

USING LEARNING MODULES FOR INSTRUCTOR NEUTRALITY IN ETHICAL
QUAGMIRES: A CROSS-CURRICULAR STUDY IN ACADEMIC DEBATE

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North Dakota State University's regulations and meets the accepted standards
for the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

The purpose of this disquisition is to add to the body of educational research through practitioner, quantitative, and qualitative inquiry on the topic of academic debate. In a three-tiered study, the author conducted research for this dissertation with the intent to examine argumentation and debate in higher education. The settings for this research were a comprehensive regional university and a research-intensive university. Debate was implemented to introduce topics of controversy with the intent to spur discourse on such topics.

The author examined the use of academic debate in undergraduate and graduate education. The results are reported in three articles. The first of the three articles illuminates, through practitioner research, the processes employed in quantitative and the qualitative research. This study investigates the use of learning modules for instructor neutrality in ethic quagmires, that is, topics of controversy in higher education.

Article 2 was a quantitative investigation of the impact of debate in undergraduate education. Over 6 semesters, participants (n=349) took part in a quasi-experimental study. The author designed and incorporated four learning modules to instruct students on the basic tenets of debate. Students were tasked to complete the modules outside of face-to-face class time. Students then participated in an in-class debate. Data were collected through a survey instrument designed for the study. Participants' open-ended responses were also examined.

The third study, a qualitative study, investigated the lived experience of doctoral students in an in-class debate. The debate in the qualitative study was a cooperative learning activity as part of an Education Doctoral Program course titled Foundations of Education Research at North Dakota State University. The author investigated whether academic debate may have had a catalyzing influence on the debaters at the doctoral level. The author conducted semi-structured

interviews of 7 of 12 classmates and the professor. The author used descriptive phenomenological analysis in the investigation of the interviews to examine the lived experience of doctoral students in a debate setting, following the use of learning modules for debate instruction.

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Dr. Hilde van Gijssel, VCSU colleague and friend, acted as a research mentor and coach throughout my doctoral experience. Our many conversations about natural and social sciences helped usher me to a deeper levels of understand about phenomena in both areas. These conversations provided the beginnings for the idea about a small research study on academic debate as a cross-curricular study. This small study became the structure for an entire dissertation.

To my wife, Pam, an angel's apprentice, I cannot begin to thank you for your patience over five long years. I am eternally grateful for your unwavering love, regard, and care for Louis and me.

When I started this program, I made a deal with my 83-year-old dad. He asked me incessantly for 17 straight years, "When are you going back for your doctorate?" The deal was, I finish my Ph.D., and he would come to my graduation. I had to say my goodbyes three years

ago, but our deal never stopped motivating me. I dedicate this dissertation and my Ph.D. to Lawrence Edward Walsh, Sr.

Mom, you instilled in me that education is the way for your kids to better themselves. You did not just speak the words, though; you backed them up. Dad and you stretched and contorted so I could continue learning through two bachelor's degrees. This initial support gave me confidence to pursue a master's degree and now a Ph.D. I will pass down to the next generation the wisdom you instilled in me.

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TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	xii
LIST OF FIGURES	xiii
CHAPTER 1. INTRODUCTION	1
Background and Frame of the Problem	3
Background	3
Frame.	5
Persona	6
Perspective taking	6
Pushing boundaries	6
Strategy	7
Calling the game	8
Transformation.....	8
Learning Theory.....	9
Vygotsky.....	9
Cognitive-mediation theory	10
Zone of proximal development.....	12
Statement of the Problem.....	14
Purpose of the Disquisition.....	18
CHAPTER 2. DISCOURSE THROUGH DEBATE IN HIGHER EDUCATION	21
Origins of the Study	21
Teaching Context.....	23

Review of Literature	23
The Research.....	24
Setting	24
Goals.....	24
The Problem.....	25
Strategy in Theory.....	26
Strategy in Practice	28
Foundational work	29
Learning modules.....	29
Summary: Debate Modules.....	42
Data Collection and Analysis.....	43
Discussion and Conclusion	44
 CHAPTER 3. USING LEARNING MODULES FOR TEACHING DEBATE IN A CROSS-CURRICULAR ENVIRONMENT	 46
Review of the Literature	47
Theoretical Framework.....	49
Purpose of the Study	50
Research Questions.....	50
Methods.....	51
The Setting	51
The Intervention: Learning Modules	51
Debate Procedures	52
Assignment of Groups	53
Instrumentation	53

Basic understanding of argumentation and debating skills.....	54
Basic understanding of stem cell research	55
Foundations of moral issues related to stem cells.....	55
Foundations of pro-con positions related to stem cells.....	55
Attitudes about research engagement in the future.....	56
Survey validation	56
Assigning Bloom’s Taxonomy	56
Calibrating open-ended responses	57
Results.....	57
Student Demographics	57
Differences in Students’ Perceptions of Learning Course Content by Grouping	59
RQ1. Are there differences in students’ perceptions of their learning content based on their intervention grouping (test vs. control)?.....	59
RQ2. Are there differences in students’ perceptions of their learning debate skills based on their intervention grouping (test vs. control)?.....	61
Differences in Students’ Perception About Learning Debate Skills.....	63
RQ3. Are there differences in students’ perceptions of their topic perspective/opinion based on their interviewing grouping (test vs. control)?	63
Discussion: Structured Debate as a Scaffold for ZPD	65
Better Learned the Content?	66
Better Learned Debating Skills?	66
The Game of Argumentation	68
Zone of Proximal Development.....	68

Scaffolding for Higher Order Thinking	69
Conclusion	69
CHAPTER 4. THE PHENOMENOLOGY OF OBJECTIVITY: A DEBATE IN DOCTORAL EDUCATION	71
Theoretical Frame	72
Phenomenology as Intermediary.....	76
Methods.....	82
Participants.....	94
Materials	94
Procedures.....	94
Findings	98
Textural.....	98
Anxiety.....	99
Preparation	99
Safety.	100
Trust.....	101
Fun.	101
Long-term effect	102
Structural.....	103
Scaffolding.....	103
Environment.....	104
Teaching strategy	105
Cohesion	106
Transformation.....	106

Discussion and Conclusion	107
CHAPTER 5. CONCLUSION	111
Discourse Through Debate in Higher Education	112
Using Learning Modules for Teaching Debate in a Cross-Curricular Environment	113
The Phenomenology of Objectivity: A Debate in Doctoral Education	115
Limitations	116
Recommendations.....	118
Suggestions for Research.....	120
REFERENCES	123
APPENDIX A. DEBATE MODULE 1	149
APPENDIX B. DEBATE MODULE 2	151
APPENDIX C. DEBATE MODULE 3	154
APPENDIX D. DEBATE MODULE 4.....	156

LIST OF TABLES

<u>Table</u>	<u>Page</u>
2.1. Debate Terms and Definitions	31
2.2. Part C Assignments.....	33
2.3. Part 1 Assignment.....	34
2.4. Giving Support for Reasons.....	34
2.5. Part 2 Assignments	35
2.6. Assignment 2 Practice Rebuttals	36
2.7. Five-Step Rebuttal	37
2.8. Example of Rounds Segments for Debate	40
3.1. Match up for Bloom’s Taxonomy.....	58
3.2. Match up for Bloom’s Taxonomy (Without Modules).....	58
3.3. Student Gender.....	58
3.4. Student Major.....	59
3.5. Student Grade Level	59

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1.1. Zone of proximal development.....	13
2.1. Zone of proximal development.....	27
2.2. Sample of Likert-based scale used as the survey instrument in the debate.	43
3.1. Modules improved debate experience.	61
3.2. Number of student responses.	62
3.3. Percentage of student responses.....	63
3.4. Modules helped students to understand debate procedures.	64
3.5. Students wanted more support with debate procedures.	65
4.1. The blind men and the elephant.	85
4.2. Fictitious likeness of the lived experience of the blind men encountering an elephant.....	87
4.3. Leaping the gap.....	88
4.4. Phenomena and the researcher understanding of phenomena.	93

CHAPTER 1. INTRODUCTION

In 1992, I finished the required coursework for a middle and high school licensure in education from Northern State University in Aberdeen, South Dakota. I submitted an application to the State of South Dakota, Department of Education, and received a teaching license in good standing with endorsements in speech, language arts, literature, English, and...debate? I was befuddled. I had received an endorsement with full confidence of the licensing body for a discipline about which I knew almost nothing. Despite an effort to keep quiet a dubious credential, I have, over the years, been called upon to teach debate. I have had to learn little-by-little the tenets of argumentation.

By the term *debate*, for the purposes of this study, I am referring to competitive academic contest between peers. Warner and Brusckke (2001) identified six characteristics inherent in an academic debate. It is “based on student performance, and it is competitive, interscholastic, time pressured, research intensive, and dialectical” (p. 9). A debatable topic, called a resolution, is often chosen on its merit as a value or policy issue. A sample resolution may include a topic like this: “The continuing introduction of new technologies and new media adds little to the quality of education.” Essentially, a resolution is an opinion that has divisible positions that can be supported and refuted. The resolutions used in these studies included the following: (1) “Embryonic stem cells should be used in biomedical research” for article 2, and (2) “Objectivity is essential for good research” for article 3.

In 2003, I accepted an academic post as an invited professor in South Korea. I did not know when I touched down in Incheon that I had been recruited into the big league for debate in English-as-a-Foreign-Language (EFL). As a visiting professor of communication, English, and EFL in the Land of the Morning Calm, I soon learned that debate is sometimes used as a

benchmark in student learning of EFL (Leong, 1980; Stewart, 2003; Fahim & Sa'eepour, 2011). With a debate designation plain as day on my licensure, I was called on continually to share my “background” on debate for the benefit of English language learners who ardently wished to prove their ability in an open forum. My concealment game was up. I had to know the ins-and-outs of debate and argumentation. No longer was it enough that I had been certified to teach debate. I had to be a practitioner of debate. From that time forward, I became, in earnest, a scholar of argumentation and academic debate.

Korean Minjok Leadership Academy (KMLA) is one of South Korea's topmost preparatory high schools. Approximately 50% of graduates attend Ivy League level universities around the world. To give some indication of its standing in the minds of the Korean people, I was once upgraded to first class on an international flight out of Incheon based solely on my affiliation with the school. I was recognized as a KMLA teacher because I had come directly from the Academy to the airport, and I was skill wearing a Korean Hanbok, the traditional clothing of the Choseon Dynasty and the obligatory uniform of a KMLA instructor.

At KMLA, I taught in their Global Leadership Program for Students during four summers between 2003 and 2009, and in each instance, I was asked to teach debate. In teaching EFL students, I soon realized that the precepts of debate needed to be sectioned out to assist learners of English. By giving the lessons in chunks, the students began applying the skills set. They started to become functioning debaters. I clustered common ideas, turning these into lesson plans that seemed to assist learners to argue and rebut opinions. The students turned debaters became proficient enough easily within two weeks. Debate teams frequently ended up in the championship round of the camp's debate competition. Despite this relative success in South Korea, I never thought I would use these modular instructions outside of Asia. However, when I

returned to the United States in 2008, debate and argumentation followed me, but by the time I arrived in North Dakota, I had a solid understanding of debate as a strategy for teaching and learning.

At Valley City State University, I became colleagues and friends with a former National Institute of Health Research Fellow turned university professor. We enjoyed conversations on a multitude of topics, and in the autumn of 2009 (after I had just returned from a summer at KMLA), I intimated my role as debate teacher in South Korea. She became incredulous. Did I know about debate? Why, yes!...I have an endorsement in the discipline. My friend excitedly expressed her penchant for in-class debate as a teaching strategy. She had been using it for years in her science classes, but, she confessed, she really did not know much about how to manage an in-class debate with any real confidence. A smile of comprehension skipped across my face.

Our conversations led to action as we set out to investigate how debate could be used as a pedagogical tool in undergraduate education. I shared my ideas about modulated learning of debating skills, and this led to the creation of segmented learning modules. The ability to teach debate, which I had learned out of necessity in South Korea, began to play a decisive role in a cross-curricular collaboration that has become the center piece of this disquisition.

Background and Frame of the Problem

Background

Argumentation was endemic in ancient Greek society. Free citizens were expected to represent themselves in all matters of law (Foxhall, 1993). The functions of discourse were prized. Perhaps the conceptions of the ideal citizen were somehow linked to debate's tenets (Murphy, Katula & Hoppmann, 2013). The doctrines of pro and con, right and wrong, point and counterpoint seem to mirror the duality of human thought (Graham & Martin, 1990). Argument

appears to be a natural mechanism of cognition, and humankind seems to be inclined to express these dualistic, dichotomous thoughts (Schneider, 1987). In short, individuals seem to think in arguments (Kuhn, 1992). Recognizing this may be the starting point for a debater, which, argued Tannen (2012), includes everyone.

When someone shares a view about anything, others may disagree, even in the spirit of play (i.e. devil's advocate). Disagreeing about how the world occurs as a viewpoint may give rise to what can be called a *clash* or a *clash point*, in the parlance of debate. A clash in debate is a head-on collision of opinions based on an opposing view. More simply, a clash point is a contentious position that can be debated. The ability to recognize a clash point may contain the seeds for scholarship and research.

Discerning a clash point is a skill, and it may empower a learner toward the beginnings of active discourse, which, in turn, may lead to insights and discussion about varying points of view on scientific issues. The craft of argumentation, then, is the cornerstone of scholarly thought (Andrews, 2010). Postman (1996) placed argument as the soul of an education, adding that anyone can manipulate a population who cannot discern logical fallacies or overgeneralizations. Critical thinking may be a first line of defense against misinformation and malicious intent. However, argumentation and debate are skills that must be recognized, learned, and applied.

Academic debate embodies argumentation and places it within the framework of a learning strategy. Azzam (2008) suggested that debate is a coronation activity in scholarship because it places learners in direct contact with contemplation and critique, methodology and method, and empowerment and self-confidence. Azzam (2008) further asserted that the defining virtues of debate (until recently a predominately a white, male elitist activity) is its ability to equalize a learning environment by giving voice to anyone who participates, including those who

may be marginalized in a less structured space. Debate may overshadow other learning activities because “it molds students into dexterous thinkers, researchers, speakers, and, ultimately, and, ultimately, good citizens” (p. 69).

