Impact of Student-Led Instruction vs. Professor-Led Instruction on Course Performance and Student Perceptions of Learning

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ABSTRACT: This study examines the difference in student performance when exposed to either student-led or professor-led instruction on Faith and Work topics, and whether the difference in instruction method has an impact on student beliefs about their learning and their perceptions about student-led instruction. Quiz scores and post-course survey results indicate that there was no difference in student performance based on instruction method, but student perceptions about learning varied. The results suggest that the process of creating student presentations positively influences learning, but that learning content from peers is not viewed as having a positive impact on learning.

INTRODUCTION

Student presentations are a common element of many business courses for a variety of reasons. First, effective presentation skills are one of the essential learning outcomes for college students in the twenty-first-century, as determined by the Association of American Colleges & Universities (2011). In addition, 89% of employers believe that colleges and universities should spend more time developing presentation skills, (AAC&U, 2011) because of the direct translation into the workplace. The ability to present your ideas effectively not only influences hiring decisions, but also contributes to continued career growth and employability (de Beer, 2007).

Secondly, using student presentations as a pedagogical practice benefits the professor, presenter, and non-presenting students. From the professor’s perspective, presentation assignments can ask students to either teach an assigned topic or to summarize small group work. This can add both depth and breadth to the student’s understanding of the assigned topic. By assessing presentation content and delivery skills, instructors can identify any learning gaps and coach students about improvement areas. As an experiential or active learning approach, student presentations push presenters to not just passively acquire knowledge, but be actively involved in the learning process (McCarthy, 2010). This leads to “greater class interaction and participation, increased interest in learning, new perspectives covered otherwise, and improvement in communication and presentation skills” (Girard, Pinar & Trapp, 2011, pg. 77). Non-presenting students also benefit from this approach as they learn peer-feedback techniques, grasp course content, and observe presentation skills (Girard, Pinar & Trapp, 2011).

Lastly, as Christian professors looking to integrate faith into the learning process, the decision to use student presentations can be one way to infuse virtue development into the classroom, particularly when the presentation content connects to their faith. Students develop courage by facing uncertain situations such as public speaking and self-disclosure with the willingness to share how their beliefs inform their behavior in a business environment. The virtue of wisdom can also be cultivated when presentation topics are focused on faith integration, as students are directed back to God, in that “the fear of the Lord is the beginning of wisdom, and knowledge of the Holy One is understanding” (NIV, Proverbs 9:10).

Based on these reasons, student presentations have the potential to positively influence the learning experience for students. However, there is more to discover about the effectiveness of student presentations as a learning tool. Do students learn better when their fellow classmates teach the material compared to the
professor? Do student presentations change their perceptions about how well they mastered the course content? There have been studies on the impact of different pedagogical choices on learning outcomes and student perceptions (Corbett, Kezim, & Stewart, 2010; Redner & Rundle, 2006). However, the literature is less clear on the impact of different instructional approaches when it comes to student-led versus professor-led instruction.

This study was devised to fill that gap by examining whether there was a difference in learning outcomes based on who facilitated the content and identifying student perceptions about the learning experience. During the fall semester of 2015, two sections of undergraduate students enrolled in MGT 231: Principles of Management learned about Faith and Work topics using two different instructional approaches. One section was taught using student-led instruction, while the other was taught through professor-led instruction. Quiz scores were used to measure whether the teaching approach made a difference in student learning, and a post-course survey was conducted to identify student perceptions about their learning based on the teaching approach.

Key research questions include the following: (1) Does the choice of student-led versus professor-led instruction have an impact on student performance as measured by Faith and Work quiz scores? and (2) Does the choice of student-led versus professor-led instruction have an impact on student beliefs about their level of learning and their perceptions about student presentations as an effective instructional technique?

What follows is a summary of the literature, a description of the research methodology, results of the study, and a discussion of the results along with limitations and implications for future research.

