ward and Jenkins (1992) highlighted the importance of providing opportunities for students to form relationships with other students in the class and with the instructor. In fact, Chambliss (2014) found that just one or two meaningful interactions with other classmates or the instructor can have a tremendous impact on the student's engagement in the course. Many other researchers have also highlighted the significance of active learning strategies to accommodate for feelings of anonymity, passive learning, and lack of motivation (Mulyran-Kyne, 2010; Straits, 2007; Yazedjian and Boyle Kolkhorst, 2007). For example, Straits (2007) did a case study of an instructor, Dr. Caillet, who received high student evaluations on a consistent basis. In studying why Dr. Caillet received such high evaluations, Straits found that it was due to the fact that she was a caring instructor who challenged students to solve problems and develop higher cognitive-level thinking skills, encouraged questions both in and outside of class, and conveyed passion for the subject matter. In other words, Dr. Caillet used active learning strategies; such strategies resulted in motivated students who cared about learning and felt they had a voice. Mulyran-Kyne (2010) sums it up well when she points to the 'need to move beyond the 'traditional' lecture to more active forms of teaching and learning if quality education is to be provided in large classes' (p. 182).

The extant literature on engaging students in large classes also reveals that involving students as active participants in their learning increases their chances for depth of understanding and long-term retention of material (Eison, 1999; Huerta, 2007; Miller et al., 2013). For example, Miller et al.'s (2013) research found that the use of 'engaging lectures' (involving the use of written reflection, problem sets, brainstorming sessions, and/or open discussion) led to statistically significant higher averages on unit exams and the comprehensive final exam, demonstrating an improved long-term retention of material. Furthermore, according to the constructivist view of learning, true learning takes place when the learner is actively involved in the process and not a passive recipient of content (Duffy and Orrill, 2004).

Research on engagement strategies in large courses reflects the utility of visuals, real-life examples, challenging problems or questions, passionate delivery, and student involvement through pair-shares, written reflections, quizzes, and small group work (Apgar et al., 2014; Burns, 1999). Additional research provides evidence of the utility of social media or technology such as Facebook (Boon and Sinclair, 2009; Liu, 2008), Twitter (Tyma, 2011), student response systems (Blackburn, 2015; Denker, 2013; Hoyt et al., 2010; Mayer et al., 2009), and even lo-tech tools such as crayons, post-it notes, and index cards to engage students in the writing process (Siegel Finer et al., 2016). Russell et al. (2016) transformed their large course and implemented a number of the evidence-based strategies listed above, including a student response system, small group work, online quizzes prior to delivery of large lecture material, and written reflections. Results indicated that the students were significantly more prepared, engaged, and satisfied with the course; they also earned higher grades than students who had taken the same course in the traditional format.

Capitalizing on the above listed strategies, I developed a team challenge to motivate students to engage at a higher level in the three large lectures I taught as part of a hybrid 'Fundamentals of Communication' course. Students in this course met once a week for fourteen weeks in a 50-minute large lecture with approximately 250 students. In addition, they met two times a week in a 50-minute lab section with a small group of 30 students. Because they are smaller, lab sections are conducive to active learning strategies. However, I wished for active learning to happen in the large lectures as

well. When in the large lectures, I wanted students to think more critically when questions were posed, to engage more readily when given work to be done in pair-shares and small groups, and to reflect more deeply when asked to reflect in writing. Extra credit was offered as the reward to the winning section(s) in each of the three large lectures. I intended it to act as an extrinsic motivator to encourage students to take that initial step in engaging actively, with the hope that eventually, students engage because they are motivated intrinsically to grapple with the course material. In addition, I hoped that framing it as a team challenge would boost motivation to engage since there is evidence for such a relationship in the literature. For example, using self-report measures (i.e., Hypercompetitiveness in Academia Scale and Classroom Participation Scale), Shimotsu-Dariol et al. (2012) found a significant, positive correlation (r = .33, p < .001) between students' academic competitiveness and participation. This indicates that a team challenge which fosters competition may help to boost participation levels.

Purpose

This semester-long team challenge was developed to increase participation and attendance levels, and to decrease distraction levels of students in large lecture. Although not originally conceptualized in terms of research, the team challenge quickly developed into a case study from which to explore the utility of a friendly competition as an extrinsic motivator. It was aimed at answering the following research question: Will a team challenge implemented in a large lecture introductory course encourage participation of students?

Methodology

Weekly, the teaching assistants (TAs) collected participation, distraction, and attendance-level data and entered them onto a shared Google spreadsheet. With that data, continual comparisons were made between the lab sections, and the data were shared with visual graphs in large lectures to boost morale and increase excitement with the challenge. At the end of the semester, the lab sections with the highest participation and attendance levels and lowest level of distractions were awarded 3% extra credit, which could be the difference between a B+ and an A-. However, it is important to note that this was *extra* credit. In other words, a student could still earn an A in the class without participating in the challenge; an individual's success was not dependent upon other students.

Procedure

In this section, procedures pertaining to the team challenge and the case study will be explained: the importance of clarifying the purposes, training TAs to code, and encouraging teamwork.

Clarify purposes. On the first day of the semester, it is important to introduce the purposes of the team challenge to students: to build community and encourage active engagement. Community is important to students, and they tend to lack a sense of it in a large lecture hall. Coming into an auditorium as a new college freshman can be especially intimidating. New college students may not know anyone else in the class and may feel unsure about where to sit. The challenge in this course was structured such that students sat in an assigned section with others in their lab section. The assigned section gave students a place to belong. Furthermore, it gave students the opportunity to communicate with and build relationships with others in their lab sections. The larger purpose of the team challenge was to encourage active engagement of students. Ultimately, the goal is for students to engage at a deeper level, affording them the opportunity to wrestle with and apply the material rather than passively listening to it. The hope is that the extrinsic reward of a large extra credit bonus (again, 3% is added to the final grades of the students in the winning section/sections) will give students the needed incentive and the bravery to participate and engage—and that once they start to engage, the extrinsic reward will become secondary to the intrinsic value of what they are learning.

It is helpful to reinforce the purposes of the team challenge with students on a bi-weekly basis. Sharing the purposes of the challenge initially gave students a framework; reinforcing the purposes regularly kept students motivated. Students may also have appreciated the instructor's genuine interest in their engagement with the material, which may have inadvertently encouraged active engagement as well.