Frame

Debate is a game (Mitchell, 1998; Strait & Wallace, 2008), and debaters use game strategies. Identifying clash points, in order to best their opponents, is an example one such strategy. Planning to win can be fun, and may be a natural part of learning (Lafley & Martin, 2013). The competition that academic debate affords is tantamount to play. *Argumentation as play* has several attributes that can serve as a framework throughout this disquisition. For example, playmates often take on a *persona*, a character or avatar, which allows maneuvering within the context of the playground. Playmates must engage in *perspective taking*, such that each distinguishes what is a game and what is reality. In a game state, *pushing boundaries* allows those at play to move beyond the roles and limitations in the real world. Play requires *strategy*, such as in a board game, in which one or more players must predict and adjust to an evolving schema (Marden Arslan & Shamma, 2009). Because play has its beginnings in the realm of make-believe, the players always have an out. In make believe, players can *call the game* and return to reality. Most games can be started and halted at will. When a game is set up to consider participant’s boundaries and needs, everyone involved may find themselves *transformed*. Players expand their capacity for engagement as participation and participation as engagement. Therefore, when debaters immerse themselves within the structure of argumentation as play, they can throw off prescribed ways of being to take on new ways of seeing the perspectives of others. When they return back to home base from their altered state, they may find the playing field

looks and feels different. Their perspective may have been transformed by trying on the values, beliefs, and attitudes of others.

The following paragraphs elaborate *argumentation as play*, clarifying the attributes and subtleties of each.

Persona. Play is serious business (Turner, 1982), and when someone plays, they often take on what Jung (1953) referred to as an outward or social personality. Through play, a participant becomes someone other than who s/he actually is. In a game of competition (such as debate), this fictitious *persona grata* can act as a boundary between an unreal self and a true self. For example, in taking on a persona, a debater might pretend to believe an opinion in opposition to what s/he actually holds as true. This allows a debater to suspend judgment while simultaneously considering how another persona (i.e. an opponent) might be thinking about an opinion; thus, argumentation as play forms a structural framework to support the persona.

Perspective taking. To play means to have a new outlook; playing is an altered state of reality (Ludwig, 1966). A player has permission to look at the world differently and to gaze into a different world. In the game of debate, perspective taking balances grasping, holding, and considering someone else's worldview and contrasting it to one's own. This taking another's perspective and comparing it to one's own, even if for a moment, is a dynamic part of argumentation as play because, in a debate, players must guess how an opponent's perspective differs from their own. Trying on another's perspective can yield new ways of seeing the world; it can also take a debater out of his/her comfort zone.

Pushing boundaries. Pushing a make-believe boundary is crucial in argumentation as play because a debater must examine where s/he stands on a given opinion as compared to where an opponent is situated. This negotiation can take a debater outside the paradigm that is

responsible for assisting him/her to make meaning about the world. Examining new ways of thinking may help redefine how the world occurs to a debater as compared to a conception of a thinking, strategizing opponent. However, the flight from the known to the unknown can also be discombobulating (Sorrentino & Roney, 2000). From the philosophical to the pragmatic, argumentation as play may push skill boundaries too. For instance, a debate requires competence in impromptu thought and speaking (Furgerson, 2012). The development of these and other skills may usher debaters out of personal comfort zones momentarily and into a broader scope of social mechanisms of discourse (Worthen & Pack, 1992). From here, debaters may transfer this social negotiation into such things as teamwork by managing the give-and-take of group process. Argumentation as play requires both personal and social negotiation of boundaries.

Strategy. From the game of hide-and-seek between children to war games between countries, stratagems make up a decisive component of game playing. Participants must use critical thought to make guesses about what may be occurring in the thought processes of opponents. These guesses may define the actions of an individual and a team, with no guarantee of a desired outcome. Strategists must play both sides of a coin in factoring how to win and how not to lose (Nowak & Sigmund, 1993) or, in the latter case, how to minimize the damage of losing. In argumentation as play, strategy may also entail what it means to be a good winner rather than a poor loser. A debating team wins and loses together, but during the actual debate, an individual debater is on his/her own, leaving the rest of the players almost helpless to affect the debater's personal tactics. Trusting the members of the group, as both part a team and as individual players, is a subtle but dynamic strategy. The experience of watching a team member debate might be similar to the experience of a coach who watches the game from the sideline but

can only intercede indirectly. As the game unfolds, all members of the team must face, solve, and adjust as a team and an individual. Strategy in argumentation as play seems complex.

Calling the game. Anyone playing a game knows that behind the veil of play is a socially constructed reality. Knowing that a game is a fabricated version of this reality, with a pre-established start and end point, may prompt some players to play full out and other to hold back. Some players may take greater risks, even role shift, because when the whistle blows, s/he can return to a more recognizable self (Hauk, 2003). If a game goes too far, however, the players can pull the plug as in the famous Zimbardo (1972) imprisonment experiments in which a girlfriend of one of the participants forced the hand of the organizers to bring the game back to reality—a game that may have gone too far afield.

In the Zimbardo (1972) experiment, a cause for angst may have been the insecurity over how long the game would persist. That feeling of uncertainty about no-end-in-sight may have been a culprit to the breakdown of tolerance in the face of unpredictability (Vertue, 2003). Stating it another way, the participants may have lost perspective because they did not know how long they would need to keep playing the game. In argumentation as play, by contrast, debaters know the event will last no more than a regular class time, easily tolerable to keep up a rouse.

Transformation. Play is transformative (Caplan & Caplan, 1974; Coyne, 1999; Kurt, Kurt, & Medaille, 2010). Play allows for the examination of possibilities within the realm of possibilities. Players bring new perspectives to bear on existing paradigms. In argumentation as play, the debate is a forum to make mistakes that could be costly in other contexts. For example, the skills sets learned in debate may find real-life manifestations in job interviews, sales meetings, or organizational conflict. Making mistakes in these environments can have long-lasting consequences. By practicing in play, a learner can be scaffolded for later success. This

orientation toward success makes play an emancipatory enterprise (Raphael, Bachen, Lynn, Baldwin-Philippi & McKee, 2010; Vygotsky, 1967). Argumentation as play may create a playground that mimics real-world scenarios, and debate may be a mechanism for how to successfully comport oneself as a social animal.

Argumentation as play has several characteristics that can assist an understanding about debate as a game. The following ideas frame the idea of play within learning theory to create a thread that is drawn through this disquisition. Specifically, Vygotsky's conception of play is considered.

Learning Theory

Vygotsky. Lev S. Vygotsky (1896-1934) was virtually unknown in the United States prior to the 1970s. His writings were banned in Stalinist Russia, perhaps due to his Jewish heritage or maybe due an effusion of Western thought, which permeated his work (Blake & Pope, 2008). The collapse of the Soviet Union opened the floodgates of discourse on Vygotsky. Practitioners in the West began to discover how the theories of this theorist paralleled the work of his contemporaries (such as Piaget). Theories that had emerged during decades of obscurity found a companion when Vygotsky's work came to light. The discovery of Vygotsky in the West also enkindled visionaries who had come before him. His thought processes about human development, for example, were profoundly influenced by the writings of Hegel and Marx (Vygotsky, 2012). Both underscored the impact of society and the role of work to assist people to rise above their current conditions. Vygotsky may well have been the topmost Marxist theorist on human development, although he was never recognized as such in his own lifetime (Kozulin, 2001). Most of Vygotsky's work was published posthumously.

Cognitive-mediation theory. Vygotsky's (2012) Cognitive-Mediation Theory suggests that humans share lower mental functions with animals. What differentiate humankind from animals are the mental and psychological tools for thought. Primary among these is language, which Vygotsky believed provided access to thought—the gatekeeper to learning (Skinner, 1985). Therefore, according to Cognitive-Mediation Theory, the essence of intelligence lies in tools (Vygotsky, 1989) (an ideology consistent with Marx' conception that tools mediate progression), and these tools *mediate* between outside stimuli and the responses to stimuli. In Vygotskian thought, the tools create intentionality, comparisons, and high-order deliberation exonerating humans from outside-only stimulus (to which animals appear to be relegated) (Meares, 1997).

Vygotsky's work is often paired with that of Piaget's (whose writings Vygotsky knew), but enjoyed nowhere near the publicity of the latter until the 1980s and 1990s. Today, the theorists' works offer a complementary blending and contrasting in the understanding of human development. Both theorists believed play was important, but each saw play differently in human learning and developing. While the focus in this disquisition is Vygotsky's Cognitive-Mediation Theory, his research is illuminated by the work of Piaget and vice versa.

Piaget and Vygotsky shared two years in common: the year they were born (1896) and the year they earned their doctorates (1917). From there, philosophical similarities seem more disparate, but not unrelated. Both were about how humans develop in society. Their respective views of how learners learn may be placed, metaphorically, within the context two well-known superheroes—the Lone Ranger (without Tanto) and Batman's Robin (with Batman). For Piaget, the learner is like the Lone Ranger. On his own and through his own discovery processes, he learns how the world works by applying his own reasoning to problems and challenges

(Duckworth, 1979). For Vygotsky, the learner is like Robin. He actively learns skills and processes through his interactions with a mentor, incorporating what is provided as knowledge and tools (Guile & Young, 1998). In reality, the theories are complementary and account for how learners develop. For this disquisition, though, their respective conceptions of play need to be examined.

Piaget and Vygotsky held differing notions about the power of symbolic or pretend play. Piaget believed play was an immature, second-rate process that functioned within the paradigm of assimilation and accommodation (Bjorklund, 1997), which may have biased his thinking (i.e. that play needed to fit within a predetermined cognitive structure). This is not to suggest that Piaget did not see value in play. On the contrary, play offered the learner a means to work through situations, including problems or understandings that need processing. Here Piaget borrowed from Freud (Runco, 1999).

Vygotsky, by contrast, saw play as the means by which a learner performs at the higher edge of his/her abilities. The learner can, through play, practice something that s/he may not otherwise practice. Learning, through play, can occur without the concern for failing or the risks involved in a real-world equivalent. Given this secure environment, play can offer a safe place to try new behaviors and to mimic others. The learner can glean new characteristics such as patience, or skills such as perseverance. Vygotsky's conception of symbolic play accentuates the concept of argumentation as play—as promoting a range of positive characteristics—through his proliferation of the *zone of proximal development*, the centerpiece of Cognitive-Mediation Theory.

Across an array of theories of human development, one characteristic seems almost a constant. This is the idea that learning progresses along a given course of development toward

adaptive functioning (i.e. adulthood, for example). In a perfect world and with the right expertise, the theorist could pinpoint a stage of development in humans. These assumptive delineations are prevalent in the stage theories of Freud, Erickson, and Piaget. For Vygotsky, though, there were no apportioned points of development (Brown & French, 1979); instead, learning and developing varied across a nebular range or zone of knowledge or skill acquisition. Vygotsky (1997) called this the *zone of proximal development*.

Zone of proximal development. Vygotsky's (1997) *zone of proximal development* is a metaphor that refers to a learner's level of knowledge and skill development. The metaphor suggests development ranges from an existing level at which the learner has completely mastered a lower limit of knowledge or skill (signified by "What I can do" in Figure 1.1) to an upper limit (signified by "What I can't do" in Figure 1.1). In the lower limit, called the *actual level* of development, the learner can function within the knowledge and skill without assistance. Everything below this level has already been mastered (in the past). At the upper limit, called the *potential level* of development, the learner could not function within this knowledge and skill no matter how much assistance is provided (i.e. teaching a young child to drive a tractor). The knowledge and skill has yet to be learned (in the future). The area known as the zone of proximal development (signified by "What I can do with help" in Figure 1.1) refers to a zone of problems, challenges, or tasks that are *proximal*, that is, next to, the learner's most recent fully developed level (in the present). This zone consists of knowledge and skills that can be achieved through the assistance of a mentor.

Successfully solving problems, challenges, and tasks may depend on several environmental factors. Recalling Batman's Robin, Vygotsky (1997) believed that learning requires a coalition between a learner and a mentor. Some environmental factors may include the

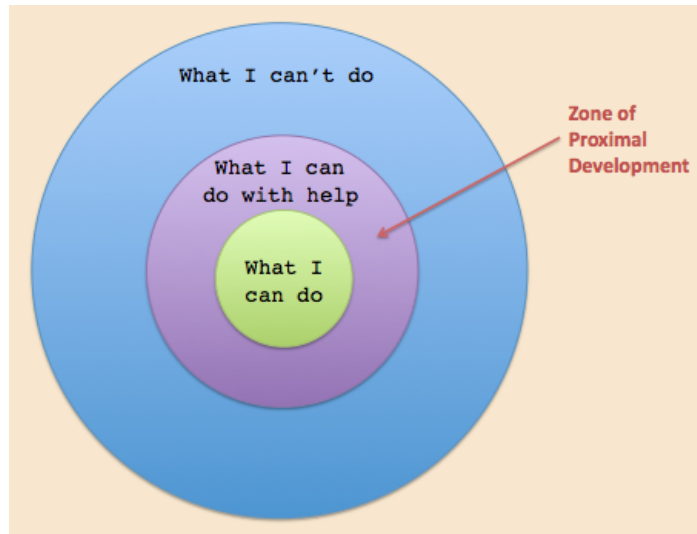


Figure 1.1. Zone of proximal development.

clarity of the instructions, the complexity of the task, or the skill of the mentor assisting the learner. The zone of proximal development is always dynamic and never static (Shabani, Khatib & Ebadi, 2010).

Learners are thought to progress through their own zone of proximal development. Some tasks are less difficult for the learner because the tasks are similar to what the learner already knows. Other tasks may be more taxing because the tasks are further away from what the learner already knows. For example, many communities with Boy Scout Troops have annual pinewood derby car races. With the assistance of a parent, a child builds his own toy car from wood. The parent may need to provide more assistance to a child whose skills lie at the lower zone of proximal development, as contrasted to a child who needs less assistance because he has masters building a toy car in previous pinewood derbies. The latter child is at the upper zone of proximal development.

Wood, Bruner, and Ross (1976) referred to this mentor's assistance as *scaffolding*. Based on the Vygotsky's writing (although he never used the term himself), scaffolding refers to the cooperation between mentor and learner in which the former adds support at the edge of the

latter's development. This scaffolding may be removed once the learner has mastered the knowledge or skill. In the example of the pinewood derby cars, a savvy parent would provide scaffolding when needed and remove scaffolding as the son masters the knowledge or task. The process of scaffolding is constantly shifting from one level to the next and relies on recognition and discernment skills of a mentor (Orlikowski, 2006).