**LITERATURE REVIEW**

Little research exists examining the impact of student-led instruction versus professor-led instruction on both measurable performance and student perceptions. However, foundational literature provides support for using experiential learning elements in the classroom setting. In addition, researchers have delved into other classroom factors that have been found to impact student performance, such as student participation and active learning. The literature also includes studies that seek to uncover student perceptions about what classroom factors contribute to their learning.

**Experiential Learning Theory**

Using student presentations as a pedagogical practice draws on Kolb’s Experiential Learning Theory, where learning is defined as “the process whereby knowledge is created through the transformation of experience” (Kolb, 1984, pg. 41). Individual learning style preferences, identified as Diverger, Assimilator, Converger, and Accommodator (McCarthy, 2010), are determined by “two dialectically related modes of grasping experience - Concrete Experience (feeling) and Abstract Conceptualization (thinking) - and two dialectically related ways of transforming experience - Reflective Observation (reflecting) and Active Experimentation (acting)” (Eickmann, Kolb & Kolb, 2002, pg. 4).

Eickman, et al. (2002) found that the learning styles of management students were concentrated in the thinking-oriented regions, which are helpful for learning analytic and quantitative skills. However, students need a variety of experiential or active learning opportunities that address the four different learning style preferences to access their preferred learning style in the classroom (Penger, Znidarsic, & Dimovski, 2011) as well as give students experience with all four learning modes: feeling, reflecting, thinking, and acting (Eickman, et al., 2002). This provides students with a wide range of experiential learning strategies to choose from in workplace situations and other academic pursuits (Penger, Znidarsic, & Dimovski, 2011), and leads to transformational learning experiences in the classroom (McCarthy, 2010).

**Classroom Factors that Impact Student Performance**

Taking an experiential learning approach in the classroom, both through student participation and an active course design, has been shown in the literature to improve student performance. Ward and James stated that “class participation will lead students to be more engaged in the classroom, more involved with course subject matter, and hence more focused on learning” (2015, pg. 144). They tested this relationship in a 2015 study, finding a “direct and significant relationship between actual class participation and learning of course
content” (Ward & James, pg. 155). This supported previous studies that connected participation with higher order thinking (Smith, 1977) and increased student thought participation (Fritschner, 2000).

In 2014, Black and Kassaye completed a study that looked at the impact of course design on student outcomes. They found that courses with active learning designs resulted in better student grades than those with more passive learning designs. In addition, they also found that student perceptions about how the course was conducted were more positive in the courses with a more active learning design. Zhang, Zhang, Stafford, and Zhang (2013) took a similar approach as they compared a student-centered active learning approach to a traditional lecture format. Their results support the Black and Kassaye study (2014), as they found overall student performance improved more in the active learning environment. These two studies extended earlier work that linked active learning to higher levels of retention for student learning (Van Eynde & Spencer, 1988) and critical thinking (Paul, 1990).

Classroom Factors that Impact Student Perceptions

The literature also includes studies that examined student perceptions about how classroom factors contribute to learning. Girard, Pinar, and Trapp (2011) found that students had positive perceptions about the contribution of class presentations to the development of their public speaking skills. Girard, et al. (2011) also found that peer-assessment activities were perceived positively by their sample of marketing students. Lastly, Corbett, Kezim, and Stewart (2010) found that “active course designs, specifically, an experiential design, result in students perceiving their learning to be more meaningful to their future jobs” (2010, pg. 123).

To summarize, the literature seems to indicate that improved student performance and perceptions can or may result from using active learning approaches in course design. Using student-led presentations to teach Faith and Work topics fits the qualifications of an active learning exercise. Students engaged with course material on a deeper level through preparation of their team’s presentation, and learned content from their peers. The research indicates that student-led instruction should lead to improved student performance on related quizzes. In addition, it should result in positive attitudes about their level of learning and their perceptions about student presentations as an effective instructional technique. The study results will add to the body of research around the effectiveness of active learning course design and provide new insight into how students perceive the learning experience of receiving student-led instruction versus professor-led instruction.