Assign seating. A specific section of the auditorium was assigned to each of the six to nine lab sections in a given large lecture. With the exception of students who required specific seats due to the need for accommodations, students were encouraged to sit with other students in their lab sections. Students were required to sit in a certain assigned section of the auditorium but were allowed to choose any seat within that assigned section. An effort was made to place lab sections that included any disabled students in the front of the auditorium. The seating chart was projected from a PowerPoint slide onto a screen at the beginning of every class to help students remember where to sit.

Instruct TAs on coding duties: Participation, distractions, and attendance. The TAs assessed participation and distraction levels of students and took an attendance count in each of the separate six to nine lab sections throughout each of the three large lectures (see Appendix A for recording tool used by TAs).

Coding participation. To assess participation, the TAs recorded the number of students who participated with verbal contributions in each section (i.e. answered questions posed by the instructor, asked questions, contributed comments) along with the number of *different* students who participated. The resulting tallies were entered onto a shared Google spreadsheet by the TAs of each section. The tallies were divided out of the total number of times participation occurred within a given large lecture to get a resulting percentage of participation. For example, if 8 student comments were offered from Section 1 on Day 1 out of a total of 24 student comments that day, and 4 student comments were offered from Section 1 on Day 2 out of a total of 36 student comments on Day 2, that section would have contributed 20% (12 comments out of 60 total comments) of the comments on those two class days. Participation levels were recorded on 13 of the 14 large lecture class days (unrecorded on the first day of class), and a percentage was calculated at the end of the semester. Percentages of the nine lab sections were compared in the 9 a.m. large lecture. Percentages of the six lab sections were compared in the 10 a.m. large lecture. Percentages of the eight lab sections were compared in the 11 a.m. large lecture. Because in every section such a large variety of students participated, the tallies of the number of *different* students who participated were unnecessary and therefore never used in determining the winning sections. However, in future iterations of the team challenge, I would definitely include a tally of the number of different students who participate since it appeared to have broadly encouraged participation. See Appendix B for an example of a graph used to reflect participation levels at the end of the semester for one of the three large lectures.

Coding distractions. Distraction levels were measured with tallies of late students, students using cellphones, talking, or engaging in other distracting behaviors. On each of the 13 class days, for each section the number of late students was tallied separately from the tally of all other distracting behaviors. Tallies were compared in the same pattern described above in coding participation. Bar graphs were constructed and shown periodically throughout the semester to depict the total number of late students and distractions tallied in each lab section in comparison to the other sections in their particular large lecture (see Appendix C for an example).

Coding attendance. Attendance was measured with a simple count of students present out of the total number of students in each section, and that number was translated into a percentage. For example, if there were 24 out of the 28 students present in Section 1 on Day 1, and 28 out of 28 students on Day 2, then a total of 52 students were present out of 56 total students in Section 1, with a resulting percentage of 93%. Attendance was recorded on 13 large lecture class days, and a percentage was calculated for each section at the end of the semester. Percentages were compared in the same pattern described above in coding participation. See Appendix D for an example of an attendance graph from one of the three large lectures at the end of the semester.

Coding results. All of these data were collected at every large lecture and used in obtaining comparisons between sections in participation, distraction, and attendance levels. The intention was that the section with the highest level of participation, highest level of attendance, and lowest level of distractions would win the 3% extra credit at the end of the semester. However, the section with the highest level of participation in each large lecture was not the same as the section with the highest level of attendance; therefore, two sections in each of the three large lectures were granted 3% extra

credit at the end of the semester—the section with the highest level of participation and the section with the highest level of attendance. Distraction levels were so low across all sections that they were not used as a factor in determining the winners.

Encourage teamwork. It is also important that the instructor clarify the significance of team in this process. Each lab section is a team, and as such, they need to support one another as they would on any other team in which they are a participant. As on a team sport, when one individual team member fails or lacks effort, the whole team pays the price. Similarly, when one individual team member succeeds, the whole team benefits, and the team celebrates together. The instructor can talk about the significance of 'not letting down your teammates'—i.e. not wanting to be the latecomer to class or the one who texts during class or does not participate, because these will contribute to the team's failure instead of its success. Instead, team members should come to class on time, sit in their assigned sections, and participate and engage actively to help their team to succeed and win the prize at the end.

Results: Evidence of Student Engagement

Participation Levels

The team challenge was designed in response to what I perceived to be a lack of engagement of students in the previous semester. I wanted to provide an incentive for students to free themselves of distractions and participate. I also wished to create a comfortable and safe atmosphere. Because I designed the activity in an effort to boost student engagement in my large lectures at the beginning of a new semester and it was not originally conceptualized as a study, I do not have comparison data from the previous semesters to compare levels of participation. However, from my observations and the anecdotal data from TAs, there appeared to be higher levels of participation in the semester in which the challenge was implemented. Furthermore, comparisons between the results of the traditional university evaluations used at the end of both semesters reveal higher evaluations on every item in the semester in which the challenge was implemented. On average, there was a 5% increase in student satisfaction in all fifteen categories on the standard university evaluations. In other words, students had more positive evaluations of 'the course as a whole,' 'instructor's contribution to the course,' 'use of class time,' 'instructor's interest in whether students learned,' 'amount learned in the course,' 'confidence in instructor's knowledge,' 'instructor's enthusiasm,' and more. Although the higher evaluations could reflect other factors (i.e. different students), it is possible that the addition of the team challenge had a positive influence upon evaluations as well.

Distraction Levels

In addition to higher participation levels, I noted far fewer distractions. Reminders to students to keep cell phones away in order to support their teams seemed to work well as there were very few cell phones out throughout the semester, and this is confirmed with the distraction data as described below. I also noted more engagement during pair shares and small group work. In the previous semester, some students would immediately grab their cell phones when I introduced an activity in class and would not even pretend to engage, even when I walked right up to them and suggested that they work with the students around them. With the team challenge in place, students seemed to feel an obligation to their section classmates to engage since they knew that not doing so would hurt their chances of earning the extra credit at the end of the semester, and they did not want to let down their teammates.

I also observed fewer students coming in late. The assigned seating probably helped with that because students did not necessarily feel comfortable coming in late if they had to walk to their section in the front of the room. I would also hypothesize that students did not want to let their teammates down in the challenge and as a result, were more invested in arriving on time.

Distraction level data confirm the observations described above. For example, in the 9 a.m. large lecture, there were a total number of 49 distractions across all 13 classes. In the 10 a.m. large lecture, there were a total of 44 distractions, and at the 11 a.m. large lecture, there were a total number of 59 distractions in all 13 classes. On average, that turns out to be less than 4 distractions in each large lecture on each of the class days—less than 4 distractions out of 200-250 students in a large lecture hall over the course of a 50-minute class. Considering that includes all students who walk in late along

with all students who pull out a cell phone at any point or talk with a classmate or choose not to engage in class activities, that number is quite low. Ultimately, this aids the instructor in maintaining a virtually distraction-free class, which helps everyone to focus better.