Vygotsky's (2012) Cognitive-Mediation Theory offers a wealth of perspective when applied to learning modules in the instruction of academic debate. The theory encompasses academic debate in as a learning tool, specifically one that uses the strategies of language. Cognitive-Mediation Theory supports debate in the aspect of symbolic play as a means to support a learner at the height of his/her abilities within the zone of proximal development, and it reflects the learning environment as the students negotiate the zones of proximal development as s/he employs knowledge and skill from the learning modules into an actual debate.

Vygotsky's (2012) theory contributes a learning framework throughout this disquisition and is elaborated in each of the articles. In the next segment, a statement of the problem is considered.

Statement of the Problem

In a society as highly technological as the United States, citizens are bombarded with variant views on moral issues (Dreier, 2005). Individuals are forced to make decisions in the face of ethical dilemmas (Rogerson, Gottlieb, Handelsman, Knapp & Younggren, 2011; Shapiro & Stefkovich, 2001; Thiel, Bagdasarov, Harkrider, Johnson & Mumford, 2012). For example, a common controversy in modern society is the speed at which medical sophistications are advancing. Individuals, depending on culture and creed, hold various views on progress made in medical arenas. One such advancement is research on embryonic stem cells, which is why this

topic was chosen as the source for a debate resolution in article 2. Due to the embroilment that surrounds these modern advancements, educators may determine these topics might be too risky for their classrooms. When the topics *are* taught, they may show up as drudgery for the students as an educator attempts to teach sensitive materials without betraying his/her own biases and without inciting crusades to defend strongly held positions—all in an attempt to avoid losing control of their classrooms (Johnson, Johnson, & Smith, 2000).

This may be part of the reason that argumentation is rarely taught within the context of science, and despite the abundance of contentious topics, debate is even less likely to show up in science classrooms—despite that argumentation and debate are recognized as a means to develop critical skill sets (Jonassen, 2010; Omelicheva, 2007; Osborne, 2009). One reason that debate is heralded but not incorporated might be that instructors may lack the necessary structure or know-how to facilitate a debate in their classrooms. Argumentation and debate may be more common in the humanities, for example. Instructors in the sciences may believe that a debate on factious topics such as stem cell research could upset students or that an unstructured debate could get out of hand in an open forum (Hedley & Markowitz, 2001). Few educators may be willing to risk upheaval inside with students and outside of the classroom with administrators or parents. Another point of resistance may be a perception about altering teaching styles. Instructors may believe that the shift required in their teaching techniques to facilitate a debate would be too much trouble.

The ubiquity of the Internet can be useful partner for educators to shift teaching strategies to benefit themselves and their students. The option of combining traditional teaching styles with hybrid strategies marries the best features of both face-to-face and web-based instruction as blended learning. However, this merger places an encumbrance on both educator and learner. In

the case of academic debate as a pedagogical tool, instructors need specific instruction on argumentation and debate (Osborne, 2010). Students need to understand argumentation and debate well enough to function as a member of a debate team in an in-class setting.

By these studies, the authors expect to show that combining the newest of technologies with the oldest of practices can provide innovative pedagogical applications to convey sensitive and controversial information. With the materials used in these studies and made available in article 1, educators can add debate to virtually any course to bolster critical thinking and open discussion as well as accentuate course objectives. Simultaneously, the learning modules and the in-class debate may create a safety net for both learner and educator. For the learner, the process can create a safe and scaffolded environment in which the learners build knowledge and skills around argumentation. For the educator, the process can establish a mechanism to stay out of the crosshairs of controversy, but introduce disputable topics as an observer.

Module-based instruction as scaffolding for students of debate may encourage learners to take ownership of the skill sets they will need. The competencies of using basic debate vocabulary, recognizing opinions versus reasons, listening actively, predicting arguments, and offering rebuttals may nudge students to the upper range of their zone of proximal development to acquire the tools necessary to participate in an academic debate. Web-based learning modules, as segmented units of instruction and scaffolding, can be incorporated into a blended environment to assist students to learn both argumentation and debating skills. Furthermore, such skills gleaned through modular instruction may assist students into knowledge and skills necessary to actively participate in a class-time debate. The scaffolding that the debate modules provide may allow learners to begin balancing perspectives on sensitive topics (Lubetsky, Harrington, LeBeau, & Semaka, 2007).

By using learning modules for debate instruction, an instructor offered scaffolding, while still placing the student at the center of learning. Vygotsky envisioned the learner as a kind of apprentice picking up skills in an environment of co-construction (Fivush, 2008). The modules, then, are a kind of mentor in absentia, in that, they were created by a knowledgeable collaborator and provide on-going support within a student's zone of proximal development. A module, as defined for this research study, contains three distinct characteristics:

1. A learning module is created from learning objects (small chunks of learning).
2. A learning module contains information used to support students to manage their own learning.
3. A learning module encourages learner independence to develop habits related to investigative inquiry (Hudsen, Owen, & Veen, 2006; Kavadella et al., 2013).

Situated within these three characteristics, the instructor provides the scaffolded starting point, and the student works through the tasks individually. The learning from the modules is assisted and reinforced through exercises tied to skills needed for academic debate. By the time the student shows up for the actual in-class debate, his/her knowledge and skills may be situated within their zone of proximal development. This may be determined and assessed by their command and practical application of skill sets displayed in the debate as provided as scaffolding in the modules.

In the following section, the purpose of the disquisition is considered in which the author elaborates on the purpose of the overall disquisition and how this purpose is underscored in each of the three articles.

Purpose of the Disquisition

Authentic educators acknowledge their biases when it comes to topics with multi-varied viewpoints (Lin, Lake, & Rice, 2008). Peshkin (1982) held that subjectivity operates during the entirety of the research process. By presenting sensitive material in a course, the instructor will invariably lean in one direction or another with or without realizing it. Even the subtleties of the verbal and non-verbal language may expose biases lurking in the unconscious (Robinson, 2009). Learners deserve a format in which the instructor and the student are partnered in their investigation of controversial topics so that this investigation is fair and balanced. An honest and supportive learning environment is a starting place for educators to represent nearly any controversial view that surfaces, and this provides the means for learners to be skeptical about these views. Both educator and learner would then have the privilege and the responsibility to investigate all facets of a topic, not only those perspectives are deemed necessary or worthy. The conscientious instructor, awake to Vygotskian thought, would seek out balanced materials to initiate student research, and the students would have the freedom to incorporate these materials or seek out others that could be presented inside a classroom dialogue.

Great care was used to create the modules. Vygotsky (2012) warned that environmental factors could impact successful outcomes in the zone of proximal development. For example, the modules incorporate carefully worded instructions, and the tasks balance simplicity and complexity to students at a reasonable level. By using modules to initiate balanced discourse and scaffold basic debate skills, educators may accomplish two outcomes. First, s/he can assist students to learn the canons of argumentation and debate. Second, s/he can keep her own thoughts and biases at arm's length to ensure a more neutral stance on emotionally charged topics.

The modules provide scaffolding that build knowledge and skills at the lower range of a college student's zone of proximal development. For example, the exercises and tasks begin with the key terms and concepts in debate. As the learner progresses through the modules, knowledge and skills are incorporated. For instance, students are asked to work together with a partner to practice forming arguments and rebuttals. This Vygotskian approach of moving debaters through the zone of proximal development assists the learner to build knowledge and skill in order to accept the responsibility for his/her own learning (Townsend & Fitzgerald, 1996). By completing the learning modules, the students can be expected to take part in an in-class debate. The students can also be expected showcase their skills to argue and rebut opinions and positions on ethical dilemmas in the form of a resolution.

Three studies in debate were designed and illuminated in this dissertation to assist educators in directing students through scaffolded instruction into moral predicaments, culminating in an in-class debate. These research studies highlight students' perceptions about the effectiveness of modular learning for academic debate in higher education. Ultimately, the learners participate in a group environment as part of a debate team, creating a collaborative group-based effort. Five active learning tenets seem to be endemic in such an environment which include positive interdependence, individual accountability, interpersonal skills, face-to-face promotive interaction, and processing (Johnson, Johnson, & Smith, 1998). The author argues that each of these cognitive and meta-cognitive skills is at the heart of learning cooperatively.

By these studies in the use of learning modules, the author seeks to elucidate the efficacy of prescribed units of instruction as means of scaffolding academic knowledge and skill building across curricular thresholds. This study investigated perceived self-efficacy in which learners were scaffolded within the zone of proximal development, moving from inexperienced to

functional debaters. The author intends to show that students perceived an increase in ability in debate and that a systematic, structured approach to debate can be a powerful teaching strategy for educators.

CHAPTER 2. DISCOURSE THROUGH DEBATE IN HIGHER EDUCATION

This practitioner research details how academic debate can be introduced to engage learners across disciplines. The strategy maximizes student-led discussion and minimizes the loss of class time that would otherwise be sacrificed for in-class preparation of a debate. Students were tasked to complete learning modules independently, outside of class. The modular components were designed to assist a range of educators and learners, including those who have no experience with debate. Instructions on facilitating a class-time debate are carefully outlined, and all necessary materials to facilitate an in-class debate are made available.

An in-class debate as a cooperative learning activity can add breadth and depth to practitioner pedagogy. Debate may highlight critical thinking, public speaking, and team strategizing. For example, Musselman (2004) reported observations of students who, in the process of the debate, argued constructively, admonished bullying, and encouraged reticent debaters to join in. Temple (1997) indicated that students tended to investigate both sides of an issue by discovering research along a full spectrum, ranging from the textbook to journal articles. Shapiro (1995) used debate to incorporate such abstractions as moral development, placing those abstractions within the framework of argumentation and real-world situations. From the humanities to the sciences, debate can be added to courses across the curriculum. Further, it can be used to reinforce retention of content, to underscore application of skills sets, and to cement course objectives. This practitioner research outlines how argumentation and debate can be incorporated seamlessly into existing curricula.

Origins of the Study

This practitioner research on the use of learning modules in academic debate emerged out of collegial conversations between professors at a small, comprehensive upper Midwestern

university. The authors stumbled across a mutual interest in argumentation and debate. Each had used debate as a learning strategy, but for different ends.

H.V.G. has used debate for more than a decade to encourage students to discuss emotionally charged issues. Her aim was to do this by getting students to distance themselves from reactionary, visceral responses. She found, however, the results of the class-time debates did not fulfill her expectations. The students complied by researching topics for the debate resolution, but when it came time to rebut the opposing team's argument, both sides tended to give a series of monologues rather than actually *debating* relevant issues. Naturally, questions surfaced about the usefulness of debate in the science classroom. Was debate lacking in soundness for teaching and learning? Or does a debate need to be executed within a set of parameters for it to have the optimal education effect?

R.L.W. has taught debate at varying educational levels and holds a debate endorsement as part of a teaching license. Early in his career, he incorporated debate into humanities and social sciences classrooms to promote an understanding of argumentation and to facilitate a particular skill in public speaking. Later he used debate in English-as-a-Foreign-Language (EFL) settings, most recently during summer language intensives as an English and communication instructor at Korean Minjok Leadership Academy, a premiere preparatory high school in Gangwon Province, South Korea. In the context of EFL, debate is often integrated into curricula as an optimal environment for learning autonomy in second language acquisition (Decoursey, Raquel, & Huynh, 2011). It maximizes both in-put and out-put skills in language acquisitions (Yang, 1998). Students must read and write as well as listen and speak when functioning within a debate.

Teaching Context

Within the practice of higher education pedagogy, educators may find a new audience for argumentation and debate in their contemporary learners. For this to occur, however, professors must introduce these competencies and entice learners to actively participate in using them. While debate has long been celebrated as a useful teaching and learning strategy, research indicates that its practice may require improvements to ensure acceptance by students. Some research suggests that mismanagement by educators can cause learners to gain little from in-class debates (Goodwin, 2003; Kennedy 2007). Other research points out that some educators may avoid using debate due to perceived hassles (Elwood & Klenowski, 2002; Oros, 2007). Debate that is carefully facilitated, however, can have a profound impact on student engagement (Smith, 1957; Walker, 2001).

Review of Literature

From the myriad of choices for active engagement from dyads to cooperative learning and beyond, Azzam (2008) placed academic debate as the coronation of active learning strategies because an in-class debate places learners in direct contact with critical thinking and scholarship, organizational and research skills, and empowerment and self-confidence. Elliot (1993) positioned debate as much more than a classroom competition. At the core of debate was empowerment: students become aware of choice. Debate has the capacity to enhance class participation, active and cooperative learning, and analytical thinking (Bonwell & Eison, 2013; Kennedy, 2009; Noonan, 2011). Johnson and Johnson (1985) point to a key pedagogical perk of debate: students are motivated to read outside of class. By skipping the reading aligned with a debate, a student risks social humiliation. Students subsequently reported the debate illuminated the readings (Elliot, 1993).

Elliot (1993) related a threefold increase in class participation when debate was used as a teaching strategy. First, students were engaged in public address; second, students played a part in making the debate run smoothly, from note taking to researching to peer-review; and third, discussions increased during and after the debate. Mirroring participation, debate capitalizes on student engagement in three important ways: first, students must read, comprehend, and analyze complex information; second, the students must develop logical arguments that reflect a given position and demonstrate that position; and, third, the students must think critically about the issues presented, rather than just taking notes during lecture (Elliot, 1993; Garrett, Schoener, & Hood, 1996; Kennedy, 2007; Oros, 2007).

The Research

Setting

The setting for this practitioner research was a small, liberal arts university in the upper Midwest of the United States. Two undergraduate professors, one from biology and one from communication, respectively, realized a mutual interest in academic debate. The former had used debate in biology classes, reporting less than ideal results, and the latter had a background in debate, and had most recently used it in English language instruction in South Korea prior to this study. The participants were students in *General Biology* and *Fundamentals of Public Speaking*. Over 6 semesters, 349 students took part in the study.

Goals

The researchers shared a common goal to learn whether debate could be used as a face-to-face teaching strategy to increase discussion on topics of controversy. The resolution throughout the study was “Embryonic stem cells should be used in biomedical research.” For

biology, could debate be used to entice learners to engage in deeper scholarly inquiry? For communication, can debate introduce a range of speaking protocols within a single exercise?

The Problem

A global revolution is occurring in higher education. Digital natives are challenging the structures of teaching and learning that have remained stubbornly intact for the preceding untold generations (Bolton et al., 2013; Gardner & Eng, 2005; Taylor, 2012). The current generation of students, born between 1982 and 2005, are often referred to as Generation Y, Millennials, Echo Boomers, the Net Generation, First Digitals, the Trophy Generation, or the Peter Pan Generation (Armour, 2008; Huntley, 2006). They are the first generation to have grown up completely surrounded by technology. Educators, from earlier generations, are scrambling to meet the demands of these learners and have, generally, been caught flat-footed (Taylor, 2010).