METHODOLOGY

Undergraduate management students enrolled in two identical sections of a principles-level management course participated in the study over the course of one semester. Each section fulfilled the course objective, “Articulate the connection between business and the redemptive story of Creation” by addressing five different broad Faith and Work topics throughout the semester. These topics, derived from Ewest and Miller’s “five overarching modern Protestant accents that shape and inform the integration of faith and work” (2010, pg. 16), included the following:

- Personal Purpose or Calling in daily life
- Stewardship or “Co-Regency”
- Economic Justice and Business Ethics
- Lifestyle Modesty within success, with Radical Generosity
- Evangelism

To address these topics, all students read chapters out of three different textbooks: Every Good Endeavor (Keller, 2012), Why Business Matters to God (and what still needs to be fixed) (Van Duzer, 2010), and How the Church Fails Businesspeople: And What Can Be Done About It (Knapp, 2012). In addition, all students completed four online quizzes on assigned reading and wrote both a pre and post-course essay that reflected changes in their personal perspective on Faith and Work integration over the course of the semester.

The teaching method used to deliver content and facilitate discussion differed between the two sections. Section one participated in professor-led instruction on each Faith and Work topic. Section two was divided into teams and asked to prepare a classroom presentation on one Faith and Work topic. Students were required to include an orientation to key elements of the assigned
Faith and Work topic, real-life examples of the topic, and a class engagement activity (see Appendix A).

To provide consistency between the two sections, student-led and professor-led instruction was based on the same reading assignments and completed on the same class days. Student teams were given the associated quiz questions ahead of time to help in the presentation preparation process, and after each presentation, the online quiz was opened to the entire class to complete before the next scheduled class. Quiz score data was collected to measure the impact of the teaching method on student learning (see Appendix B for Faith and Work quiz questions); section one had 36 participating students, and section two had 37 participating students.

After the completion of the semester, a second data collection took place. All enrolled students were offered the opportunity to complete a follow-up survey, and were placed into a drawing for a small gift certificate if they submitted answers.

The survey content was developed to measure student perceptions of teaching methodology contributions to learning using a five-point Likert-like scale (see Appendix C). This scale included strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. The usage of a neutral response item has been found to be problematic in some cases, leading to “ambiguity involved with the meaning of the response” (Kulas, Stachowski, & Hays, 2008, pg. 258). In this case, the neutral midpoint was used to allow students to decisively identify with a neutral attitude, and the results were not unduly skewed by the presence of the midpoint. If the study was replicated, the midpoint could be eliminated to push respondents to choose agreement or disagreement and instead include the option “prefer to not respond” or “not applicable” (Kulas, et al, 2008).

Two questions were customized based on what type of instruction they experienced in the course, three questions focused on Faith and Work learning outcomes overall, and two questions identified basic demographic information. For the customized questions, students were asked whether they believed the way the Faith and Work content was facilitated had a positive impact on their learning, as well as whether preparing a presentation on one Faith and Work topic had a positive impact on their learning. From section one, 12 students responded, while 35 students responded from section two for a total of 47 students out of a possible 73 students.

RESULTS

Quiz Score Results

First, quiz score data was examined to determine whether the differences in instruction had an impact on the graded assessment. Because the two sections had independent observations and the data met the measurement requirements, an independent-samples t-test was conducted to compare the quiz score output between the two sections. The results indicated that there was not a significant difference in the scores for section one who received professor-led instruction (M = 8.17, SD = .257) and section two who received student-led instruction (M = 7.95, SD = .675); (t(6) = .609, p = .245). The overall average quiz score for all students was a passing score: 8.06 points out of 10 possible points. This answers the first research question in that the choice between professor-led and student-led instruction did not have a significant impact on how well students were able to complete the Faith and Work quizzes.

However, there are other factors that could have an impact on the students’ ability to successfully complete the quizzes, including student GPA, level of class preparation, and reading comprehension ability. If a significant difference in performance between the sections had been found, these elements would have required a closer look to help explain the difference outside of the teaching method.

Post-Course Survey Results

The second research question dealt with student perceptions about their level of learning and the use of student-led instruction as an instructional technique through a post-course survey. Interestingly, even though there were not any statistically significant differences in their quiz grades, there were definite differences in the students’ perception of the impact of learning by type of instruction method.

Descriptive statistics of the responses are provided in Table 1 and 2. The results indicate that the majority of students who received professor-led instruction agreed or strongly agreed that it had a positive impact on their learning (92%) and had a preference for professor-led instruction. A smaller percentage of the students who
received student-led instruction agreed or strongly agreed that it had a positive impact on their learning (66%), but only 63% of these students preferred to learn from the professor. These results seem to show that students believe that professor-led instruction is more beneficial when it comes to their learning, but the students who had been exposed to student-led instruction were less likely to prefer learning from the professor.

There was also a perception difference when students were asked to rate the impact of preparing a Faith and Work presentation. The majority of students who participated in student-led instruction agreed or strongly agreed that being required to create a presentation had a positive impact on their learning about the Faith and Work topics (91%). In contrast, only 50% of the students who participated in faculty-led instruction agreed or strongly agreed that being required to prepare a presentation would have positively impacted their learning. These results indicate that the students who created a Faith and Work presentation understood the benefits of digging deeply into a specific topic, even though they did not prefer learning from those presentations. Students who had not been exposed to the presentation assignment were not able to understand the potential benefits to learning.

Table 1. Post-Course Survey Results for Professor-Led Instruction (N = 12)

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having my professor lead the Faith and Work discussions positively impacted my learning.</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
<td>66.7%</td>
<td>25%</td>
</tr>
<tr>
<td>My learning would have been improved by preparing a presentation on one Faith and Work topic.</td>
<td>8%</td>
<td>25%</td>
<td>16.7%</td>
<td>41.6%</td>
<td>8%</td>
</tr>
<tr>
<td>I prefer to learn course content from:</td>
<td>Professor-led: 92%</td>
<td>Student-led: 8%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Post-Course Survey Results for Student-Led Instruction (N = 35)

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having my peers lead the Faith and Work discussions positively impacted my learning.</td>
<td>2.9%</td>
<td>8.6%</td>
<td>19.4%</td>
<td>55.6%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Having to prepare a presentation on one Faith and Work topic positively impacted my learning.</td>
<td>0%</td>
<td>0%</td>
<td>8.6%</td>
<td>40%</td>
<td>51.4%</td>
</tr>
<tr>
<td>I prefer to learn course content from:</td>
<td>Professor-led: 62.9%</td>
<td>Student-led: 37.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lastly, Table 3 presents the final survey question results asked to all course participants. It indicates that regardless of the teaching method, 89.3% of all students felt confident in their understanding of Faith and Work topics. This is supported by the above-average quiz scores, and matches their perceptions about their learning. Students who participated in professor-led instruction were impacted more by the instruction method, while creating the presentation had more of an impact on learning for those who received student-led instruction. These perceptions could also be influenced by other factors, such as presentation team dynamics, presentation ability, and motivation to learn Faith and Work topics.

Table 3. Post-Course Survey Results for All Students (N = 47)

<table>
<thead>
<tr>
<th>Measurement Item</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel confident in my understanding of Faith and Work topics as a result of this course.</td>
<td>0%</td>
<td>0%</td>
<td>10.6%</td>
<td>48.9%</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

**DISCUSSION**

The results of this study, while indicating that there was not a statistically significant difference between instructional methods when it came to learning, suggest that there was an impact on student perceptions about the benefits of learning. This has important implications for how professors approach course design and gathering student feedback.

**Course Design**

First, looking to course design, the results seem to confirm that student presentations not only develop important oral communication skills and contribute to the experiential learning process, but requiring students to become an “expert” on one particular topic can be perceived as a meaningful learning experience. Professors may want to design student presentation assignments so that students are asked to think deeply about topics that stimulate critical thinking and develop value-driven perspectives, rather than simple factual overviews or a regurgitation of textbook content. With the Faith and Work presentations, students were asked to apply the content to a real-life situation and engage the class in thinking about the assigned topic, which required thought and preparation on the part of the student. In addition, students could be asked to reflect on the presentation assignment as a learning experience, connecting back to both their preferred learning style and personal virtue development.

**Course Feedback**

Second, the methodology behind gathering course feedback should be re-examined. Typically, course evaluations tend to focus on progress towards developing competencies and skills, but professors would benefit from understanding student perceptions of the impact on learning for specific assignments. Just because a student does well on an assessment does not necessarily mean that the learning experience resonated positively with the student.

In this study, both the professor-led and student-led instruction resulted in similar performance outcomes, but differed in how students perceived the impact on learning. Knowing that students learn well from the process of creating a presentation, but do not learn as well from listening to the actual presentation may change next semester’s assignments. Perhaps a hybrid approach would be an improvement: professor-led instruction for key content areas and student-led instruction around Faith and Work application elements.

**LIMITATIONS AND FUTURE RESEARCH**

One limitation of this study is that the analysis was conducted using a sample of students from only
one university within two sections of one management course. To be able to make stronger and more generalized conclusions, a greater number of universities and topics across the business curriculum should be examined. Further research is needed to determine whether the impact on learning changes if a different presentation topic is used, along with identifying other student characteristics that may confound the findings. These student characteristics could include previous experience with the presentation material, motivation to learn topic, gender, and denominational background.

To summarize, the results of this study clarify that despite a lack of difference in quiz scores between professor-led and student-led instruction and a more negative perception towards learning from student-led instruction, there are still strong reasons to incorporate this type of assignment into the business curriculum. The process of creating a presentation had a positive impact on learning, and broadened student perspectives on using experiential learning methods to learn content. Professors can use these results when considering course design choices and developing course feedback instruments.

The author wishes to thank Dr. Emmett Dulaney and Anderson University’s Doctorate of Business (DBA) program for their inspiration and assistance with this article.

REFERENCES


Appendix A

MGT 231: Faith and Work Team Presentation

Date: See Course Schedule for due dates
Length: 15-minute presentation
Breakdown of Key Elements:

- Orient class to key elements of assigned Faith & Work theme & assigned reading: Key concepts, definitions, team perspectives about topic
- Provide real-life examples of the theme “lived out”: Interviews, company examples
- Engage class in discussion about the topic: Small group discussion, Q&A, activity
- Key Grading Elements:
  - Clearly presented theme
  - Real-life examples of the theme “lived out”
  - Purposeful and planned class discussion
  - Equal involvement by all team members

Appendix B

Quiz #1: Personal Purpose or Calling

Quiz #1: Personal Purpose or Calling

1. Without meaningful work, we experience:
   a. Inner loss and emptiness
   b. Peace and fulfillment
   c. Usefulness to others

2. “Leisure is not the mere absence of work, but a(n) __________ of mind and soul.”
   a. Burden
   b. Attitude
   c. Celebration

3. Modern society views work as:
   a. Temporary difficulty
   b. An unfortunate truth
   c. A necessary evil

4. “Filling the earth”, according to Genesis 1:28, means we must:
   a. Exploit the earth’s resources
   b. Develop and build our society
   c. Have large families

5. According to Keller, our work should be a way of service to:
   a. God
   b. Neighbors
   c. God and our neighbors
6. “One of the main ways that you love others in your work is through the ‘ministry of ____________’.”
   a. Acceptance
   b. Competence
   c. Faith

Quiz #2: Stewardship and “Co-Regency”
1. We are called to participate in the creation mandate AND God’s work of _____.
   a. Wealth-Creation
   b. Opportunity
   c. Reconciliation

2. According to Van Duzer, the two purposes of business include:

3. Operating in the “messy middle” is defined as:
   a. The conflict between behaving ethically and business success
   b. Looking for the possible “third way” in challenging situations
   c. The alignment between ethical behavior and business success

4. “The pursuit of purpose should be limited by the notion of ____________.”
   a. Shareholders
   b. Sustainability
   c. Skepticism

5. According to Van Duzer, profit is:
   a. Not a reward
   b. A powerful tool to help a business serve
   c. Both A & B

6. The practices to help us remain receptive to the work of the Spirit include:
   a. Conforming to the pattern of the world
   b. Keeping our spiritual life separate from work
   c. Meditating on Scripture

Quiz #3: Lifestyle Modesty & Radical Generosity
1. Finding identity through our work leads to:
   a. Materialism and Snobbery
   b. Power and Significance
   c. Materialism and Efficiency

2. T/F: The DNA of self-centeredness and competitive pride are at work deep in each of us.

3. “Looking to some created thing to give you what only God can give you” is the definition of:
   a. Significance
   b. Idolatry
   c. Faith
4. The idols of modern society include reason, empiricism, and:
   a. Individual Freedom
   b. Collective Success
   c. Tradition

5. The gospel gives us hope for work through:
   a. Giving us new community traditions
   b. Keeping our motives for work the same
   c. Providing a new moral compass

Quiz #4: Evangelism
1. The best way to share the gospel story at work is through:
   a. Demonstrating Christ-like behaviors
   b. Sharing our testimony
   c. Both A & B

2. A gospel-centered business will:
   a. Look the same as a business who is not centered on the gospel
   b. A work environment that is ethical only at the top
   c. Use profit as one of many important bottom lines

3. An unbalanced emphasis on Christian worldview on work can lead us to:
   a. Privilege white-collar work
   b. Overvalue the good work done by nonbelievers
   c. Counteract elitism in our approach to work

4. Common grace can be defined as:
   a. God telling us to participate only with other believers
   b. God imprinting His story on our hearts
   c. God blessing only those who follow Him

5. T/F: According to Keller, the gospel is a set of lenses through which you “look” at everything else in the world.
Appendix C
Post-Course Survey:

1. The Faith and Work discussions this semester were led by:
   a. Students
   b. Faculty

2. Having my peers lead the Faith and Work discussions rather than my professor positively impacted my learning.
   a. Strongly Agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly Disagree

3. Having to prepare a presentation on one Faith and Work topic positively impacted my learning.
   a. Strongly Agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly Disagree

   a. Strongly Agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly Disagree

5. Having my professor lead the Faith and Work discussions rather than my peers positively impacted my learning.
   a. Strongly Agree
   b. Agree
   c. Neither Agree nor Disagree
   d. Disagree
   e. Strongly Disagree

6. My learning would have been improved by preparing a presentation on one Faith and Work topic.
   a. Strongly Agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly Disagree
7. I feel confident in my understanding of Faith and Work topics as a result of this course.
   a. Strongly Agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly Disagree

8. The amount of time spent on Faith and Work topics in the course is:
   a. Absolutely Appropriate
   b. Slightly Appropriate
   c. Neutral
   d. Slightly Inappropriate
   e. Absolutely Inappropriate

9. I prefer to learn course content from:
   a. Student-led presentations
   b. Faculty-led discussions

10. Year in School:
   a. Freshmen
   b. Sophomore
   c. Junior
   d. Senior

11. Reason for taking MGT 231:
   a. Business core requirement
   b. Business minor requirement
   c. Personal Interest in the material
   d. Other: Please identify

12. Gender
   a. Male
   b. Female
   c. Other