Attendance Levels

Although I did not take attendance in the previous semester when I did not use the team challenge, I can claim with confidence that attendance levels rose. There were far fewer empty seats, and the data on attendance levels for the semester in which the challenge was implemented reveal high levels for a large lecture. Out of a total of 23 lab sections, only 7 of the sections (less than 1/3) had attendance levels below an average of 80%, with the lowest section being an average of 73% attendance over the course of the semester. The remaining 15 sections had average attendance levels above 80%, with the vast majority of them (15 out of 17) at 85% or higher.

Unexpected Outcomes

In addition to the assigned seating to help students to build rapport with their fellow classmates and reduce the sense of anonymity, it also helped to disperse the students in an appealing manner. In the previous semester in which a team challenge was not used, the students who sat in the front participated more than those in the back, who were often distracted by their cell phones. In other words, instead of the highly engaged students sitting in the very front and the less engaged students sitting in the very back, students with varying levels were spread throughout the lecture hall, perhaps keeping the less engaged students from causing distractions and encouraging higher levels of involvement throughout the lecture hall.

In addition, students appeared to be excited by the team challenge. They were particularly enthused when I would show progress graphs such as the graphs showing participation, distraction, and attendance levels. Winning sections would give out cheers, and they would even razz those in losing sections in a friendly way. I never observed any mean-spirited reactions between sections; any teasing appeared to be in good fun and part of healthy competition.

Discussion and Implications

Overall, the use of the team challenge to increase student engagement in the large lecture introductory communication course was a success. Participation and attendance levels rose, and there were fewer late students and students causing distractions. Therefore, the findings of this case study provide further evidence for the utility of competition as a tool to motivate students to engage, confirming previous research (e.g. Shimotsu–Dariol et al., 2012). In addition, the assigned seating provided students with a stronger sense of community because they had the opportunity to build rapport with fellow classmates in their lab sections. This helped to reduce students' sense of anonymity, shown to be important to students in large lectures in the extant literature (e.g., Biggs, 1999; McKeachie, 1999; Provitera McGlynn, 2002).

Despite the overall success, there are important considerations worthy of further exploration, pertaining to the role of TAs, the utility of competition versus collaboration in academia, and the definition of participation across all student populations.

Role of TAs

Implementation of the team challenge and the resulting case study provided the opportunity for exploration of the role of TAs in the introductory communication course large lecture. Prior to the team challenge, TAs were responsible for listening to the lecture for content (to avoid redundancy when teaching lab sections) and collecting written reflections at the end of class. With implementation of the team challenge, their responsibilities increased since they were asked to record tallies of participation, distractions, and attendance. However, this placed TAs in a monitoring role over their students. What if, instead, TAs were asked to be more active in the process with their students during large lecture? Perhaps requiring that TAs sit with their lab sections and model active engagement during pair-shares and small group work would boost motivation levels of students and encourage even higher levels of participation. Although I did ask TAs to sit with their sections and to engage, many were not very comfortable with it and took on more of a monitoring role. Such a role

may inhibit student engagement instead of encourage it. Perhaps I should have first helped TAs to recognize the importance of modeling active engagement; more extensive training may have helped.

I might also consider asking TAs to observe sections other than their own because it reduces the chance for bias in recording tallies. Although participation and attendance levels are objective data that can be recorded with a simple tally, it is possible that TAs did not notice all distractions or did not pay close enough attention in recording them. Assigning TAs to sections other than their own might help to reduce such bias. It would also give such TAs the opportunity to get to know other students and vice versa.

Although reflecting upon the role of TAs in the team challenge is important, more important is what this may mean in terms of the inclusion of TAs in all courses, especially those involving large lectures. It begs the question, how can instructors of large lecture courses best incorporate TAs so as to most effectively contribute to student success?

Competition or Collaboration?

In addition to reflecting upon the role of TAs, it seems prudent to consider how the team challenge might be structured such that more sections have the opportunity to succeed. One way in which to explore this is to ponder upon opportunities for collaboration versus competition. Instead of offering extra credit only to the section with the highest levels of participation and attendance, it is possible to set specific parameters for winning the team challenge and to clarify those for students at the start of the semester. For example, I might set 90% as the expected attendance level along with 15% of the overall participation in order for a section to earn the extra credit. That would set the bar, give each section more specific and attainable goals, and allow for every section who meets the standard to win, encouraging collaboration versus competition.

Furthermore, although this was not the case in the semester in which I implemented the team challenge, it is possible that participation and attendance levels may wane as the semester progresses in sections who do not appear to have a chance of winning. One way an instructor might accommodate for that is to conduct classroom exercises in which different lab sections are given different problems to solve, questions to answer, or tasks to complete. Then students from each section would need to report to the whole, which ensures that students from *all* sections are actively engaged. Another possibility is to include ways to earn more points in a short amount of time—'double points days' for example, days upon which tallies would count as 'two for one.' In addition to keeping participation and attendance levels high, such activities may help to foster collaboration versus competition.

Is Participation Defined Appropriately?

In this case study, participation was defined in terms of verbal contributions. Every time a student asked a question, commented upon a course concept, or answered a question posed by the instructor, a tally mark was recorded for participation in that particular lab section. It was defined as such because in a large lecture hall with up to 250 students, it seemed less feasible to define it in less direct ways (i.e. students taking notes or showing signs of listening). However, was this an appropriate way to define participation for all student populations? In future iterations of the challenge, it would be interesting to keep track of differences in participation by demographics. Do men participate more than women or vice versa? Do international students participate less or more than American students? There is evidence that oral class participation is more challenging for Asian international students (e.g., Kim, 2008; Lee, 2009; Liu, 2001). For example, using extensive observation and interview data from six Korean graduate students, Lee (2009) found English proficiency, differences in sociocultural values and educational practices, individual differences, and classroom environment influential in determining levels of participation in small groups. However, regardless of their length of stay in the United States (ranging from one to six years), all six of these Korean students were reticent about participating in whole class discussions; this indicates that they would likely have difficulty participating in a large lecture hall. Again, participation in this case study was coded as verbal contributions, but perhaps alternative forms of participation should be explored to encourage participation from populations of students who feel less comfortable engaging verbally.

Conclusion

Regardless of the overall success of the team challenge, assessing the experience as a case study raises several questions pertaining to the role of TAs, the utility of collaboration versus competition, and the definition of participation. First, the findings of this case study force reflection upon how large lecture instructors might best utilize TAs in large classes to contribute to student success; are there ways in which TAs can help to engage students at deeper levels? Next, this case study raises questions surrounding competition versus collaboration; are both conducive to learning? Do both encourage students to reach beyond extrinsic motivators and to wrestle with curriculum due to its intrinsic value? Or is collaboration or competition more likely to foster intrinsic motivation? Finally, this case study highlights the importance of defining participation in such a way as to contribute to the success of all student populations, including those most often marginalized.

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Introduction

The auditorium is filled with 250 students—mostly college freshmen. The professor is teaching an intro-level general education communication course and wants desperately to *engage* the students in the learning process. Instead of talking *to* them and treating them as passive receptacles of knowledge, the instructor wants to talk *with* them, engaging them as active participants in their learning process. However, the professor must fight a few battles in getting students to participate in this large lecture—the perception that because this course is an introductory level class, it should be an 'easy A,' the irritation of students who feel that they should not be required to take this 'gen-ed' course, especially in large lecture format, and the intimidation students feel in participating before 250 other students. Together, these attitudes lead students in the introductory level large lecture to pay closer attention to their incoming texts or to sit and wait for the instructor to 'give' them the information needed for the next exam. So how can instructors of large lecture courses change those perceptions and get students excited about engaging in their learning process?

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Literature Review

Research suggests that one of the reasons why it is difficult to engage students in large lectures is because students feel anonymous (Biggs, 1999; Carbone and Greenberg, 1998; McKeachie, 1999; Provitera McGlynn, 2002; Ward and Jenkins, 1992). Provitera McGlynn (2002) refers to this as 'de-

individuation,' which is the feeling of anonymity experienced when part of a large group. De-individuation may lead to distracting behaviors: students may engage in side conversations, text friends, or walk in and out of the room at will. Students in large lecture courses may also experience social isolation due to decreased opportunities to interact with other students, and they may feel less motivated to engage with course material (Cooper and Robinson, 2000). Finally, much of the research reveals that students in large courses often experience passive learning, largely due to the sense of anonymity they experience (Biggs, 1999; Carbone and Greenberg, 1998; Ward and Jenkins, 1992). Yazedjian and Boyle Kolkhorst (2007) claim that 'it is imperative for instructors to take well-planned measures to combat students' lack of commitment to learning by decreasing student anonymity in class' (p. 165).

In order to decrease the student anonymity that may result in lack of motivation and passive learning, Ward and Jenkins (1992) highlighted the importance of providing opportunities for students to form relationships with other students in the class and with the instructor. In fact, Chambliss (2014) found that just one or two meaningful interactions with other classmates or the instructor can have a tremendous impact on the student's engagement in the course. Many other researchers have also highlighted the significance of active learning strategies to accommodate for feelings of anonymity, passive learning, and lack of motivation (Mulyran-Kyne, 2010; Straits, 2007; Yazedjian and Boyle Kolkhorst, 2007). For example, Straits (2007) did a case study of an instructor, Dr. Caillet, who received high student evaluations on a consistent basis. In studying why Dr. Caillet received such high evaluations, Straits found that it was due to the fact that she was a caring instructor who challenged students to solve problems and develop higher cognitive-level thinking skills, encouraged questions both in and outside of class, and conveyed passion for the subject matter. In other words, Dr. Caillet used active learning strategies; such strategies resulted in motivated students who cared about learning and felt they had a voice. Mulyran-Kyne (2010) sums it up well when she points to the 'need to move beyond the 'traditional' lecture to more active forms of teaching and learning if quality education is to be provided in large classes' (p. 182).

The extant literature on engaging students in large classes also reveals that involving students as active participants in their learning increases their chances for depth of understanding and long-term retention of material (Eison, 1999; Huerta, 2007; Miller et al., 2013). For example, Miller et al.'s (2013) research found that the use of 'engaging lectures' (involving the use of written reflection, problem sets, brainstorming sessions, and/or open discussion) led to statistically significant higher averages on unit exams and the comprehensive final exam, demonstrating an improved long-term retention of material. Furthermore, according to the constructivist view of learning, true learning takes place when the learner is actively involved in the process and not a passive recipient of content (Duffy and Orrill, 2004).

Research on engagement strategies in large courses reflects the utility of visuals, real-life examples, challenging problems or questions, passionate delivery, and student involvement through pair-shares, written reflections, quizzes, and small group work (Apgar et al., 2014; Burns, 1999). Additional research provides evidence of the utility of social media or technology such as Facebook (Boon and Sinclair, 2009; Liu, 2008), Twitter (Tyma, 2011), student response systems (Blackburn, 2015; Denker, 2013; Hoyt et al., 2010; Mayer et al., 2009), and even lo-tech tools such as crayons, post-it notes, and index cards to engage students in the writing process (Siegel Finer et al., 2016). Russell et al. (2016) transformed their large course and implemented a number of the evidence-based strategies listed above, including a student response system, small group work, online quizzes prior to delivery of large lecture material, and written reflections. Results indicated that the students were significantly more prepared, engaged, and satisfied with the course; they also earned higher grades than students who had taken the same course in the traditional format.

Capitalizing on the above listed strategies, I developed a team challenge to motivate students to engage at a higher level in the three large lectures I taught as part of a hybrid 'Fundamentals of Communication' course. Students in this course met once a week for fourteen weeks in a 50-minute large lecture with approximately 250 students. In addition, they met two times a week in a 50-minute lab section with a small group of 30 students. Because they are smaller, lab sections are conducive to active learning strategies. However, I wished for active learning to happen in the large lectures as

well. When in the large lectures, I wanted students to think more critically when questions were posed, to engage more readily when given work to be done in pair-shares and small groups, and to reflect more deeply when asked to reflect in writing. Extra credit was offered as the reward to the winning section(s) in each of the three large lectures. I intended it to act as an extrinsic motivator to encourage students to take that initial step in engaging actively, with the hope that eventually, students engage because they are motivated intrinsically to grapple with the course material. In addition, I hoped that framing it as a team challenge would boost motivation to engage since there is evidence for such a relationship in the literature. For example, using self-report measures (i.e., Hypercompetitiveness in Academia Scale and Classroom Participation Scale), Shimotsu-Dariol et al. (2012) found a significant, positive correlation (r = .33, p < .001) between students' academic competitiveness and participation. This indicates that a team challenge which fosters competition may help to boost participation levels.

Purpose

This semester-long team challenge was developed to increase participation and attendance levels, and to decrease distraction levels of students in large lecture. Although not originally conceptualized in terms of research, the team challenge quickly developed into a case study from which to explore the utility of a friendly competition as an extrinsic motivator. It was aimed at answering the following research question: Will a team challenge implemented in a large lecture introductory course encourage participation of students?

Methodology

Weekly, the teaching assistants (TAs) collected participation, distraction, and attendance-level data and entered them onto a shared Google spreadsheet. With that data, continual comparisons were made between the lab sections, and the data were shared with visual graphs in large lectures to boost morale and increase excitement with the challenge. At the end of the semester, the lab sections with the highest participation and attendance levels and lowest level of distractions were awarded 3% extra credit, which could be the difference between a B+ and an A-. However, it is important to note that this was *extra* credit. In other words, a student could still earn an A in the class without participating in the challenge; an individual's success was not dependent upon other students.

Procedure

In this section, procedures pertaining to the team challenge and the case study will be explained: the importance of clarifying the purposes, training TAs to code, and encouraging teamwork.

Clarify purposes. On the first day of the semester, it is important to introduce the purposes of the team challenge to students: to build community and encourage active engagement. Community is important to students, and they tend to lack a sense of it in a large lecture hall. Coming into an auditorium as a new college freshman can be especially intimidating. New college students may not know anyone else in the class and may feel unsure about where to sit. The challenge in this course was structured such that students sat in an assigned section with others in their lab section. The assigned section gave students a place to belong. Furthermore, it gave students the opportunity to communicate with and build relationships with others in their lab sections. The larger purpose of the team challenge was to encourage active engagement of students. Ultimately, the goal is for students to engage at a deeper level, affording them the opportunity to wrestle with and apply the material rather than passively listening to it. The hope is that the extrinsic reward of a large extra credit bonus (again, 3% is added to the final grades of the students in the winning section/sections) will give students the needed incentive and the bravery to participate and engage—and that once they start to engage, the extrinsic reward will become secondary to the intrinsic value of what they are learning.

It is helpful to reinforce the purposes of the team challenge with students on a bi-weekly basis. Sharing the purposes of the challenge initially gave students a framework; reinforcing the purposes regularly kept students motivated. Students may also have appreciated the instructor's genuine interest in their engagement with the material, which may have inadvertently encouraged active engagement as well.

Assign seating. A specific section of the auditorium was assigned to each of the six to nine lab sections in a given large lecture. With the exception of students who required specific seats due to the need for accommodations, students were encouraged to sit with other students in their lab sections. Students were required to sit in a certain assigned section of the auditorium but were allowed to choose any seat within that assigned section. An effort was made to place lab sections that included any disabled students in the front of the auditorium. The seating chart was projected from a PowerPoint slide onto a screen at the beginning of every class to help students remember where to sit.

Instruct TAs on coding duties: Participation, distractions, and attendance. The TAs assessed participation and distraction levels of students and took an attendance count in each of the separate six to nine lab sections throughout each of the three large lectures (see Appendix A for recording tool used by TAs).

Coding participation. To assess participation, the TAs recorded the number of students who participated with verbal contributions in each section (i.e. answered questions posed by the instructor, asked questions, contributed comments) along with the number of *different* students who participated. The resulting tallies were entered onto a shared Google spreadsheet by the TAs of each section. The tallies were divided out of the total number of times participation occurred within a given large lecture to get a resulting percentage of participation. For example, if 8 student comments were offered from Section 1 on Day 1 out of a total of 24 student comments that day, and 4 student comments were offered from Section 1 on Day 2 out of a total of 36 student comments on Day 2, that section would have contributed 20% (12 comments out of 60 total comments) of the comments on those two class days. Participation levels were recorded on 13 of the 14 large lecture class days (unrecorded on the first day of class), and a percentage was calculated at the end of the semester. Percentages of the nine lab sections were compared in the 9 a.m. large lecture. Percentages of the six lab sections were compared in the 10 a.m. large lecture. Percentages of the eight lab sections were compared in the 11 a.m. large lecture. Because in every section such a large variety of students participated, the tallies of the number of *different* students who participated were unnecessary and therefore never used in determining the winning sections. However, in future iterations of the team challenge, I would definitely include a tally of the number of different students who participate since it appeared to have broadly encouraged participation. See Appendix B for an example of a graph used to reflect participation levels at the end of the semester for one of the three large lectures.

Coding distractions. Distraction levels were measured with tallies of late students, students using cellphones, talking, or engaging in other distracting behaviors. On each of the 13 class days, for each section the number of late students was tallied separately from the tally of all other distracting behaviors. Tallies were compared in the same pattern described above in coding participation. Bar graphs were constructed and shown periodically throughout the semester to depict the total number of late students and distractions tallied in each lab section in comparison to the other sections in their particular large lecture (see Appendix C for an example).

Coding attendance. Attendance was measured with a simple count of students present out of the total number of students in each section, and that number was translated into a percentage. For example, if there were 24 out of the 28 students present in Section 1 on Day 1, and 28 out of 28 students on Day 2, then a total of 52 students were present out of 56 total students in Section 1, with a resulting percentage of 93%. Attendance was recorded on 13 large lecture class days, and a percentage was calculated for each section at the end of the semester. Percentages were compared in the same pattern described above in coding participation. See Appendix D for an example of an attendance graph from one of the three large lectures at the end of the semester.

Coding results. All of these data were collected at every large lecture and used in obtaining comparisons between sections in participation, distraction, and attendance levels. The intention was that the section with the highest level of participation, highest level of attendance, and lowest level of distractions would win the 3% extra credit at the end of the semester. However, the section with the highest level of participation in each large lecture was not the same as the section with the highest level of attendance; therefore, two sections in each of the three large lectures were granted 3% extra

credit at the end of the semester—the section with the highest level of participation and the section with the highest level of attendance. Distraction levels were so low across all sections that they were not used as a factor in determining the winners.

Encourage teamwork. It is also important that the instructor clarify the significance of team in this process. Each lab section is a team, and as such, they need to support one another as they would on any other team in which they are a participant. As on a team sport, when one individual team member fails or lacks effort, the whole team pays the price. Similarly, when one individual team member succeeds, the whole team benefits, and the team celebrates together. The instructor can talk about the significance of 'not letting down your teammates'—i.e. not wanting to be the latecomer to class or the one who texts during class or does not participate, because these will contribute to the team's failure instead of its success. Instead, team members should come to class on time, sit in their assigned sections, and participate and engage actively to help their team to succeed and win the prize at the end.

Results: Evidence of Student Engagement

Participation Levels

The team challenge was designed in response to what I perceived to be a lack of engagement of students in the previous semester. I wanted to provide an incentive for students to free themselves of distractions and participate. I also wished to create a comfortable and safe atmosphere. Because I designed the activity in an effort to boost student engagement in my large lectures at the beginning of a new semester and it was not originally conceptualized as a study, I do not have comparison data from the previous semesters to compare levels of participation. However, from my observations and the anecdotal data from TAs, there appeared to be higher levels of participation in the semester in which the challenge was implemented. Furthermore, comparisons between the results of the traditional university evaluations used at the end of both semesters reveal higher evaluations on every item in the semester in which the challenge was implemented. On average, there was a 5% increase in student satisfaction in all fifteen categories on the standard university evaluations. In other words, students had more positive evaluations of 'the course as a whole,' 'instructor's contribution to the course,' 'use of class time,' 'instructor's interest in whether students learned,' 'amount learned in the course,' 'confidence in instructor's knowledge,' 'instructor's enthusiasm,' and more. Although the higher evaluations could reflect other factors (i.e. different students), it is possible that the addition of the team challenge had a positive influence upon evaluations as well.

Distraction Levels

In addition to higher participation levels, I noted far fewer distractions. Reminders to students to keep cell phones away in order to support their teams seemed to work well as there were very few cell phones out throughout the semester, and this is confirmed with the distraction data as described below. I also noted more engagement during pair shares and small group work. In the previous semester, some students would immediately grab their cell phones when I introduced an activity in class and would not even pretend to engage, even when I walked right up to them and suggested that they work with the students around them. With the team challenge in place, students seemed to feel an obligation to their section classmates to engage since they knew that not doing so would hurt their chances of earning the extra credit at the end of the semester, and they did not want to let down their teammates.

I also observed fewer students coming in late. The assigned seating probably helped with that because students did not necessarily feel comfortable coming in late if they had to walk to their section in the front of the room. I would also hypothesize that students did not want to let their teammates down in the challenge and as a result, were more invested in arriving on time.

Distraction level data confirm the observations described above. For example, in the 9 a.m. large lecture, there were a total number of 49 distractions across all 13 classes. In the 10 a.m. large lecture, there were a total of 44 distractions, and at the 11 a.m. large lecture, there were a total number of 59 distractions in all 13 classes. On average, that turns out to be less than 4 distractions in each large lecture on each of the class days—less than 4 distractions out of 200-250 students in a large lecture hall over the course of a 50-minute class. Considering that includes all students who walk in late along

with all students who pull out a cell phone at any point or talk with a classmate or choose not to engage in class activities, that number is quite low. Ultimately, this aids the instructor in maintaining a virtually distraction-free class, which helps everyone to focus better.

Attendance Levels

Although I did not take attendance in the previous semester when I did not use the team challenge, I can claim with confidence that attendance levels rose. There were far fewer empty seats, and the data on attendance levels for the semester in which the challenge was implemented reveal high levels for a large lecture. Out of a total of 23 lab sections, only 7 of the sections (less than 1/3) had attendance levels below an average of 80%, with the lowest section being an average of 73% attendance over the course of the semester. The remaining 15 sections had average attendance levels above 80%, with the vast majority of them (15 out of 17) at 85% or higher.

Unexpected Outcomes

In addition to the assigned seating to help students to build rapport with their fellow classmates and reduce the sense of anonymity, it also helped to disperse the students in an appealing manner. In the previous semester in which a team challenge was not used, the students who sat in the front participated more than those in the back, who were often distracted by their cell phones. In other words, instead of the highly engaged students sitting in the very front and the less engaged students sitting in the very back, students with varying levels were spread throughout the lecture hall, perhaps keeping the less engaged students from causing distractions and encouraging higher levels of involvement throughout the lecture hall.

In addition, students appeared to be excited by the team challenge. They were particularly enthused when I would show progress graphs such as the graphs showing participation, distraction, and attendance levels. Winning sections would give out cheers, and they would even razz those in losing sections in a friendly way. I never observed any mean-spirited reactions between sections; any teasing appeared to be in good fun and part of healthy competition.

Discussion and Implications

Overall, the use of the team challenge to increase student engagement in the large lecture introductory communication course was a success. Participation and attendance levels rose, and there were fewer late students and students causing distractions. Therefore, the findings of this case study provide further evidence for the utility of competition as a tool to motivate students to engage, confirming previous research (e.g. Shimotsu–Dariol et al., 2012). In addition, the assigned seating provided students with a stronger sense of community because they had the opportunity to build rapport with fellow classmates in their lab sections. This helped to reduce students' sense of anonymity, shown to be important to students in large lectures in the extant literature (e.g., Biggs, 1999; McKeachie, 1999; Provitera McGlynn, 2002).

Despite the overall success, there are important considerations worthy of further exploration, pertaining to the role of TAs, the utility of competition versus collaboration in academia, and the definition of participation across all student populations.

Role of TAs

Implementation of the team challenge and the resulting case study provided the opportunity for exploration of the role of TAs in the introductory communication course large lecture. Prior to the team challenge, TAs were responsible for listening to the lecture for content (to avoid redundancy when teaching lab sections) and collecting written reflections at the end of class. With implementation of the team challenge, their responsibilities increased since they were asked to record tallies of participation, distractions, and attendance. However, this placed TAs in a monitoring role over their students. What if, instead, TAs were asked to be more active in the process with their students during large lecture? Perhaps requiring that TAs sit with their lab sections and model active engagement during pair-shares and small group work would boost motivation levels of students and encourage even higher levels of participation. Although I did ask TAs to sit with their sections and to engage, many were not very comfortable with it and took on more of a monitoring role. Such a role

may inhibit student engagement instead of encourage it. Perhaps I should have first helped TAs to recognize the importance of modeling active engagement; more extensive training may have helped.

I might also consider asking TAs to observe sections other than their own because it reduces the chance for bias in recording tallies. Although participation and attendance levels are objective data that can be recorded with a simple tally, it is possible that TAs did not notice all distractions or did not pay close enough attention in recording them. Assigning TAs to sections other than their own might help to reduce such bias. It would also give such TAs the opportunity to get to know other students and vice versa.

Although reflecting upon the role of TAs in the team challenge is important, more important is what this may mean in terms of the inclusion of TAs in all courses, especially those involving large lectures. It begs the question, how can instructors of large lecture courses best incorporate TAs so as to most effectively contribute to student success?

Competition or Collaboration?

In addition to reflecting upon the role of TAs, it seems prudent to consider how the team challenge might be structured such that more sections have the opportunity to succeed. One way in which to explore this is to ponder upon opportunities for collaboration versus competition. Instead of offering extra credit only to the section with the highest levels of participation and attendance, it is possible to set specific parameters for winning the team challenge and to clarify those for students at the start of the semester. For example, I might set 90% as the expected attendance level along with 15% of the overall participation in order for a section to earn the extra credit. That would set the bar, give each section more specific and attainable goals, and allow for every section who meets the standard to win, encouraging collaboration versus competition.

Furthermore, although this was not the case in the semester in which I implemented the team challenge, it is possible that participation and attendance levels may wane as the semester progresses in sections who do not appear to have a chance of winning. One way an instructor might accommodate for that is to conduct classroom exercises in which different lab sections are given different problems to solve, questions to answer, or tasks to complete. Then students from each section would need to report to the whole, which ensures that students from *all* sections are actively engaged. Another possibility is to include ways to earn more points in a short amount of time—'double points days' for example, days upon which tallies would count as 'two for one.' In addition to keeping participation and attendance levels high, such activities may help to foster collaboration versus competition.

Is Participation Defined Appropriately?

In this case study, participation was defined in terms of verbal contributions. Every time a student asked a question, commented upon a course concept, or answered a question posed by the instructor, a tally mark was recorded for participation in that particular lab section. It was defined as such because in a large lecture hall with up to 250 students, it seemed less feasible to define it in less direct ways (i.e. students taking notes or showing signs of listening). However, was this an appropriate way to define participation for all student populations? In future iterations of the challenge, it would be interesting to keep track of differences in participation by demographics. Do men participate more than women or vice versa? Do international students participate less or more than American students? There is evidence that oral class participation is more challenging for Asian international students (e.g., Kim, 2008; Lee, 2009; Liu, 2001). For example, using extensive observation and interview data from six Korean graduate students, Lee (2009) found English proficiency, differences in sociocultural values and educational practices, individual differences, and classroom environment influential in determining levels of participation in small groups. However, regardless of their length of stay in the United States (ranging from one to six years), all six of these Korean students were reticent about participating in whole class discussions; this indicates that they would likely have difficulty participating in a large lecture hall. Again, participation in this case study was coded as verbal contributions, but perhaps alternative forms of participation should be explored to encourage participation from populations of students who feel less comfortable engaging verbally.

Conclusion

Regardless of the overall success of the team challenge, assessing the experience as a case study raises several questions pertaining to the role of TAs, the utility of collaboration versus competition, and the definition of participation. First, the findings of this case study force reflection upon how large lecture instructors might best utilize TAs in large classes to contribute to student success; are there ways in which TAs can help to engage students at deeper levels? Next, this case study raises questions surrounding competition versus collaboration; are both conducive to learning? Do both encourage students to reach beyond extrinsic motivators and to wrestle with curriculum due to its intrinsic value? Or is collaboration or competition more likely to foster intrinsic motivation? Finally, this case study highlights the importance of defining participation in such a way as to contribute to the success of all student populations, including those most often marginalized.

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Appendix A
Large Lecture Section Evaluation

Date: _____
Section Observed: _____
Instructor of Section Observed: _____

Attendance Count (# of students present): _____

Total number of students who participated from this section: _____
Tally Marks:

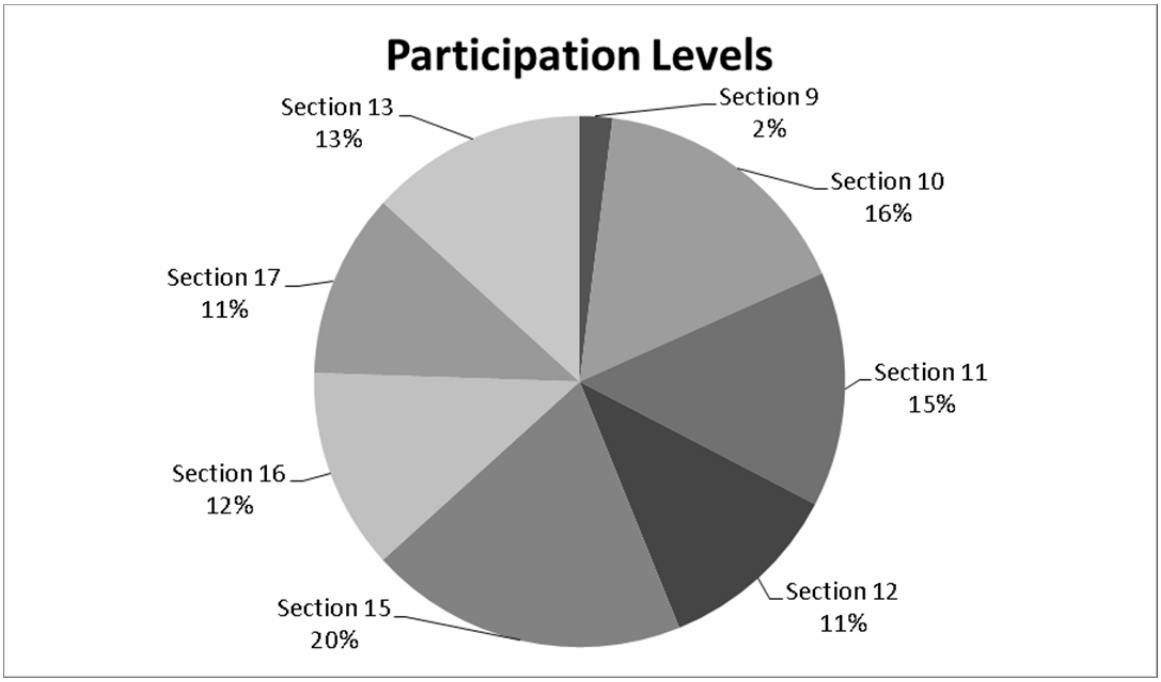
Number of *different* students who participated from this section: _____
Tally Marks:

Evaluation Notes:
Names/Number of students who came in late: _____

Number of students who did NOT engage during activities (i.e. sat silently, looked on cell phone): _____
Tally marks:

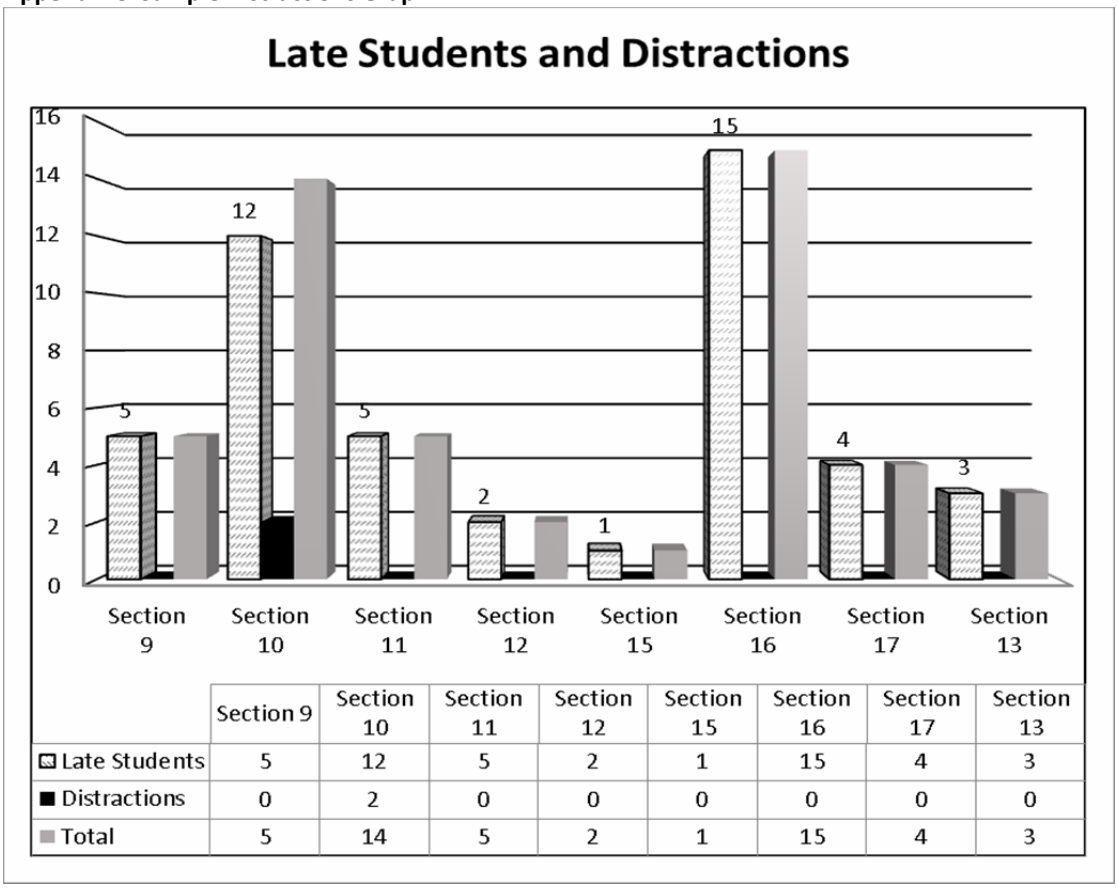
Other comments:

Appendix B: Sample Participation Graph



This pie chart was shown at the end of the semester in the large lecture that met at 11:00 a.m. each week. Each piece of the pie represents the percentage of participation (i.e. amount students answered questions, asked questions, contributed comments) from each lab section in attendance over the course of the semester.

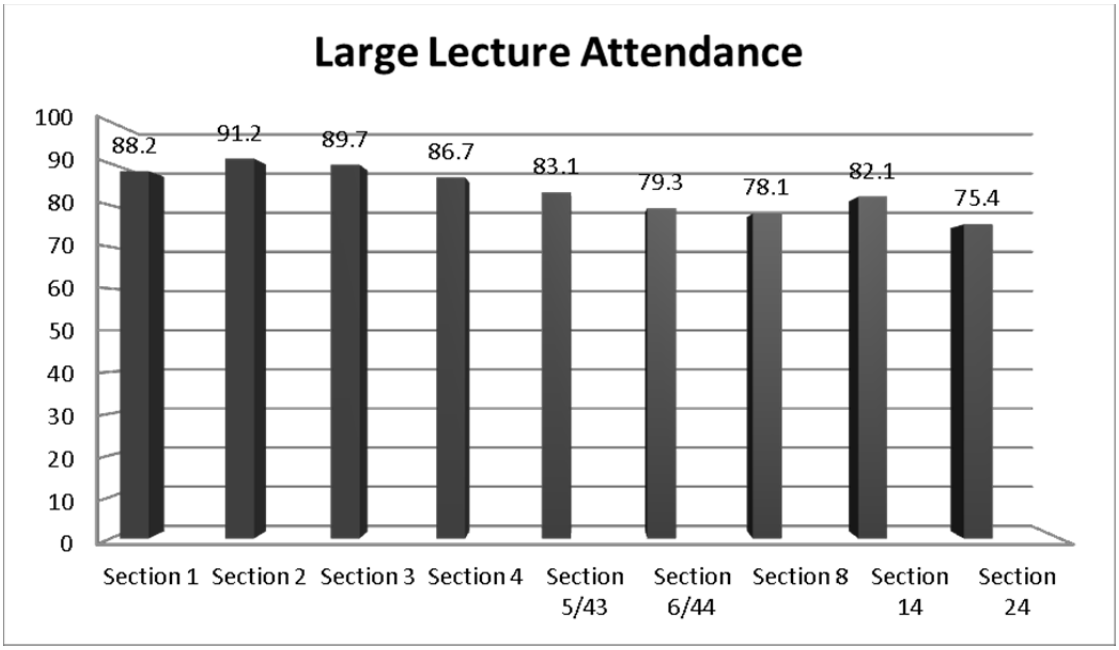
Appendix C: Sample Distractions Graph



	Section 9	Section 10	Section 11	Section 12	Section 15	Section 16	Section 17	Section 13
Late Students	5	12	5	2	1	15	4	3
Distractions	0	2	0	0	0	0	0	0
Total	5	14	5	2	1	15	4	3

This graph was shown at the end of the semester in the large lecture that met at 11:00 a.m. each week. The striped bars represent the total number of late students over the course of the semester in each lab section shown, while the black bars depict the total number of distractions created by students over the course of the semester. The gray bar conveys the total (i.e. number of late students plus number of distractions).

Appendix D: Sample Attendance Graph



This graph was shown at the end of the semester in the large lecture that met at 9:00 a.m. each week. The bars on the graph reflect the percentage of students in attendance over the course of the semester in each of the lab sections that attended the 9:00 a.m. large lecture.