Experts seem to agree that instructor-centered lecture is not equipped to meet the needs of this generation of learners; for example, a 50-minute *talking head* is antithetical to anything they experience anywhere else in their lives (Eisner, 2011; Heaney, 2007; Larkin, 2010; Weiler, 2005; Wessels & Steenkamp, 2009). The Net Generation seems to march to a different drum. Notwithstanding, as many as 75% of professors still use lecture-based, teacher-focus pedagogy (Ebert-May et al., 2011). Tepid performance and low student evaluations (for those clinging to lecture-only delivery methods) are lighting fires under feet of faculty and administrators alike (Knight & Wood, 2005; Struyven, Dochy, & Janssens, 2005).

A majority of professors may default to lecture-based teaching because of two primary barriers. First, many educators have never been trained to think through how active learning strategies could be incorporated into their teaching styles (Feiman-Nemser, 2003; Niemi, 2002). In fact, most educators admit to mimicking the *sage on the stage* environment as taught in their

own schooling (King, 1993). Second, active learning requires that professors give up direct control in their teaching environment. Switching to a teaching style other than lecture can create fear, uncertainty, and anxiety (Beatty, 2005; Bonwell & Eison, 1991; Cooper, 1995; Keyser, 2000). Despite these barriers, professors are under pressure to make sweeping changes in their teaching approaches (Darling-Hammond, 2006; Niemi, 2002).

For those brave souls who dare to address the current pedagogical challenge, the transformation to active engagement may have a silver lining. Cooperstein and Kocevar-Weidinger (2004) suggested that most educators find the switch rewarding, and learner engagement usually pays immediate dividends in the form of student satisfaction (Umbach & Wawrzynski, 2005). Plus, resources for active engagement are more available now than ever before. For the resolute practitioner who is willing to adjust teaching strategies to accommodate a new generation of learners, these questions frame the problem and one intervention:

- RQ1: What happens when practitioners in higher education introduce modular learning strategies to teach academic debate?
- RQ2: What happens when undergraduate biology students are introduced to academic debate?
- RQ3: What happens when undergraduate public speaking students are introduced to academic debate?
- RQ3: Do language and communication skills alter in a debate setting that feature topics of controversy?

Strategy in Theory

Vygotsky (1978) emphasized the role of tools in the mediation of cognition, known as Cognitive-Mediation Theory. For example, Vygotsky (2012) held that language is a tool. In fact,

he believed that language was synonymous with cognition, not just one the byproduct of the other (Knuth & Cunningham, 1993). In the learning environment, Vygotsky (2012) purported that language used in a cooperative environment becomes language used in the mind of the learner. He wrote, “Sign-based mediation first is intermental then becomes intramental...” (Kozulin, Gindis, Ageyev, & Miller, 2003, p. 350). This concept of Vygotsky’s (2012) inner speech as self-instructive communication was a consideration for the creation of the learning modules. Learners were expected to internalize the instructions of the modules as scaffolding for use in a class-time debate.

Within the Cognitive-Mediation Theory is the concept called the *zone of proximal development* (ZPD). The ZPD is a range of knowledge and skill that an educator, facilitator, or mentor can reasonably expect the learner to master with the assistance. For example, in Figure 2.1, the green area signifies what the learner can do for him or herself; s/he has learned the knowledge or skill already. The pink area signifies what the learner cannot do even with assistance; the knowledge or skill is too advanced for the learner. The blue area, the *zone of proximal development*, indicates what the learner can know or do with the assistance of a teacher or mentor.

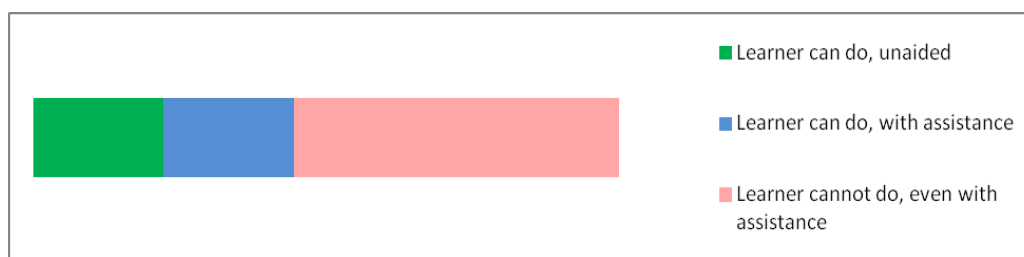


Figure 2.1. Zone of proximal development

In this study, the learning modules provided the assistance within the zone of proximal development, known as *scaffolding* (Wood, Bruner, & Ross, 1976). This is the support needed within the zone of proximal development to ensure the learner advances in knowledge and skill.

Every learner has his/her own ZPD given the information or task at hand. Therefore, no learning module could ever encompass all learning styles or types. The modules were designed with a spectrum of undergraduate learners in mind and so a range of learners could benefit from using the modules. For example, the author considered what skills sets the average university student possess, as well as what skill sets would be necessary in order to participate in a debate. The modules began with basic information about debate and continue scaffolding to assist the average learner to be functional in an in-class debate.

The learning modules may enrichment symbolic play. Vygotsky's (1967) notion of symbolic play suggested that learners practice at the height of their ability when they are within a secure, fabricated environment. Vygotsky (1967) believed that such an environment encouraged play at the upper edge of their ZPD (Bruner, Jolly, & Sylva, 1976). The learning modules for this practitioner research were designed to maximize the creation of a safe and secure environment. For instance, the modules build knowledge and skill for debate (such as vocabulary and strategies), and they also build knowledge and skills in debating etiquette (such as manner and voice) to scaffold the learner for the social environment of the classroom. The modules, then, were intended to scaffold in two critical facets of debate: the skills sets of debate itself and the habitat of debate. In other words, the modules provide both individual and social scaffolding.

In the next section, strategies in the practice of debate are examined, outlining the parameters of the study.

Strategy in Practice

In-class academic debates were conducted over 6 semesters as cross-curricular research at a small, comprehensive university in the upper-Midwest of the United States. The authors represented the departments of communication and biology, respectively, in courses titled

fundamentals of public speaking and *general biology*. Participants in the study (n=349) were communication and biology students, but were not necessarily communication and biology majors. The participants represented a range of majors across the university's disciplines. Most participants were traditional students, that is, those entering college directly from high school.

Debate teams of 4-6 members each were determined by lottery. The lottery system ensured random assignment of placement on teams and pro-con position. Once the teams and pro-con positions were set, the students were not allowed to swap. This safeguarded self-selection of team membership or position preference based on individual inclination or bias. The resolution for each of the debates was "Embryonic stems should be used in biomedical research."

Foundational work. This report of practitioner research coincides with a quantitative study titled *Using learning modules for teaching debate in a cross-curricular environment*. Reporting in tandem, the second article provided a deeper rendering of the research design. This first article is written with the intent to provide the materials used for an in-class debate. These materials and artifacts are made available: Learning modules 1 through 4 for debate instruction; rubrics for peer and instructor review of debaters; and judge's critique to score debating teams.

Learning modules. The author designed four learning modules reflecting on Vygotsky's (2012) Cognitive-Mediation Theory as a frame. The modules scaffolded debate knowledge and skill in the zone of proximal development for undergraduate students of biology and communication. Students were tasked to complete the modules outside of regular class. Debate skills in the modules were scaffolded to range from basic skills in module 1 to more involved skills by module 3. For instance in module 1, rudimentary instruction was given such as key words with definitions. By module 3, students were transferring earlier knowledge and skills to action-based exercises to advance learners to the upper range of the zone of proximal

development. These exercises prompted the learner to find a partner to practice skills in real time.

Students reported informally that the time to completion varied depending on the depth and breadth of the module. The average time for completion of the modules seemed to approximate 40 minutes per module. Completed modules were required to be uploaded to the content management system. Students who had not completed the modules were not allowed to participate in the debate. The author relied on the modules to play an in absentia mentoring role. The desired outcome was students skilled in debate and able to participate as an active team member for a one-time, in-class debate.

In the next segment, each of the four modules is detailed to provide clarity about its role and purpose in transforming students into debaters. The modules were written from the perspective that the learner may be situated at the lower level of the zone of proximal development, having little or no experience with argumentation or debate. By module 3, the students would be expected to be at a higher level of the zone of proximal development, such that students would be able to participate actively in an in-class debate.

Module 1. Module 1 was titled Introduction to Debate, and contained four main components, A through D.

Part A. Part A introduced the basic terms of debate assuming that students were at a lower level of the zone of proximal development (see Table 2.1). The modules were written with the assumption that learners had little or no experience with debate.

Part B. Part B distinguished between an opinion and a reason. For example, a *resolution* was an opinion about which there can be disagreement. Debaters either agreed or disagreed with the resolution regardless of what they personally believed. Debaters often introduced an opinion

with an *opinion indicator* such as *I think* or *I believe*. An example might look like this: “I believe that smoking should be banned in public places.”

Table 2.1

Debate Terms and Definitions

Term	Definition
Debate	A game in which two opposing teams make speeches to support their arguments and disagree with those of the other team.
Resolution	The opinion about which two teams argue.
Affirmative (pro) team	Agrees with the resolution.
Negative (con) team	Disagrees with the resolution.
Rebuttal	Explains why one team disagrees with the other team
Clash point	An opinion, reason, or evidence by the opposing team that is debatable.
Debate judge	Decides the winning team.

A *reason* explained why a debater holds a particular opinion and can be introduced with a *reason indicator* such as *because* or *since*. An example of a reason might look like this:

“...because secondhand smoke is harmful for nonsmokers.” Together, the opinion and the reason might look like this: “I think that smoking should be banned in public places because it is harmful for nonsmokers.”

Part C. Part C clarified a distinction in argumentation between a strong reason and a weak reason. According to Lubetsky, Harrington, LeBeau, and Semaka (2007), a strong reason had three characteristics:

1. A strong reason logically supports the opinion.
2. It is specific and supports the opinion clearly.
3. It is convincing to a majority of people.

Here was an example that illustrates strong reasons and illuminated each of Lubetsky et al.'s (2007) three characteristics:

Resolution: "Smoking should be banned in public places."

1. Because smoking is a known health risk;
2. Because it gives a smoker bad breath and makes his/her teeth yellow;
3. Because secondhand smoke is harmful for nonsmokers.

Within Part C, three assignments were included to bolster learner understanding of strong and weak reasons (see Table 2.2).

Module 2. Module 2 was titled Supporting Your Opinion and was broken up into two primary sections.

Part 1. Part 1 began with a warm-up exercise called *The Devil's Advocate* in which learners are asked to find a partner. Although a partner would not constitute as a mentor in the Vygotskian (2012) sense, the learner and the partner would follow the instructions created by a mentor, furthering learning of the materials. Together the student and partner take turns arguing both sides of the following resolutions:

1. Human cloning should be permitted in the United States.
2. Being single is better than being married.
3. Parents should avoid purchasing war toys for their children.
4. Zoos do more harm than good.

The Devil's Advocate exercise included crucial scaffolding in the culture of debate. In academic debate, debaters should not change the wording of the resolution. For example, if the resolution read *Human cloning should be permitted in the United States*, the Pro debater would state, "I agree with the resolution *Human cloning should be permitted in the United States* because...."

On the other hand, the Con debater may have the urge to adjust the resolution to fit his/her con position such as *Human cloning should not be permitted in the United States*. However, the rules of debate suggest that the resolution should not be altered, only the debater’s perspective changes (Halvorson & Koshy, 2006). So then, the con debater would state, “I disagree with the resolution *Human cloning should be permitted in the United States* because...” This ensured uniformity throughout the debate.

Table 2.2

Part C Assignments

Part C: Assignments	Assignment prompts
Assignment 1	Use the example above (i.e. smoking) and determine what you believe is one strong reason and one weak reason. Explain why you believe your examples are strong and weak.
Purpose: Assignment 1	The purpose of Assignment 1 is for student to practice recognizing strong reasons.
Assignment 2	To give examples of strong reasons versus weak reasons, develop a multiple-choice exercise (as shown above).
Purpose: Assignment 2	The purpose of Assignment 2 is for students to begin developing the thought process behind strong reasons
Assignment 3	With a partner (not necessarily a classmate), practice generating strong reasons for the resolutions below: (Note: These examples are intended to be inflammatory to ensure two debatable sides. The examples may occur as controversial.) 1. Women should quit their job after they get married. REASON: 2. Love is more important than money. REASON: 3. Being married is better than being single. REASON: 4. Health care is a civic right and access should be provided. REASON:
Purpose: Assignment 3	The purpose of Assignment 3 is for students to create strong reasons based on a resolution.

Part 1 contained one assignment as a reflection on predicting opposing views on the same resolution (see Table 2.3).

Table 2.3

Part 1 Assignment

Part 1: Assignment	Assignment prompts
Assignment 1	Write a reflection: With your partner, were you able to come up with arguments on both sides of these issues? Was one side (i.e. pro side or con side) more natural or more supportable than the other? Why?

Part 2. Part 2 assisted learners to support for their reasons. Lubetsky et al. (2007)

promoted four types of evidence that include the following:

1. Example: Taken from one’s own experience or from what one has seen, heard, or read.
2. Common sense: Something one can expect everybody would know.
3. Expert opinion: The opinions of experts coming out of research.
4. Statistics: The data as a result of empirical research.

Given the resolution *Smoking should be banned in all public places*, each of the four types of evidence might look like the examples in Table 2.4.

Table 2.4

Giving Support for Reasons

Example:	How to start: “For example” / “For instance” / “Let me give you an example” Example: “Whenever I go to a restaurant or bar and there are people smoking near me, I feel that I am breathing their smoke. This makes me a smoker even though I don’t want to be.”
Common sense:	How to start: “Everyone knows” / “If...then” / “It’s common knowledge that” Example: “Everyone knows that secondhand smoke is very unhealthy for nonsmokers.”
Expert opinion:	How to start: “According to” / “To quote (author)” / “John Miller (author) _____ suggests in his book _____...” Example: “According the Environmental Protection Agency (EPA) in a report dated June 2009, secondhand smoke causes approximately 3000 lung cancer deaths in nonsmokers each year.”
Statistics:	How to start: “According to” / “To quote (author)” / John Miller (author) _____ suggest in his book _____...” Example: <i>Time Magazine</i> in August, 2009 in an article title <i>Be a Quitter</i> reported, “Secondhand smoke causes about 250,000 respiratory infections in infants and children every year, resulting in about 15,000 hospitalizations each year.”

In the examples for *expert opinion* and *statistics*, a support design was incorporated. This design had four components that include the author, the title, the source, and the source date. The final project might look similar to the examples above: “According to John Miller in an article titled *Be a Quiter*, *Time Magazine*, August 2009...”

Part 2 contained two assignments designed to reinforce understanding of the use of support for reasons (see Table 2.5).

Table 2.5

Part 2 Assignments

Part 2: Assignment	Assignment prompt
Assignment 2	<p>Rank the above reasons according to their strength. For a review of reasons, consult <i>Part C</i> of Module 1.</p> <ul style="list-style-type: none"> • A strong reason logically supports the opinion. • It is specific and supports the opinion clearly. • It is convincing to a majority of people.
Assignment 3	<p>Write a pro reason and a con reason for each of the following resolutions. For each of the resolutions, use one of the four supports (i.e. example, common sense, expert opinion, or statistics). By the end of this exercise, you will have used each of the four supports at least once.</p> <p>Resolutions:</p> <ol style="list-style-type: none"> 1. Human cloning should be permitted in the United States. 2. Being single is better than being married. 3. Parents should not purchase war toys for their children. 4. Zoos do more harm than good.

Module 3. Module 3 was titled Rebuttals: Predicting and Refuting Arguments and was designed to assist students to recognize and use rebuttals. The module was split up into two parts.

Part 1. Part 1 helped scaffold team members to predict the opposing team’s arguments, to listens for clash points (i.e. an argument that *clashes* with their own opinion or position), and to jot them down when clashes arise. A critical strategic distinction in debate is the knowledge that a clash point is the beginning of a rebuttal (Verderber, 1963). During an actual debate, each team

was instructed to, first, brainstorm a list of strong reasons to build their own arguments, and, second, anticipate clash points arguments the opposing team could use. A team gains an advantage when they prepare such a list of possible arguments and decide ahead of time how to rebut them.

Part 2. Part 2 contained one assignment for the practice of writing rebuttals (see Table 2.6). To rebut an argument, each team member can benefit by learning a five-step rebuttal. The five steps are described in Table 2.7.

Here is an example of a five-step rebuttal for the resolution *Cats are better pets than dogs*: “The opposing team’s first point was related to care (signpost). John/Rebuttal speaker one claimed that cats require less care (rephrase). That’s not important (negation). The whole point about the amount of care is not relevant to owning a pet because pets require care (*Why* statement). The reason that we have a pet is to enjoy taking care of it (rational).

Module 4. Module 4 was unique in that it did not contain any exercises; instead, module 4 provides social scaffolding. The module provided instructions on how to administer and behave during a debate. This module is titled Debate Structure and Guidelines. Beyond instructions, suggestions for etiquette during the debate are offered. The module was sectioned into three parts.

Table 2.6

Assignment 2 Practice Rebuttals

Part 2: Assignment	Assignment prompts
Assignment 1	Imagine you are on the Affirmative (pro) side of the resolution. The resolution for the debate is <i>Burning the American flag should be illegal</i> . You are in the rebuttal speaker role. Brainstorm a list of strong reasons that your (imaginary) opponents could use (the are on the con side of the resolution). Compose rebuttals for the three strongest arguments of the opposing team. Write those rebuttals using the five-step rebuttal strategy.

Table 2.7

Five-Step Rebuttal

Step	Description
Step 1: Signpost	Say this first: “Their first point was...” / “Their second point was...” (Orient the other team and the judge to the clash points.)
Step 2: Rephrase	Then say: “They claimed that...” / “They suggested that...” / “They mentioned that...” (State the argument so that the other team and the judge can follow along easily. Take notes during the opposing team’s speeches; this will ensure clarity in creating a rebuttal.)
Step 3: Negation	Then say: “This is not true!” / “Even if that were true, it’s doesn’t relate to this debate!” (Use tone of voice to express disagreement with the opposing team’s point of view.)
Step 4: <i>Why</i> statement	Example 1: “It can’t be accurate that...” / “It’s not necessarily important that...” / The whole point about _____ is not relevant” / “Everything they said about _____ can be easily explained...” Example 2: “Their example is not relevant to the issues of this debate because...” / “The statistics they gave are not necessarily true because...” / “The problem mentioned by their expert source is easily explained...”
Step 5: Rational	“There is <i>no</i> connection between A and B...” / “The reason that...” / “Just because X is true does not necessarily mean that Y is also true.”

Part 1. In part 1, the components were elaborated to manage an in-class debate for a 50-minute class time. However, a debate can also be administered (at a more leisurely pace) in a 75- or 90-minute class time. Included in the instructions were the job descriptions for each of the debaters on a team. Each of the four positions per team (eight total debaters for two teams) and the corresponding job descriptions are elaborated here:

1. Introductory speaker
 - a. Introduces the team’s position.
 - b. Presents the team’s four arguments (which have been developed as a full team effort of brainstorming ideas and choosing the top for arguments).
 - c. Maximum speaking time: 4 minutes.

d. Here's how the introductory speaker starts: "My name is _____. I am the introductory speaker for the affirmative/negative team. I will provide our four arguments for/against the resolution _____" (Introductory speaker states the resolution verbatim).

2. Rebuttal speaker 1

a. Rebutts the introductory speaker's arguments.

b. States and rebuilds the team's first two arguments (of the four total arguments presented by the Introductory speaker).

c. Maximum speaking time: 4 minutes.

d. Here's how the Rebuttal speaker 1 starts: My name is _____. I am the first Rebuttal speaker for the affirmative/negative team. First, I will be rebutting the arguments of the introductory speaker of the affirmative/negative team. Second, I will be rebuilding my team's first two arguments for/against the resolution _____" (Rebuttal speaker 1 states the resolution verbatim).

3. Rebuttal speaker 2

a. Rebutts any argument thus far in the debate by the opposing team.

b. States and rebuilds the team's second two arguments (of the four total arguments presented by the Introductory speaker).

c. Maximum speaking time: 4 minutes

d. Here's how the Rebuttal speaker 2 starts: "My name is _____. I am the second Rebuttal speaker for the affirmative/negative team. First, I will be rebutting the arguments of the Introductory speaker and the first Rebuttal speaker of the affirmative/negative team. Second, I will be rebuilding my team's second set of

arguments for/against the resolution _____ (Rebuttal speaker 2 states the resolution verbatim).

4. Concluding speaker

- a. Final rebuttals on any arguments presented in the debate by the opposing team.
- b. Concludes the team's debate by summarizing the team's positions and arguments.
- c. Maximum speaking time: 4 minutes
- d. Here's how the concluding speaker starts: My name is _____. I am the concluding speaker for the affirmative/negative team. First, I will be providing a final rebuttal on the arguments of the affirmative/negative team. Second, I will be providing a final review of our four arguments for the resolution _____ (Concluding speaker states the resolution verbatim).

The debate had four rounds of two debaters each. For example, in round one, the affirmative and negative introductory speakers both present. The entire debate followed this guideline in Table 2.8.

Part 2. In part 2, students learned how to brainstorm arguments. This brainstorming exercise provided an opportunity for team members to collaborate quickly but efficiently. Team brainstorming took place during the four-minute breaks between debate rounds. The object of the brainstorming exercise was to (1) strengthen their own arguments, (2) generate rebuttals for the arguments of the opposing team, and (3) anticipate probable arguments from the opposing team in the coming rounds. Each team member was expected to contribute to the effort to bolster the team's overall success in the debate.

Table 2.8

Example of Rounds Segments for Debate

Round 1	Introductory speaker 1 – Affirmative team (4 minutes) Introductory speaker 1 – Negative team (4 minutes)
Four minute recess: Each team prepares their arguments and rebuttals.	
Round 2	Rebuttal speaker 1 – Affirmative team (4 minutes) Rebuttal speaker 1 – Negative team (4 minutes)
Four minute recess: Each team prepares their arguments and rebuttals.	
Round 3	Rebuttal speaker 2 – Affirmative team (4 minutes) Rebuttal speaker 2 – Negative team (4 minutes)
Four minute recess: Each team prepares their arguments and rebuttals.	
Round 3	Concluding speaker – Affirmative team (4 minutes) Concluding speaker – Negative team (4 minutes)
Total minutes: 44	

An argument consisted of a reason followed by ample support (i.e. examples, common sense, expert opinions, and statistics). Debaters were encouraged to consider that all support was debatable within the context of the debate. Just because the other team offered evidence to provide support does not necessarily mean the evidence was true or valid. Debaters were reminded to doubt and test the evidence and question the source of the evidence. The following questions were offered for consideration, and team members could work together to rebut the opposing team’s arguments:

1. Is there a source given for the evidence?
2. Does the source explain the claim? If yes, does it explain the claim satisfactorily?
3. Is there a date on the source?
4. If the support is a statistic, is that statistic meaningful or valid?
5. Is the author of the support an expert in his/her field?

6. Is the source biased?

Part 3. Part 3 offered scaffolding for debaters as they fulfill their respective roles, whether as an introductory, rebuttal, or concluding speaker. The guidelines for debaters were encapsulated in the word *manner*. In debate, the goal was to convince an audience and a judge or judges that an opinion was accurate, reliable, and supportable. To make a convincing argument, the debater was charged to use strategy, for example, strong reasons, reliable support, and believable refutations. In addition to strong materials, debaters would want to consider a strategic manner, which suggested that a debater must speak enthusiastically, rather than in a monotone voice. Manner may include gestures, eye contact, posture, voice, and humor.

Gestures. Effective debaters used gestures when they speak. For example, an argument was heightened by the simple act of showing one, two, and three fingers to begin points 1, 2, and 3. A debater may make a fist to show staged outrage, or point to the opposing team while paraphrasing a weak reason they had used. Debaters should avoid distracting mannerisms such as playing with a pen, fixing one's hair, holding the lectern, or touching one's face while speaking. Hands would go to one's side when not in use.

Eye contact. While speaking, a debater should face his/her opponent. Looking out the window, at the floor, or at one's own team members showed a lack of confidence. A debater needed to convince the opposing team and could begin to do so by speaking directly to them. A debater may need to read momentarily to state evidence accurately or to check one's notes, but the key was to make these departures from eye contact brief.

Posture. Posture was paramount. To be convincing, the debater needed to project confidence. The presenter was reminded to stand up straight, balance on both feet, place

shoulders back, and keep the head high. Avoid slouching, wobbling, or leaning. Use movements to make points, but stop and deliver to make the greatest impact.

Voice. Voice control was crucial. The debater must speak clearly and loudly so the entire room can hear the arguments. Many people can become nervous when they speak, and this often leads a speaker using a soft or monotone voice. Monotonous speeches are boring. Instead, vary rate of speech, volume, and pitch. Stress the most important words in the sentences. Debaters can talk louder or softer during the most poignant segments of their delivery. For effect, debaters can pause and alter a speech pattern between points.

Humor. A debate setting can feel serious. In this context, humor may or may not be effective, but the debater who can make an audience laugh is quickly embraced as an effective, fun debater.

Summary: Debate Modules

Four learning modules provided instruction and scaffolding for academic debate. The modules were designed for independent study outside of the regular class instruction. Module 1 furnished the basic terms of debate, the distinction between opinions versus reasons, and clarifications for strong versus weak reasons. Module 2 assisted learners to understand how to give support for reasons. Module 3 helped learners recognize and incorporate rebuttals. Module 4 set up guidelines and instructions on how to conduct a functional in-class debate.

The modules were created reflecting on Vygotsky's (2012) Cognitive-Mediation Theory. From this frame, the instructor provided the learners with a specific language and set of symbols in the form of modules. As the learners mastered the use of these symbols and language, s/he began using them as a tool. The debate modules functioned as a mediating tool for the debaters' preparation of the debate. The modules and later the debate provided scaffolding to think, plan,

and direct debaters into the language of argumentation. In effect, the scaffolding became internalized instructions for debate.

Data Collection and Analysis

A standard Likert-based scale was used to survey participants sectioned into treatment and control groups. The instrument contained five-point scale (see Figure 2.2). The survey instrument was created in cooperation with four practitioners of action research from the natural sciences, social sciences, and humanities. The Likert-based survey type gave the flexibility to measure responses from both groups. For example, the surveys differed slightly depending on whether a participant had the use of modules or not.

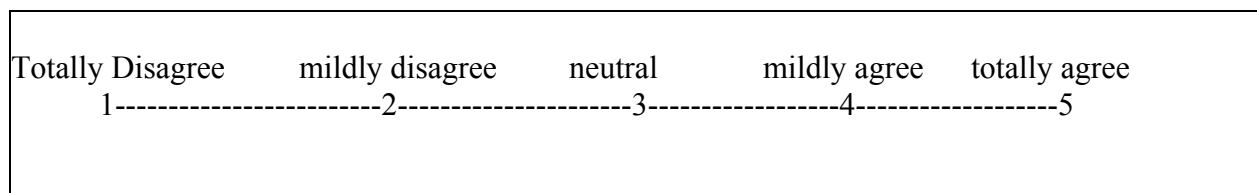


Figure 2.2. Sample of Likert-based scale used as the survey instrument in the debate.

Treatment groups received all four learning modules for instruction in academic debate and were surveyed after the debate. The control group only received module 4 directly before the actual debate and were surveyed after the debate. The survey questions sought to gather student perceptions about their experience with an in-class debate.

Survey data were analyzed to compare survey scores for students that used modules and those that did not; to show the scores for survey questions for students who used modules; to report whether the modules assisted students to understand debate procedures; and to investigate whether students without modules reported a desire for more instruction about debate and argumentation. Open-ended question responses were separated between number of responses and percentages of response correlated to the seven themes to learn which had the greater impact.

Discussion and Conclusion

This practitioner research investigated the use of academic debate in undergraduate education. In-class debates were conducted across the curriculum in speech communication and biology courses. The purpose of the study was to determine whether learning modules had an impact on student comprehension of academic debate. A student's t-test was employed to assess survey data for participants who used modules as a treatment group and those participants who did not as a control group. The analysis as a posttest-only, two-group randomized descriptive design showed a p-value of <0.001 .

Using learning modules to teach debate is both a teaching tool and a teaching strategy. The modules were designed as a teaching tool in order to build debating skills within a relatively short amount of time (i.e. easily within two weeks). They were also designed as a mechanism to engage students without using class time until the actual debate. By contrast, the modules are a teaching strategy because the debate that follows the modular instruction places the student in an active role of investigation. Learners must see themselves as a debater contemplating the game of debate, using the strategies of debate. For example, debaters must formulate arguments for their own team, and debater must also make guesses about how another team may formulate arguments. These guesses become the starting point for rebuttals.

In creating arguments and rebuttals, students must think for themselves about process and environment. Students quickly become philosophers by realizing that even while they themselves are forming arguments and brainstorming rebuttals for possible arguments of the opposing team, their opponents are following the same process. The thought process might follow this line of consideration: "I must generate arguments for my team's position in this debate, and, simultaneously, I must anticipate arguments that my opponents might make based on their

position. If my opponents are following the same process, then I should devise unique arguments that they are unlikely to anticipate.” This level of analysis, anticipation, comparing, linking, and metacognition is what Herrington and Oliver (1999) refer to as higher order thinking.

Debate offers learners an exercise into critical thinking. The scope of this thought must necessarily occur beyond the scope of their strongly held opinions, prejudices, and biases. Debate, by its dichotomous nature, according to Tannen (2012) forces the debater to the middle to what Aristotle (2011) called the Golden Mean. This is desirable middle ground between two extremes. Academic debate, then, seems to be a middle-seeking learning strategy, in that, the debater must forego previous opinions in order to consider a range of possibilities; professors can remove themselves from the fray by introducing bellicose topics through the mechanism of debate; and debaters work to balance each other toward more rational position on a topic of controversy. Ultimately, the active participation afforded students provides the opportunity for learners to negotiate their position against opposition and voice those thoughts.

CHAPTER 3. USING LEARNING MODULES FOR TEACHING DEBATE IN A CROSS-CURRICULAR ENVIRONMENT

Topics in science classrooms can be controversial. Issues such as cloning, DNA profiling, or embryonic stem cell research may evoke emotional responses in educators and learners alike. Mackinnon (2006) maintained, however, that educators should address issues that are complicated and contestable. Neves and Sanyal (1995) mirrored this attitude by pointing out the need in academia for an appropriate forum that allows full and frank expression of an entire spectrum of views.

However, professors may harbor concerns that class-time discussions about controversial topics could turn contentious. Such topics can evoke strongly held beliefs and attitudes about the world and, therefore, can incite heated arguments. On one hand, active participation in discussions containing topics of antagonism may meet with a range of responses from fanaticism to avoidance. On the other hand, educators may be taking a risk of having an open discussion become an exercise in verbal fisticuffs rather than a rational exchange of ideas. When students express views with emotion but without critical examination, classmates may dismiss dichotomous outlooks as baseless. Pertinent and penetrating points may get eclipsed, leaving students clutching insular perspectives. Depending on the climate of the classroom, students may feel reluctant to express their viewpoint if they believe their opinions contradict those of their professor or classmates. Students who hold back may do so due to fear of repercussion or ridicule. Other students may avoid delving into factious topics over concern the professor may contest strongly held convictions by promoting a liberal bias (Zipp & Fenwick, 2006).

Creating a safe environment may be an appropriate first step in assisting learners to take learning risks. Following this, research suggests that engagement activities such as an in-class

debate, active learning that makes an impact, must occur in an environment that students perceive as safe (Becker, Chasin, Chasin, Herzig, & Roth, 1995; Mitchell, 1998). In a secure setting, learners may be more willing to consider the complexity of controversial topics. A safe environment may also encourage an open examination and expression of variant ideas (Cole & Sugioka, 1999). Second, debate may promote lively discussions on a range of topics in science, but only debates managed proficiently can expect predictable results (Bellon, 2000). A structured debate in a secure environment may provide a plausible setting in which students can begin to formulate a variety of arguments and opinions. Some disciplines seem to lend themselves to debates, and scholars might expect debates to occur in areas such as political science, law, and philosophy classrooms, but the authors are suggesting that academic debate can make an impact across many disciplines.

Review of the Literature

A review of argumentation and debate studies showed classroom debates as a time-honored strategy in teaching (Azzam, 2008; Camp & Schnader, 2010; Helenius, Goldstein, Halm & Korenstein, 2006; Hutchinson, 2011; Jugdev, Markowski, & Mengel, 2004; Kennedy, 2007; Mitchell, 1998; Moeller, 1985; Musselman, 2004; Omelicheva, 2006; Temple, 1997; Tessier, 2009). Other studies acknowledged the skill sets used in debate move through Bloom's taxonomy, from the lower domains such as recalling details to the higher domains such as defending claims (Jagger, 2013; Jin & Jeong, 2013; Tumposky, 2004). Shapiro (1995) contended that debate engages learners at Bloom's psychomotor domains because students must negotiate abstractions, but must reassemble these abstractions to fit real-world scenarios. Elliot (1993) also recognized academic debate as a pathway to critical and cooperative engagement in three important ways: first, the students had to read, comprehend, and analyze complex information;

second, they had to develop logical arguments that reflect a given position and demonstrate that position; and, third, they had to think critically about the issues presented, rather than just taking notes during lecture.

The benefits of debate include sought-after competencies such as class participation, active learning, cooperative effort, and critical thinking. Still, many educators shy away from debate due to perceived complexities. Omelicheva (2006) acknowledges several challenges in using educational debate as a pedagogical tool. Some of these difficulties include how to simulate critical thought; how to determine a salient evaluation; how to involve all the students; how to select a viable topic; how to maintain a welcoming classroom climate; and how to economize an instructor's time in preparing the debate. Challenges like these may explain why debate is often bypassed when professors plan their curricula. Even educators familiar with purported advantages may avoid debate in the classroom because of concerns or challenges that accompany the process (Hyde & Binham, 2000; Snider, 1984; Trapp, 1993). Some educators complain that, despite its advantages, setting up a class time debate causes more problems than it's worth (Omelicheva, 2007). However, the benefits seem to outweigh the costs. For example, Omelicheva (2006) argued that few other cooperative learning activities share the ameliorating outcomes of a well-managed educational debate. Chief among these was students' deepened appreciation for complex social issues.

When a debate is facilitated soundly, students appear to become actively engaged. The byproduct of a well-run debate demands that individual team members investigate a multitude of angles related to a resolution. Examining a variety of perspectives helps ensure that students begin forming arguments on complex issues (Helenius, Goldstein, Halm & Korenstein, 2006; Bartanen, 1995). Helenius et al. (2006) held that debaters must process issues for which there

may be no definitive answers. Learners are empowered to become aware of choices and a deepened appreciation for complex social issues (Bellon, 2000; Elliot, 1993; Omelicheva, 2006).

The justification for incorporating debate into undergraduate courses seemed plausible. When collegial conversations between the authors led to collaboration, the intent became an effort to learn how debate could be used as a pedagogical tool in biology and communication courses. Building on the work of Krieger (2005), the authors developed four learning modules to provide students with a quick and simple way to grasp the concepts and techniques of argumentation. The modules were created for the purpose of sharing the materials with educators in order to pave the way for others to facilitate academic debate as a hassle-free classroom environment. Further, the aim of the authors was to create learning modules that assist learners to become functional debaters within the span of a week or two, given a time commitment of roughly 40 minutes per module. For this study, the authors did not use the modules during in-class instruction. In fact, no class time was devoted to the learning modules. Instead, they were used as an undercurrent of the courses through the course management system. This is not to say that the modules could not be used as lesson plans for in-class instructions. The overriding intent for the modules was to assist learners in understanding the basic principles of debate. Neither author expected students to develop into competitive tournament debaters.

Theoretical Framework

The theoretical frame for this study was Vygotsky's (2012) Cognitive-Mediation Theory and the *zone of proximal development*. The zone of proximal development illustrates a zone or a region in which learners can be expected to grasp knowledge or skills given the assistance of a teacher, facilitator, or mentor. Wood, Bruner, and Ross (1976) referred to this assistance as *scaffolding*. The debate modules used in this study were intended as scaffolding for learning of

debate. Beyond this, the structure of debate itself may have provided a scaffold for debaters, assisting learners to engage in critical discourse. For example, learners may have had the opportunity to challenge a priori beliefs on a topic of controversy. The learning modules may have established a zone of proximal development that may have scaffolded learners to move from lower level learning tasks to higher order critical learning engagement—both in preparing and performing in debate.

Purpose of the Study

The authors designed a study that introduced the use of the debate modules as a pedagogical intervention to see if such an intervention would have an effect on the learning outcomes and student perceptions of an in-class debate. Subsequently, the authors sought to test whether the use of structured a debate learning modules in a way that provided an underpinning to the learning processes and outcomes. The study, in effect, created two semi-experimental settings in different subject areas to test the implementation of the debate module strategy. The study comprised comparing two course sections in two different subject areas to see whether the debate module approach improved the teaching and learning outcomes.

Research Questions

The primary objectives were to determine whether the use of debate as a structured teaching tool influences students' perceptions of learning in the classroom, and, whether the facilitation of learning using structured debate modules improves students' perceptions of their content learning and learning of debating skills?

The research questions included the following:

1. Are there differences in students' perceptions of their learning of course content based on their intervention grouping (test vs. control)?

2. Are there differences in students' perceptions of their learning debate skills based on their intervention grouping (test vs. control)?
3. Are there differences in students' perceptions of their topic perspective/opinion based on their intervention grouping (test vs. control)?
4. Are there differences in students' perceptions of debate based on the type of learning as categorized by Bloom's taxonomy (test vs. control)?
5. Are there differences in students' overall performance in the course based on their intervention grouping (test vs. control)?

Methods

The Setting

The environment of this study was a small, comprehensive university in the upper-Midwest of the United States. The university is non-selective with average to low student ACT scores. The study was conducted collaboratively in the departments of communication and biology. The course titles were *fundamentals of public speaking* and *general biology*. One-third of all freshmen take R.L.W.'s communication course. All science majors take H.V.G.'s biology class.

The Intervention: Learning Modules

Krieger (2005) provided the basis for development of four learning modules. Each module contained targeted instruction on debating skills and students reported informally that the exercises took approximately 20-40 minutes to complete. Modules 1 through 3 were assigned to the treatment group prior to the debate as an out-of-class homework assignment. Module 4 was provided for both the treatment and the control group. In module 1, learners became acquainted to the terminology and reasoning processes involved in debate. Module 2 introduced students to

argumentation and the quality of arguments to support pro and con positions. Module 3 focused on formulating successful rebuttals. Module 4 laid out the rules students needed to follow for a successful debate.

Students' use and comprehension of modules were monitored. Students completed assignments as prompted in the learning modules; these assignments were submitted electronically through a Learning Management System.

Debate Procedures

The debates were conducted in Biology 150 and Communication 110 over 6 semesters. Communication classes used two 50-minute class times (i.e. Monday and Wednesday). The first class time was used for preparation during which time module 4 (i.e. the structure of an in-class debate) was introduced as a face-to-face lesson plan. The second 50-minute period was used for the actual debate. One debate with two teams can run comfortably within one 50-minute class time given the timing constraints in module 4. Biology 150 classes used one two-hour lab period. The lab's first hour was used for preparation. The second hour was used for the actual debate.

Treatment and control groups were pre-determined. An entire class was either a control or treatment group. Classes as treatment groups were given modules 1 through 3 two weeks prior to the debate. Classes as control groups were given module 4 right before the debate (but had no access to modules 1 through 3). Basic information about embryonic stem cells was provided for individual and team preparation. These materials were made available for student through the university's learning management system. In addition to the standardized materials, groups were encouraged to continue their own research to expand their breadth and knowledge for the resolution "Embryonic stem cells should be used in biomedical research." A total of 349 biology

and communication students participated over 6 semesters. The study was approved by Valley City State University's IRB review process.

A team critique was developed for scoring. The course instructor judged the debates. The judge tallied debaters' skills sets in argumentation, correlated to coverage in the learning modules. The element of friendly competition may have increased engagement, including a team's willingness to get prepared. The judge announced the winning team. As a side note, R.L.W. engaged non-debating students (i.e. those in the audience) by asking non-debaters to peer-critique their classmates who were debating.

Assignment of Groups

Debate teams were determined by lottery to ensure neutrality. This safeguarded random assignment of groups. Communication 110 students drew pro and con positions on the class time of the debate. Therefore, students were not aware of their pro or con position during their preparation before the debate. Each team member had to be prepared to wage either pro or con platform. Biology 150 students also drew pro or con positions by lottery, but did so at the beginning of the first lab period. Therefore, they were aware of their pro or con position during their preparation in their lab period before the debate.

Once the debate teams were determined, the instructors restricted any changes in team members or positions. In the same way, the pro or con position was maintained for the debate. Strict adherence to these protocols guaranteed that students could not choose team arrangements or pro/con positions based on individual preferences.

Instrumentation

The survey instruments were designed to measure student perceptions of an in-class debate and to measure student perceptions about skill development in argumentation as a result

of use or lack of use of learning modules. The scale for the instruments 1 through 5 were as follows: totally disagree, mildly disagree, neutral, mildly agree, and totally agree. The survey instruments queried participants in these areas:

- Basic understanding of argumentation and debating skills
- Basic understanding of stem cell research
- Foundations of moral issues related to stem cells
- Foundations of pro-con positions related to stem cells
- Attitudes about research engagement in the future

Basic understanding of argumentation and debating skills. Questions related to the basic understanding of argumentation and debating skills were asked for participants who used and did not use modules. Related questions for participants who used modules included the following:

- Question 12: The modules helped me understand the process of debate better.
- Question 13: The modules improved my understanding of the use of arguments to support my position.
- Question 14: I can classify arguments by the form of support they provide.
- Question 15: I have a better understanding about the strength of arguments

Related questions for participants who did not use modules include the following:

- Question 12: I enjoyed the debate but thought the procedure was confusing.
- Question 13: I would have liked to learn more about debating before the actual debate.
- Question 14: I would like to have more information about the strength of arguments.

Basic understanding of stem cell research. Questions related to the basic understandings of stem cell research were asked of all participants. Related questions included the following:

- Question 1: Debate helped me understand better what stem cells are.
- Question 2: Debate helped me understand better where stems cells come from.
- Question 3: Debate helped me understand better why stem cells have the potential to cure diseases.
- Question 4: Debate helped me understand better what the problems are related to stem cell research.

Foundations of moral issues related to stem cells. Questions related to foundations of moral issues related to stem cells were asked of all participants. Related questions included the following:

- Question 5: Debate helped me identify the moral issues around the use of stem cells.
- Question 6: Debate helped me understand better the moral issues about the use of stem cells.

Foundations of pro-con positions related to stem cells. Questions related to foundations of pro-con positions related to stem cells were asked of all participants. Related questions included the following:

- Question 7: Debate helped me find arguments to support my position.
- Question 8: Debate helped me to understand the arguments of people that disagree with me on stem cells.
- Question 9: Debate strengthened my position on stem cells.
- Question 10: Debate changed my position on stem cell research.

- Question 11: My opinion did not change after the debate.

Attitudes about research engagement in the future. Questions related to attitudes about research engagement in the future were asked of all participants. Related questions included the following:

- Question 15/17: I am more likely to look for arguments to support my opinion in the future.
- Question 16/18: I am more likely to look for arguments that are supporting the opposite opinion than my own in the future.

Treatment groups and control groups were surveyed. Both surveys posed the same questions, except for three questions that specifically asked students to consider the impact of the learning modules. The delineated questions sought to elucidate two distinctions in the treatment and control groups, respectively. For the treatment group, the authors wanted to measure whether the modules influenced an understanding of debate strategies (See Figure 2: Questions 12, 13, 14, and 15). For the control group, the authors wanted to measure whether the students believed they would have benefited by specific instruction in debating skills, prior to the debate (See Figure 3: Questions 12, 13, and 14).

Survey validation. A standard Likert-based quantitative survey was used. Scholars from biology, communication, humanities, and education collaborated with the authors to make certain the instrument used familiar language, asked relevant questions, made the rating scales understandable, and provided exhaustive response categories.

Assigning Bloom's Taxonomy. The authors equated the survey questions to the domains of Bloom's Taxonomy. Authors first worked independently so as not to bias inter-rater concordance. Each author was asked to assign survey questions with a number correlated to the

taxonomy (1 through 6). The authors then met to negotiate any discrepancies and assign a final designation for each question.

Table 3.1 shows the match-up of survey questions *with* modules with Bloom's Taxonomy. Table 3.2 shows the match-up of survey questions *without* modules with Bloom's Taxonomy. All survey questions were identical to the survey with modules except questions 12, 13, and 14.

Calibrating open-ended responses. An inter-rater process was also used to calibrate general comments. The survey contained one open-ended question. Most participants provided handwritten remarks, which were transcribed into an Excel document. The authors first worked independently to read comments and determine recurring themes. The authors then compared themes and decided on seven common themes, as follows:

1. Understanding stem cell issues
2. Changing one's opinion
3. Functioning and processing with the debate
4. Having passion about the debate topic during
5. Opposing opinions
6. Having fun
7. Gaining information (scientific process)

Results

Student Demographics

The parameters of student demographics include gender, academic major, and grade level. Both data sets are reported by discipline, communication and biology, respectively (see Tables 3.3-3.5).

Table 3.1

Match up for Bloom's Taxonomy

Survey Questions with Modules	Bloom's
1. Debate helped me understand better what stem cells are.	1
2. Debate helped me better understand the source of stem cells.	1
3. Debate helped me better understand why stem cells have the potential to cure diseases.	2
4. Debate helped me better understand the problems related to stem cell research.	2
5. Debate helped me identify the moral issues related to stem cell research.	4
6. Debate helped me better understand the moral issues related to stem cell research.	2
7. Debate helped me identify arguments supporting my position regarding stem cell research.	3
8. Debate gave me insight into opposing viewpoints regarding stem cell research.	3
9. Debate reversed my position on stem cell research.	5
10. Debate strengthened my position on stem cell research.	5
11. Debate did not alter my position on stem cell research.	5
12. The modules helped me better understand the process of debate.	2
13. The modules improved my ability to use supporting arguments.	3
14. I can recognize and utilize evidence to support the four forms of arguments.	4
15. I can identify weaknesses and strengths in arguments.	4
16. I am now more likely to research evidence in support of my opinion.	5
17. I am now more likely to research evidence in support of the opposing opinion.	5

Note. 1=Remembering; 2=Understanding; 3=Applying; 4=Analyzing; 5=Evaluating.

Table 3.2

Match up for Bloom's Taxonomy (Without Modules)

Survey Questions without Modules	Bloom's
12. I enjoyed the debate but thought the process was confusing.	2
13. Information about debate skills beforehand would have helped me.	2
14. Information about weaknesses and strengths in arguments would have helped me.	1

Note. 1=Remembering; 2=Understanding.

Table 3.3

Student Gender

Gender	Speech	Humanities
Male	104	99
Female	62	74

Table 3.4

Student Major

Major	Speech	Humanities
Arts & Humanities	5	1
Business & Computer Information Systems	40	4
Communication Arts & Social Sciences	6	9
Education	54	12
Math & Science	40	127
Undecided/Non-degree	21	20

Table 3.5

Student Grade Level

Grade Level	Speech	Biology
Freshman	93	126
Sophomore	57	33
Junior	14	11
Senior	2	3

Differences in Students’ Perceptions of Learning Course Content by Grouping

RQ1. Are there differences in students’ perceptions of their learning content based on their intervention grouping (test vs. control)? Figure 3.1 shows the average survey scores for each survey question for students with access to modules (with modules in gray) and students without access to modules (without modules in black). Questions 12, 13, and 14 are not represented in Figure 3.1 because these questions referred to the use (or non-use) of modules. A comparison of student groups show, in all but one occurrence (Question 10), that the modules improved the debate experience.

A student’s t-test was used to assess the survey data of communication and biology students (n=349) who used learning modules in a debate study. The analysis was a posttest-only, two-group randomized descriptive design. A significant difference between the use and non-use

of learning modules was shown ($p < 0.001$). The following is a standard reporting of results by question:

- Question 1: Debate helped me better understand what stem cells are ($M=4.10$, $SD=0.95$, $p < 0.91$, $d=0.01$).
- Question 2: Debate helped me better understand the source of stem cells ($M=4.09$, $SD=0.86$, $p < 0.42$, $d=0.11$).
- Question 3: Debate helped me better understand the source of stem cells ($M=4.11$, $SD=0.88$, $p < 0.21$, $d=0.1$).
- Question 4: Debate helped me better understand the problems related to stem cell research ($M=4.30$, $SD=0.76$, $p < 0.001$, $d=0.43$).
- Question 5: Debate helped me identify the moral issues related to stem cells ($M=4.17$, $SD=0.88$, $p < 0.008$, $d=0.36$).
- Question 6: Debate helped me better understand the moral issues related to stem cell research ($M=4.11$, $SD=0.83$, $p < 0.002$, $d=0.41$).
- Question 7: Debate helped me identify arguments supporting my position regarding stem cell research ($M=4.12$, $SD=0.81$, $p < 0.99$, $d=0.00$).
- Question 8: Debate gave me insight into opposing viewpoints regarding stem cell research ($M=4.21$, $SD=0.68$, $p < 0.02$, $d=0.31$).
- Question 9: Debate reversed my position on stem cell research ($M=2.53$, $SD=1.29$, $p < 0.002$, $d=0.40$).
- Question 10: Debate strengthened my position on stem cell research ($M=3.63$, $SD=.092$, $p < 0.008$, $d=-0.35$).

- Question 11: Debate did not alter my position on stem cell research (M=3.33, SD=1.29, $p < 0.73$, $d = -0.05$).
- Question 15: I am now more likely to research evidence in support of my opinion (M=4.00, SD=0.88, $p < 0.0001$, $d = 0.52$).
- Question 16: I am now more likely to research evidence in support of the opposing opinion (M=3.81, SD=0.98, $p < 0.0001$, $d = 0.54$).

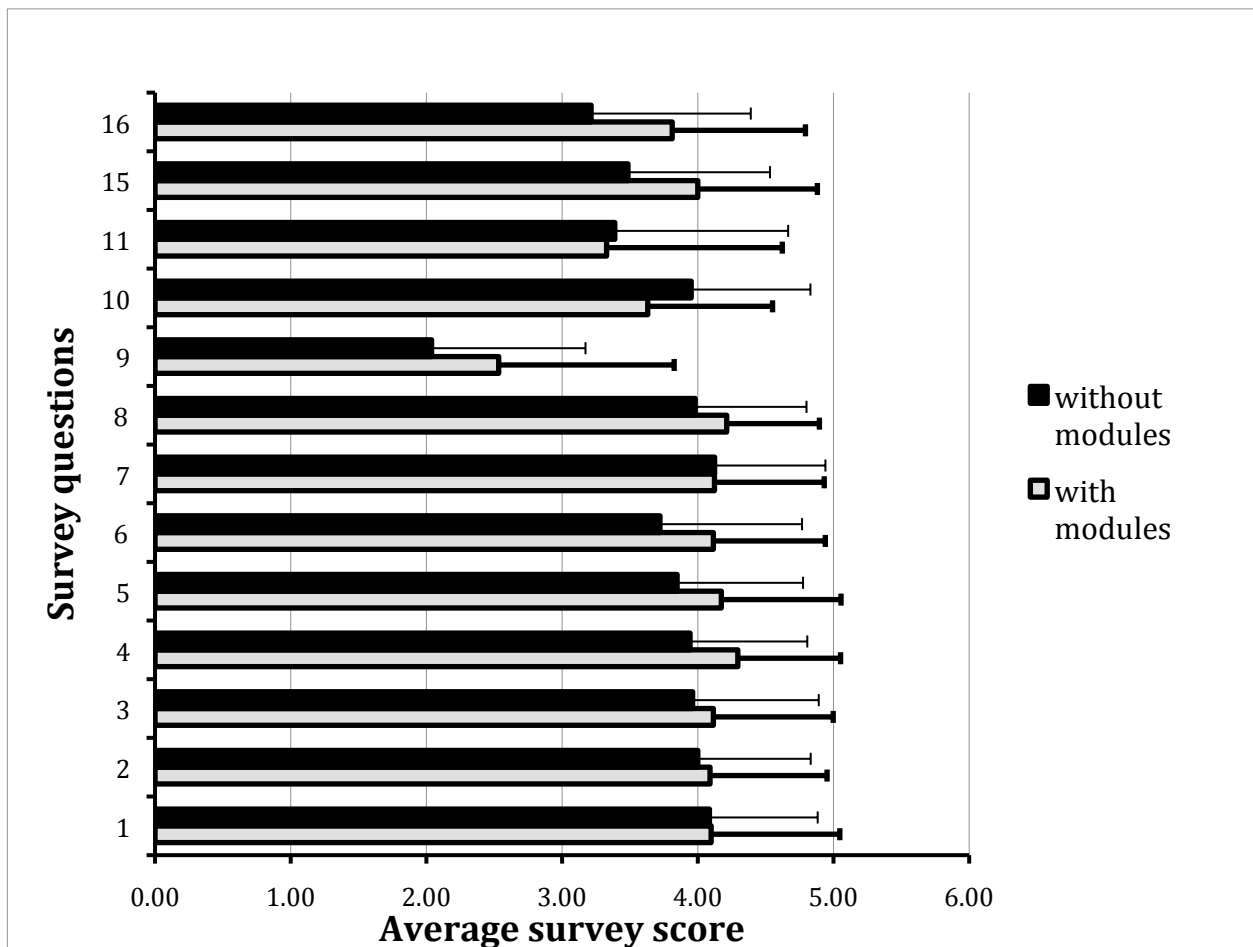


Figure 3.1. Modules improved debate experience.

RQ2. Are there differences in students' perceptions of their learning debate skills based on their intervention grouping (test vs. control)? Figure 3.2 corresponds to student

responses to open-ended questions in the survey. Figure 3.2 shows the number of response and answer category for both BIOL 150 and COMM 110 related the following 7 themes:

1. Understanding stem cell issues
2. Changing one's opinion
3. Functioning and processing with the debate
4. Having passion about the debate topic during
5. Opposing opinions
6. Having fun
7. Gaining information (scientific process)

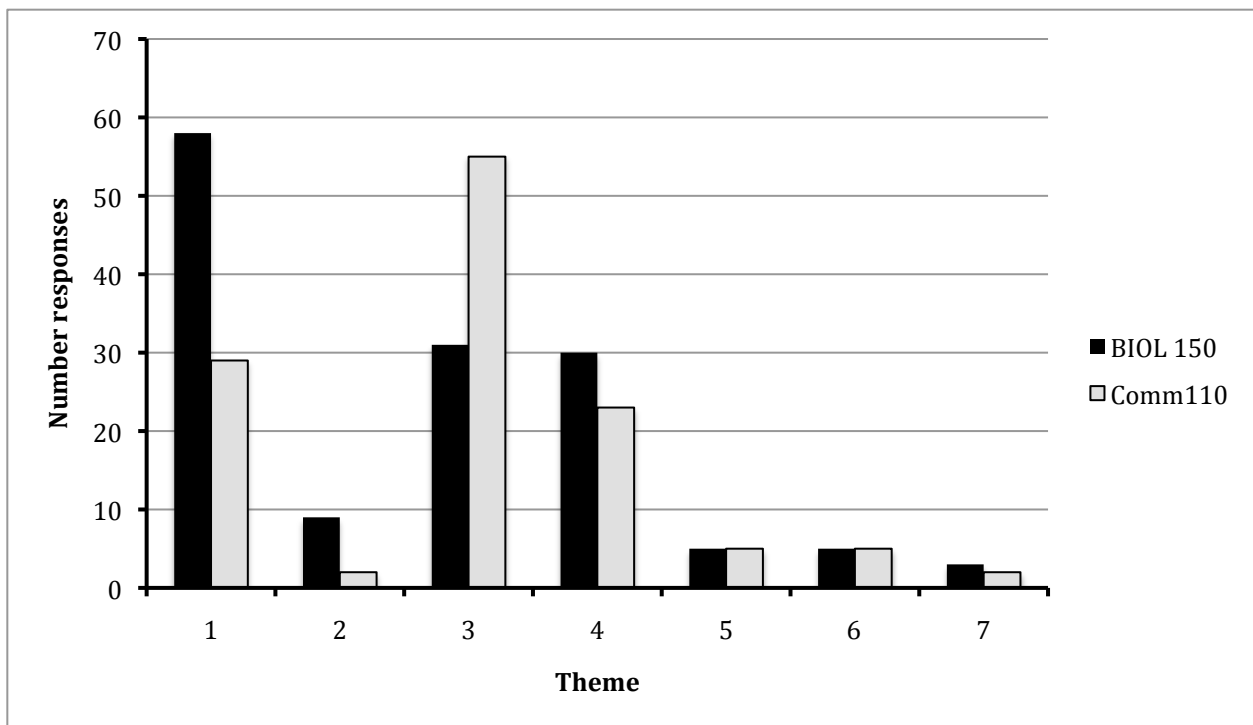


Figure 3.2. Number of student responses.

Figure 3.3 corresponds to the percentage of student responses to the survey's open-ended question. Figure 3.4 shows the percentage of responses and answer category for BIOL 150 and COMM 110 related the following 7 themes:

1. Understanding stem cell issues
2. Changing one's opinion
3. Functioning and processing with the debate
4. Having passion about the debate topic during
5. Opposing opinions
6. Having fun
7. Gaining information (scientific process)

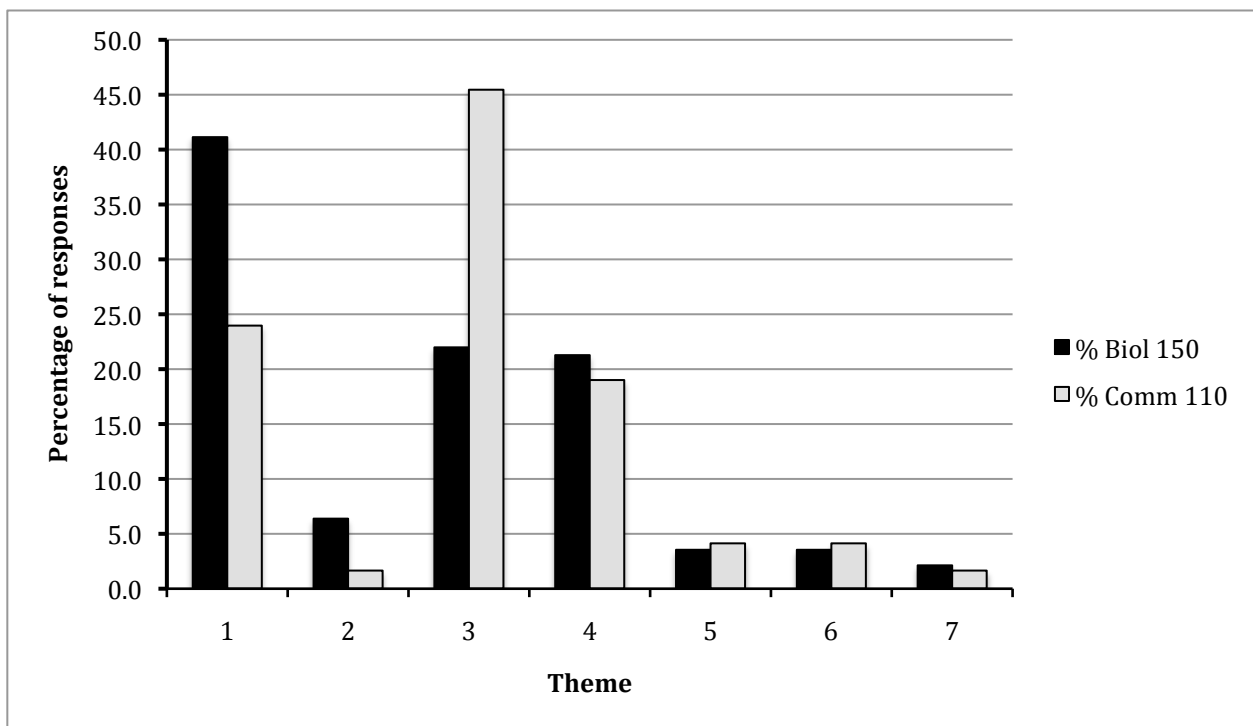


Figure 3.3. Percentage of student responses.

Differences in Students' Perception About Learning Debate Skills

RQ3. Are there differences in students' perceptions of their topic perspective/opinion based on their interviewing grouping (test vs. control)? Figure 3.4 illustrates that the learning modules helped students to understand the debate procedures. The following is a standard reporting of results for questions 12-15 from the "with modules" survey.

- Question 12: The modules helped me better understand the process of debate (M=4.08, SD=0.88).
- Question 13: The modules improved my ability to use supporting arguments (M=3.94, SD=0.85).
- Question 14: I can recognize and utilize evidence to support the four forms of argument (M=3.88, SD=0.74).
- Question 15: I can identify weaknesses and strengths in arguments (M=4.14, SD=0.74).

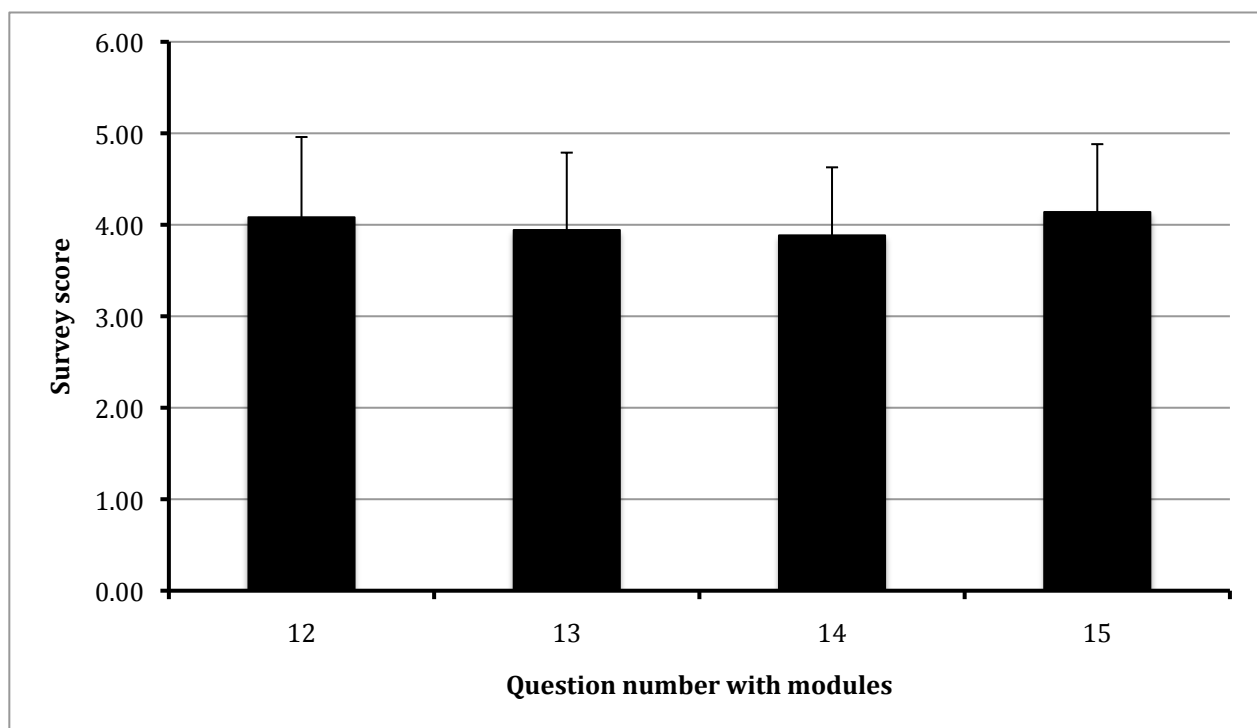


Figure 3.4. Modules helped students to understand debate procedures.

Figure 3.5 indicates that students who did not receive learning modules believed they would have benefited from instruction in the practice of debate. Questions 12 (M=2.83, SD=1.19), 13 (M=3.60, SD=0.94), and 14 (M=3.61, SD=0.94) from the survey for participants without the use of modules queried participants about any deficit they experienced.

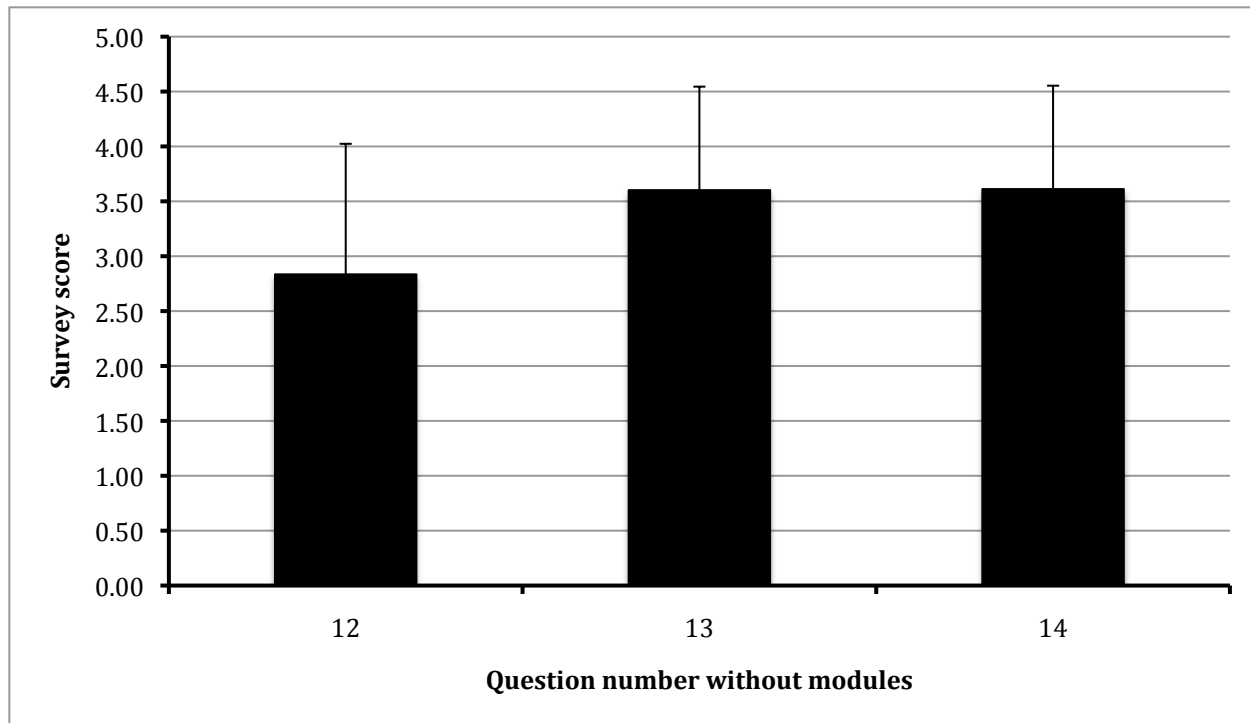


Figure 3.5. Students wanted more support with debate procedures.

Discussion: Structured Debate as a Scaffold for ZPD

The purpose of this study was to illuminate the use of academic debate in undergraduate cross-curricular settings. Special emphasis was placed on reporting how the authors created a structured and safe learning environment for in-class debate to occur. Debate is a time-tested, active-learning strategy, which educators can use to facilitate active discussion in their classes (Hurd, 2000; Koklanaris, MacKenzie, Fino, Arslan, & Seubert, 2008; Omelicheva & Avdeyeva, 2008). Some professors may shy away from debate over concern for its competitive nature, especially when sensitive or controversial topics enter the fray (Stradling, 1984). This may leave professors reluctant to broach topics that learners may need to consider for their lives in a complex world.

The author reported student demographics by gender, academic major, grade level, and discipline (i.e. communication and biology). Of 349 participants, 203 were male, and 136 were

female. The courses comprised primarily of freshman students, as may be expected since both courses are entry level. Both courses are part of the general education requirement at the university.

Better Learned the Content?

Figure 3.1 illustrates that the learning modules improved the debate experience. The compared averages seem to suggest that overall student performance was improved. Modules 1 through 3 were provided to the treatment groups approximately two weeks prior to the in-class debate. Modules 1 through 3 were designed to deliver direct instruction on argumentation skills to improve the debate experience. Whereas the control groups were restricted from receiving modules 1 through 3, module 4 was provided to both the treatment and control groups right before the debate. Module 4 furnished structured how-to information required to administer an organized debate. In all but three questions (i.e. questions 7, 10, and 11), the survey indicated that the modules had an impact on the debate experience. Colbert (1993) asked the chicken and the egg question: “Do critical thinkers migrate toward academic debating or does academic debating enhance critical thinking?” (p. 65). Figure 3.1 seems to suggest that debate experience can be enhanced through modules. Figure 3.2 may directly answer Colbert’s question.

Better Learned Debating Skills?

Figures 3.2 and 3.3 present the number of responses and percentage of responses, respectively, of the open-ended question on the survey. The open-ended question read, “What surprised you most during this process?” In both number and percentage of responses, questions 1, 3, and 4 mirrored each other to indicate that an understanding of stem cells; functioning and processing the debate; and passion about the debate topics during the debate were evident for student participants. In open-ended responses, one student wrote, “I was surprised how

passionate people were about their arguments.” Another student wrote, “I was surprised how much passion I had for something when I put my mind to it and took it seriously.”

Figure 3.4 affirms that the modules helped students understand the debate procedures. Bellon (2000) suggested that debate skills sets such as including writing, speaking, and, especially, recognizing and waging argument and rebuttals are critical to the success of the students and the debate. Questions 12, 13, 14, and 15 queried students whether they had a better understanding of the debate process; whether the students’ ability to wage arguments improved; whether students could recognize and utilize evidence to support an argument; and whether the students could recognize strong and weak arguments. Each question ranked at or slightly below the mildly agree designation on the survey, indicating that the modules supported the understanding of debating skills.

Figure 3.5 demonstrates that modules 1 through 3, as withheld in this study, created a tension for students. Control group students clearly indicated they would have liked more information and support about debate. Survey questions 12, 13, and 14 queried whether the students found the debate confusing; whether information beforehand may have been useful; and whether information about what comprised a weak or strong argument may have been helpful. Question 12 ranked “mildly agree,” but questions 13 and 14 registered just under “totally agree.” Borman and Rachuba (2001) stressed the importance of equal footing in learning environments. One of the challenges of a quasi-experimental environment is that the control group may be deprived of some aspect of the teaching strategy. While this is regrettable, a useful outcome may justify a one-time deprivation of teaching materials.

The Game of Argumentation

Debate is a game (Mitchell, 1998; Strait & Wallace, 2008), and debaters use game strategies. Identifying clash points, in order to best their opponents, is an example one such strategy. Planning to win can be fun, and may be a natural part of learning (Lafley & Martin, 2013). In the open-ended items from the survey, students reported that the debate was fun. Two students wrote, “I had a lot of fun debating” and “It was actually kind of fun.” