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Course**

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Teaching Tip

Active Learning Using Debates in an IT Strategy Course

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ABSTRACT

Professionals working in technology fields face continuing challenges, not only to remain current with the latest technologies but also to understand the complex problems their company and IT organization faces. These challenges constantly change as technology evolves, and they are dependent on organizational factors. Lectures and discussions of case studies can help students understand the decisions made in a specific case, but students must also learn to apply what they learn from specific cases to more general situations. This paper discusses the use of debates to foster active learning in an IT strategy course. In the debate activities, students research the debate topic, identify key points supporting both sides of the topic, present their research in a debate format, and develop material to help others address the topic in other situations. These activities allow students to develop skills for discovering knowledge, thinking and acting strategically, understanding context, and speaking extemporaneously. This study shows that students found debates in an IT strategy course were a valuable way to learn about course concepts, had connections to activities they expected to engage in as IT professionals, and were enjoyable.

Keywords: Active learning, Experiential learning & education, Pedagogy

1. INTRODUCTION

An IS/IT education program has many goals. One important goal is for students to learn about current technologies and develop the skills needed to create programs, databases, servers, networks, and other technical components. Another goal is for students to learn concepts such as system analysis and project management that allow them to connect components into a functional IS system. Additionally, students must learn to connect technology to the larger context of the organization for which they work by learning about IS strategy, management, and related topics. At the same time, students need to develop skills in communication, critical thinking, and complex problem solving. As educators, we expect them to integrate “ways of knowing, being, and interacting with others into the capacity for self-authorship” (Baxter Magolda, 2001, p. xvi).

Developing and connecting all of these skills is an important part of an upper level IT strategy course. An organization’s IT strategy must be closely coupled to the strategy of the larger organization, so IT professionals have to understand the complex problems that the larger organization faces along with the complex processes involved in building and maintaining IT infrastructure. IT professionals work in an ever changing environment that requires them to think critically about how to make use of new and evolving technologies. Throughout the process of developing and implementing an IT strategy, the IT professional needs to communicate with a wide

range of people in other parts of the business to gather information and explain choices and decisions needed to develop a robust IT strategy.

Instructors address these challenges in many ways, and active learning approaches, where students engage in analysis, discussion, and application of what they are learning rather than passively receiving information, can improve student learning. Many instructors use case studies to support discussions of a specific situation, but it can be a challenge to find recent cases covering all of the topics in a course. Students can be assigned to research and present on a topic – this will challenge a student to learn about a topic – but it can be difficult for students to identify key points. While presentations are a good opportunity to develop communication skills, students are not always ready to respond to questions and contribute to an in-depth discussion of the topic. This paper explores the use of debates as an active learning approach that prompts students to explore a topic, identify key points, and present their findings in a more dynamic environment.

2. LITERATURE REVIEW

A challenge in teaching students to think strategically about IT is that, while all organizations have access to the same technology components, each organization presents a different context for their use. Students must learn about common tools, techniques, and frameworks, but must also learn how to think

critically about each specific situation they encounter. This is captured in the IS 2010 curriculum specifications for the IS 2010.7 IS Strategy, Management, and Acquisitions course (IS 2010, n.d.). The learning objectives include a number of things that are situation specific or will change over time – “deciding how information systems enable core and supportive business processes,” “understand existing and emerging information technologies,” and “apply information to the needs of different industries and areas” (IS 2010, n.d., p. 35).

Looking at the educational goals of the IT strategy class in the context of Bloom’s taxonomy, many require students to move from lower order to higher order cognitive skills (Armstrong, n.d.). Reading material, class discussions, and case studies can help students understand and apply the tools and techniques covered in the course. Debates require students to use higher order cognitive skills to analyze information about the debate topic, evaluate the points that best support both sides of the debate, and create material to support their side and refute points from the opposition.

2.1 Active Learning

The use of debate assignments connects to the idea of active learning. Active learning focuses on having learners be active participants in the learning process. This contrasts with traditional lecture activities where students passively receive information with little interaction between students. While all learning requires learners to take action, Bonwell and Eison (1991, p. iii) suggest that “to be actively involved, students must engage in such higher-order tasks as analysis, synthesis, and evaluation.” They identify several general characteristics of active learning in the classroom:

- Students are involved in more than listening.
- Less emphasis is placed on transmitting information and more on developing student skills.
- Students are involved in higher-order thinking (analysis, synthesis, evaluation).
- Students are engaged in activities (e.g., reading, discussing, writing).
- Greater emphasis is placed on students’ exploration of their own attitudes and values (p. 2).

There are many reasons to use active learning. Studies show that students prefer it to traditional lectures and that it helps promote thinking and writing skills (Bonwell and Eison, 1991). Additionally, research finds positive links between student engagement and student learning, with group projects and work incorporating concepts from different courses showing some of the largest benefits for student learning (Carini, Kuh, and Klein, 2006).

One challenge of implementing active learning is the “active” part. Active learning exercises often work better in a classroom with multiple projectors, reconfigurable furniture, and other tools to support collaboration (Connolly and Lampe, 2016). These types of classrooms and equipment may not be available, but debates will work well in most classroom configurations.

2.2 Debates

There is a long history of the use of debates in education starting with the ancient Greeks and continuing through the middle

ages. Debates and rhetoric were required parts of the curriculum in colonial American colleges (Combs and Bourne, 1989). Research shows a range of productive uses of debates in a variety of fields including dentistry, economics, history, management, marketing, microbiology, political science, psychology, social work, sociology, and teacher education (Combs and Bourne, 1989; Budesheim and Lundquist, 1999; Walker and Warhurst, 2000; Dundes, 2001; Keller, Whittaker, and Burke, 2001; Musselman, 2004; Roy and Macchiette, 2005; Wiggins and Forrest, 2005; Vo and Morris, 2006; Darby, 2007; Oros, 2007; Rubin, Weyant, and Trovato, 2008; Shaw, 2012). However, despite this long history, there is limited discussion of the use of debates in the IS/IT curriculum.

The literature shows that instructors use classroom debates for a variety of purposes, many of which apply to the IT curriculum. As expected from an active learning approach, debates offer a way to engage students in course material, develop critical thinking and communication skills, and promote mastery of course content. Darby (2007) found that students in an upper-level dental hygiene course developed competencies in research, preparing logical arguments, active listening, asking questions, and forming their own opinions. Additionally, “students report that the experience is FUN!” (Darby, 2007, p. 10). In a marketing course, evidence showed that students developed critical perspectives on the debate topics and valued involvement in the teaching process, with one student noting self-authorship of learning: “This was an opportunity to interrelate with the subject itself and let the lecturer stand back for a while; and let us actually teach each other” (Walker and Warhurst, 2000, p. 41). In a social work course, Keller found that debates increased students’ self-reported knowledge of course topics and “rated the education value of debates higher than traditional assignments” (Keller, Whittaker, and Burke, 2001, p. 343).

Research also shows that debates help students develop communication skills. In traditional presentations, the presenter is the expert on the topic and uses informative speaking skills to share their knowledge with the rest of the class. In a debate, both debate teams, and potentially the audience, have developed knowledge about the topic, and the debate teams must engage in persuasive speaking to deliver and support their points. A study involving upper-level marketing students that focused on oral communication skills found significant improvement in students’ confidence in their oral communication skills and comfort in public speaking (Combs and Bourne, 1989). The majority of students also enjoyed the debates and wanted to see them used in other courses.

The literature contains several examples of debates to engage upper level and graduate students in thinking about broader issues facing a professional field (Keller, Whittaker, and Burke, 2001; Darby, 2007; Rubin, Weyant, and Trovato, 2008). These efforts prepare students to engage in public discussions about potentially controversial topics and public policy issues where professionals in the field serve the public by providing expert knowledge. For IS/IT students, this could include topics such as privacy, the digital divide, and concerns about technologies like big data, artificial intelligence, and self-driving cars. One example is the use of debates in an information ethics course (Peace, 2011). This course uses weekly debates to introduce new topics. As other authors have reported, Peace found the debates increased student

engagement in class, increased student engagement with the course material, introduced multiple points of view, and improved students' communication skills. Peace also reports overall positive feedback from students about the debate activities.

However, research on the use of debates identifies a number of concerns. Several authors mention concerns about reinforcing a bias towards seeing the two sides discussed in the debate as the only possible positions when issues may have multiple points of view (Combs and Bourne, 1989; Budesheim and Lundquist, 1999; Darby, 2007; Kennedy, 2007). Another concern with debates is that they may reinforce a student's existing beliefs rather than prompting an unbiased examination of both positions (Wiggins and Forrest, 2005; Kennedy, 2007). Some studies report success in avoiding this by assigning students to support a position inconsistent with their initial opinion (Kennedy, 2007). Another potential solution is to select debate topics about which students have little knowledge.

Research identifies some concerns about using debates in the classroom as they are potentially confrontational. For example, imagine IT students debating on Mac or PC. Kennedy (2007) reviews several perspectives on possible solutions. One perspective is that confrontation could help students learn to manage conflict. Some instructors address the concern by grading participation rather than which side won to reduce the stakes of the debate. A related consideration is that students will have different comfort levels with confrontation, and cultural considerations should be considered (Tumposky, 2004).

3. DEBATE ACTIVITY

3.1 Course Overview

I have used debates in an upper level IT course that addresses several topics covering IT strategy and management of an IT organization. In the course, students learn about the challenges facing IT organizations, such as constant requests for new and updated technology, managing the allocation of resources to new projects and needed maintenance, and the need to understand the goals and strategic priorities of the organization. To help students understand how IT organizations manage these challenges, they explore a number of concepts, including how IT delivers value, the costs of delivering IT, IT service management, and IT governance. As part of the course, students explore and apply a number of tools and frameworks, including the IT Infrastructure Library (ITIL), project portfolio management, the project management office, SWOT analysis, and different approaches for employee performance planning and assessment. While the debates introduce some new content, the main goal is for students to apply the knowledge they have developed in the class to analyze a new situation.

This course was added to our curriculum in 2017 and is now being taught for the third time. All students working toward an undergraduate degree in either our Information Technology or Health Information Technology programs are required to take the class in their junior or senior year. At this point in the curriculum, students have taken courses covering a number of technical topics to build an understanding of the technical activities performed by an IT organization. Students have also completed a course covering project management and systems analysis to develop an understanding of how to design and implement a solution for a specific problem. This prepares them

for discussions at the level of the entire IT organization, for example about using governance processes to decide which projects to do.

The course is taught on a non-residential campus that seeks to serve students and employers in the local community. We see a mix of students with some traditional age students who enter college directly after high school and a larger number of students who work or serve in the military before returning to college. Approximately 20% of our students are female, and we have students from a range of international and cultural backgrounds. A large number of students are working while taking classes which offers a great opportunity to ask them to apply course concepts to analyze the technology they work with at their job.

3.2 Debate Format

I use the debates as an opportunity for students to apply what they have learned to analyze and discuss questions facing IT organizations. During the first half of the semester, students are introduced to a variety of concepts through the textbook, additional readings, case studies, and class discussions. In the second half of the semester, I continue to introduce new topics but focus on activities where students apply course materials in a variety of activities including the debates. I design these activities to mirror a professional work environment, so I have designed the debates to have an animated, but civil, discussion of the topic rather than a discussion that focuses on who won, or which position was "right." The debate also seeks to ensure that all students understand key points on both sides of the debate since the right answer will be different for different organizations and situations.

The literature on debates covers a range of different approaches and formats used in specific situations. Snider and Schnurer (2006) provide useful resources covering the practical details of debates and offer many different techniques. The literature informed the format I used in this class, but I also considered specific course goals, the length of the class meetings, and class size. I used a debate format that had teams alternate to present two points supporting their position. After a brief break, each team would rebut the points made by their opponents and then a general question and answer and discussion period followed. I allocated an entire 80-minute class period for each debate. This allowed the debate teams a few minutes to relax and organize themselves before the debate started and ensured that time constraints would not rush the debate or the questions and discussion that followed.

To address concerns that debates can be confrontational, I clearly stated that the goal of the debates was to prepare for the discussion rather than have one side "win." In the discussion after the debate, I also ensured that the class discussed other perspectives to address potential concerns about students only seeing two sides to the issue. The final concern identified in the literature was that debates would reinforce students' existing beliefs, and I addressed this by selecting topics where students would have limited previous knowledge.

Debates were set up with two teams. Each team researched the topic, developed material to support their side of the issue, and considered how to counter the points they expected the other team to make. I felt that the remainder of the class should also research the topic to provide an informed audience. Debate teams were set up with three to four students per team to support

two or three debates depending on the course enrollment, which has varied between 12-19 students. I set up the teams early in the semester to allow sufficient time for research and preparation by the debate teams and audience members. This also allowed me to discuss the debate format in class after the teams reviewed the details provided in the learning management system. Teams had at least 6 weeks to prepare for the first debate, and I usually allowed 20-30 minutes of class time the week before a debate to allow teams to work on final planning and preparation. By the time of the first debate, the class had covered many concepts that students might find useful in developing arguments for the debate, including the wide range of activities in an IT organization, cost/value assessments, managing and prioritizing IT requests, aligning IT activities with the goals and activities of the larger organization, and IT governance. Students also learned about the ITIL (formerly Information Technology Infrastructure Library) service management framework and the idea of a project management office (PMO).

The general format of the debates is outlined in Table 1. In class on the day of the debate, I used a coin toss to determine which debate team would go first. The teams then alternated to present two key points, with a short break followed by a rebuttal. Teams had the option of using visual material to support their points. To reduce the pressure on the speakers, I treated the time limits as guidelines and did not enforce them strictly. Questions from the audience and a general discussion followed the formal debate and used the rest of the class period.

Activity	Presenter	Time Allowed
Preparation and setup	None	5 minutes
First key point	Team 1	5 minutes
First key point	Team 2	5 minutes
Second key point	Team 1	3 minutes
Second key point	Team 2	3 minutes
Break – Rebuttal preparation		Up to 5 minutes
Rebuttal	Team 2	3 minutes
Rebuttal	Team 1	3 minutes
Additional rebuttal		As needed
Audience questions		As needed
Class discussion		Remainder of the class period

Table 1. Debate Outline

3.3 Debate Assignments

For each debate, all students complete a pre-debate preparation assignment and a post-debate assignment where they apply what they learned in the debate. An additional assignment assesses the performance of each debate team. Appendix 1 provides an overview of the assignments for each debate. In total, the debate assignments contributed just under 20% of the total grade for the course. I used written assignments to document the research done to prepare for the debates. Each debate team researched the debate topic and identified key

points for the debate. Teams summarized their research in a briefing book that contained an overall discussion of the topic to provide background material and a discussion of three to five points, including points that supported the team’s position and points that could be used to rebut points made by the other team. The briefing book also documented the sources used by the team. I told teams to target the briefing book for an audience that was not familiar with the topic and specified that the briefing book should be in a format that could be given to the debate audience as a reference. The grading rubric for the assignment had four criteria:

1. The overall discussion of the topic.
2. The quality of the writing and organization of the briefing book.
3. Discussion of points supporting the team’s position.
4. Discussion of points the opposing team might use.

The separate rubric item for writing was consistent with other assignments in the course, and the quality of the sources and research was considered in the evaluation of the other rubric elements.

The individual students in the debate audience completed an audience research assignment to provide a critical, informed audience for the debate. Similar to the briefing book assignment, students prepared background information on the topic, identified three to five major points they expected the debate teams to address, and provided a list of sources. For the debate points, students in the audience wrote separate paragraphs discussing how the point connected to the two sides of the debate. The assignment also required audience members to develop three questions for the question and answer period at the end of the debate. The grading rubric for the audience research assignment was similar to the rubric for the briefing book assignment with the following elements:

1. The overall discussion of the topic.
2. The quality of the writing and organization of the material.
3. Discussion of key debate points for both sides of the debate.
4. Three questions for the question and answer period after the debate.

During the debate, the audience assessed both debate teams on four criteria: organization and clarity, use of research, use of rebuttal, and presentation style. The full assessment rubric is provided in Appendix 2. With three debates, this assessment is 7% of the total points for all of the debate assignments. I averaged the audience scores and compared them to my assessment before assigning a grade to each team. Initially, I was concerned that the audience scores might be overly harsh or kind, but I have found they generally agree with my assessment.

Following the debate, all students complete an individual assignment to develop consulting notes. This assignment puts students in the position of an IT management consultant who would work with organizations to determine how to address the debate topic in their specific situation. The consulting notes would be an internal document used to organize a discussion with the client. In the consulting notes, students identify three

key criteria to assess and discuss how different responses from a client would influence the recommendations for how the client should address the topic. I provided the example of a realtor helping a family find a house, with the size of the family being an important criterion. Students also identify an example organization and use their consulting notes to provide a recommendation for the client. In one case, a shorter follow up assignment was used when a debate occurred during the last week of the semester.

3.4 Debate Topics

The first debate topic was the question of how IT resources (hardware, software, people, and funding) should be organized in a company. The two positions argued in the debate were:

- Centralization – all IT resources should be centrally controlled and managed.
- Decentralization – while some IT resources may be centrally controlled and managed, there is value in allowing other units of the organization to control and manage some IT resources.

To help students research the topic, I noted that decentralized IT can also be called “distributed IT,” “shadow IT,” or “rogue IT.” This topic supports the “Structure IS-related activities to maximize the business value of IS within and outside the company” learning objective for the IS 2010.7 course in the IS 2010 model curriculum (IS 2010, p. 54).

The second debate looked at the question of how quickly or slowly organizations should adopt cloud computing. The two positions argued in the debate were:

- Rapid adoption – organizations should act rapidly to adopt cloud infrastructure and software solutions.
- Slow adoption – organizations should take a slow, cautious approach in adopting cloud infrastructure and software solutions.

To constrain the debate, I specified that only software-as-a-service (SaaS) and infrastructure-as-a-service (IaaS) aspects of cloud computing should be considered, and students were provided with several examples of each, including cloud services used by the university. This topic supports the “Understand existing and emerging information technologies, the functions of IS and its impact on the organizational operations” learning objective for the IS 2010.7 course in the IS 2010 model curriculum (IS 2010, p. 54).

I added the third debate topic in response to a larger enrollment the second time I used debates in the course. This debate addressed the questions of technology selection and vendor partnering and built on a discussion from the course textbook (Austin, Nolan, and O'Donnell, 2016). This topic supports the “Understand how strategic decisions are made concerning acquiring IS resources and capabilities including the ability to evaluate the different sourcing options” learning objective for the IS 2010.7 course in the IS 2010 model curriculum (IS 2010, p. 54).

The text presents details of the technical features of three potential solutions, background on each of the vendors, and discussion of different approaches for structuring the vendor contract. Each of the two debate teams argued in favor of

different proposed solutions while students in the audience developed points supporting all three proposed solutions. Students struggled a bit with finding relevant resources other than the text, so a few weeks before the debate I provided links to several articles that analyzed vendor relationship issues in several large IT project failures. This debate took place near the end of the semester, so I used a shorter follow up assignment where students ranked the three potential solutions, discussed the strengths and weaknesses of each, and identified their overall final decision.

4. RESULTS

The first time I taught the course, there were 12 students enrolled in the course when the debates took place. Two debates on IT organization and cloud computing were held, and all debate teams had three members. I did not know what to expect, but students readily embraced the debate assignments. In addition to the required preparation, several debate teams developed pamphlets supporting their cause that they distributed on the day of the debate, and one team even had theme music to support their arguments.

For both debates, teams were well prepared and readily engaged in a lively back and forth. Teams identified most of the relevant points for both topics and made connections to material previously discussed in the class. The debates provided great preparation for the post-debate discussion. As expected, students saw that the right approach for the structure of an IT organization and the pace of cloud adoption depends on the specific company or organization, and the post-debate discussion covered factors that might affect decisions in different situations, providing a good start for the consulting notes assignment.

At the end of the semester, students responded to a short survey about the debate topics, the overall debate activity, and other aspects of the class. Since this was a completely new class, I wanted to collect feedback on many aspects of the class. To keep the survey short, there were only four questions about the debate activities. Ten of the twelve students (83%) in the class responded. The survey used a five-point Likert scale ranging from Strongly Agree to Strongly Disagree. The debate related questions were:

1. I found the debate about whether IT should be centralized or decentralized helpful in learning about how the organization of IT affects its ability to work effectively with the business units it supports.
2. I found the debate about how quickly or slowly companies should adopt cloud technologies helpful in learning about how organizations should approach new technologies.
3. I found the debate format to be a useful way to explore the two topics (IT organizational structures and cloud computing) that were discussed.
4. Overall, I enjoyed the debate activities.

Although one response was neutral for all of the questions, there were at least seven (70%) strongly agree responses for each question. These results match the enthusiasm that I saw in class during the debates and the quality of work seen in all of the debate related assignments.

With the positive response to the debates, I retained them the next time I taught the course. A larger enrollment required the addition of a third debate topic as previously discussed. I also reviewed all of the debate assignments and made minor updates to improve consistency across all of the debates. Again, the students readily embraced the debate activities. The third debate about vendor partnering seemed especially popular and, without prompting from me, the debates teams, encouraged by the audience, engaged in several additional rounds of rebuttal. For the consulting notes assignment following the IT organization debate and especially the cloud computing debate, many of the students in the class used their current employer as the example.

I used a more detailed end of the semester survey to assess student perspectives on the debate activities. The survey questions are in Appendix 3. Students were asked to complete the survey in class during the last week of the semester, and 13 of the 19 students (68 %) completed the survey. The changes between the two surveys do not allow a direct comparison of the results, but in general, the surveys agree about the value and student enjoyment of the debate activities.

The first three survey questions asked about the value of the debates for learning about concepts covered in the course, and all of the questions had average responses between 4.0 and 4.2 using a five-point Likert scale (1 = Strongly Disagree; 5 = Strongly Agree), showing that students clearly saw the value of the debates.

The next two questions asked about the effort needed to participate in the debates. On a seven-point scale, the average for effort as a debate team member was 5.5, and the average as an audience member was 4.9. This indicates that both activities required effort, but the effort was not excessive. It is not surprising that participating as an audience member took less effort. Based on comments from students, some of the debate teams faced challenges common to group work including free riders and problems coordinating the work.

Question six asked, using a seven-point scale, whether students saw a connection between the debate activities and activities that they may do as a working IT professional. Two responses were neutral, and the rest saw a connection, with an average response of 5.3.

Questions seven and eight again used a seven-point scale and asked how much the students enjoyed the debate activities. For participation as an audience member, the overall average was 5.0, and only one student indicated they did not enjoy being in the audience. The average for participating as a debate team member was slightly lower – 4.5, with two students not enjoying participating in a debate team. Again, the challenges of group work may be a factor here.

The final question asked students if they would like to do debate activities in future courses. The average response on a seven-point scale was 4.5. Three students indicated they would not want to do debates in the future, but two students “very much” favored doing debates in future classes. A challenge with this question is that several of the students in the class graduated at the end of the semester, so they had no future courses to consider.

5. DISCUSSION OF RESULTS

The results show that students enjoy debates and they view them as a valuable active learning activity for an IT strategy course, in agreement with the research on the use of debates in other fields. In addition to the overall good quality of work seen in the assignments that were part of each debate, I observed that several students made an effort during the debate and the following discussion to share information with the class based on their unique experiences. One student with an interest in IT security shared great insights in both the IT organization and cloud debates. Another student working at a local insurance company shared specific details about how the nature of the business and security concerns favor a centralized approach to IT delivery and great caution in considering cloud computing.

Students actively participated during the in-class debates as both debate team members and audience members. In both semesters where I used debate activities, I noted that quieter students who clearly engaged with the course material but were reluctant to speak or ask questions during class were active participants in class with their debate teams. This may demonstrate an increase in confidence as expected from previous research (Combs and Bourne, 1989).

From the instructor’s perspective, the debates offered a nice change of pace. Rather than having to find relevant content for a topic, prompt students to review the content, and lead an in-class discussion, I could hand this task over to the students. I still had to prepare for the in-class discussion, work to engage the audience members during the transition from the debate to general discussion, and introduce topics that did not surface during a debate, but it was rewarding to see students take more ownership of the learning process. This debate approach worked well for the selected topics. The actual debates also reminded me of the more productive approaches to discussing decisions that I saw during my career as an IT professional.

There is an opportunity to improve some aspects of the debates, especially the group work aspect of participating as a member of a debate team. Most students have never participated in a class debate, so I plan to revise the introduction to the debates to address this by providing examples. The book by Snider and Schnurer (2006) provides many suggestions. Also, a chapter in the course text, where the CIO character leads a meeting where two of his staff discuss traditional and Agile approaches to project management, could be a useful example (Austin, Nolan, and O’Donnell, 2016). Organizational history and culture are obvious factors in the vendor partnering debate and were addressed by the debate teams. Students should consider these factors in the other debates, so I am revising the debate preparation assignments to suggest that students consider non-technical factors, including organization structure, history, and culture.

In listening to student concerns about the group work in the debate teams, the concerns expressed were not specific to the debate activity but were similar to comments expressed about other group assignments in the course. Rather than address these in the debate activities, I plan to address concerns about the group aspects of the debates as part of reviewing all group assignments in the course. One activity in the course has students develop a student performance plan near the beginning of the semester with a review at the end of the term. This is based on employee performance planning and reviews that

students may encounter as IT professionals. I plan to add a section for goals specific to participation in group assignments and have students do peer reviews of themselves and their group mates to provide feedback that can be used when I work with individual students to assess their performance.

6. CONCLUSION

The debate activities proved to be a productive way to use active learning concepts in this class. I saw the development of knowledge and critical thinking along with increased engagement and fun as discussed in the literature. Debates provided a way for students to build their own initial knowledge on a topic rather than receiving this from the instructor. Students engaged in the activities and met my expectations for learning about the debate topic and connecting it to other material addressed in the course. In addition, they enjoyed the activities, and, after the first debate, eagerly anticipated the remaining debates.

Students enjoy the debates, see them as a valuable way to learn about course concepts, and make connections between the debate assignments and activities they expected to engage in as IT professionals, so I plan to continue to use them in teaching IT strategy. While I am happy with the current debate topics, I plan to continue to look for additional topics that would make suitable debate topics. These might replace one of the current topics but could also allow me to vary the debate topics from semester to semester.

One key to the success of the debate topics used was that there was no clear right answer. In the IT organization and cloud computing debates, the real answer was “it depends” which forced students to look for factors that could influence organizational decision-making. While the vendor partnering debate used a specific situation with three viable solutions and many details, students were able to analyze key factors relevant to any vendor partnering decision.

I believe that opportunities to use debates exist in many IS/IT courses including more technically focused courses like programming and database development. IT professionals regularly face decisions where there is no clear “right” answer, and debates could prepare students for these situations. Students could explore the context of tools and practices used by IT professionals and use debate to present their findings. For example, in a programming course, students could debate the merits of different integrated development environments (IDEs) or even different programming languages. In a database course, the prime focus of the course might be SQL databases, but a debate could offer a way for students to explore the strengths and weakness of NoSQL databases and other emerging technologies. I think it could be interesting to use debates with case studies and could even envision debates with more than two sides. In case studies discussing a failure, teams could argue that a specific actor or action is or is not responsible for the failure. In cases that present an open-ended situation, teams could argue in support of specific future actions.

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APPENDIX 1

Overview of Debate Assignments

Assignment	Completed by	Due
Briefing Book	Each debate team	½ hour before the debate
Audience research	Individual audience members	½ hour before the debate
Assessment of debate per	Audience and instructor. Grade for each debate team.	Completed during debate
Follow up assignment: Consulting notes (debates 1 &2) Vendor choice (debate 3)	All students individually.	One week after the debate

APPENDIX 2

Debate Assessment Rubric used by Audience

Criteria	4	3	2	1	Score
<u>Organization and Clarity:</u> Main arguments and responses are outlined in a clear and orderly way	Completely clear and orderly presentation	Mostly clear and orderly in all parts	Clear in some parts, but not overall	Unclear and disorganized throughout	
<u>Use of Research:</u> Reasons are given to support team's position	Very strong and persuasive arguments given throughout	Many good arguments given, with only minor problems	Some decent arguments, but some significant problems	Few or no real arguments given, or all arguments had significant problems	
<u>Use of Rebuttal:</u> Identification of weakness in opposing argument	Excellent response to arguments presented by opposing team	Good response to opposing arguments	Decent response, but some significant problems	Poor rebuttal with little response to arguments presented by opposing team	
<u>Presentation Style:</u> Tone of voice, clarity of expression, and precision of arguments kept audience's attention and persuaded them of team's position	All features were used convincingly	Most features were used convincingly	Few features were used convincingly	Presentation was not convincing and did not keep audience's attention	
Total					

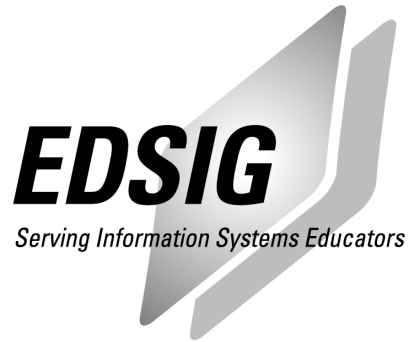
APPENDIX 3

End of Semester Survey Questions used for the Second Class Participating in the Debate Activities

Please answer the following questions about the in-class debates that looked at cloud computing, IT organization, and vendor partnering. You were a member of a debate team for one debate and an audience member for the other two.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I found the in-class debates helpful in learning how to research and understand multiple perspectives of issues facing IT organizations.					
I saw the value of the in-class debates for learning how to research issues facing IT organizations.					
I saw the value of the in-class debates for learning how to understand multiple perspectives of issues facing IT organizations.					

	Not Very Much 1	2	3	Neutral 4	5	6	Very Much 7
How effortful was it for you to participate in the debate as a debate team member?							
How effortful was if for you to participate in the debate as an audience member?							
How much did the debate activities help you understand what IT professionals do to understand complex issues?							
How much did you enjoy the debate activities as a debate team member?							
How much did you enjoy the debate activities as a debate audience member?							
How much would you like to do similar debate activities in future courses?							



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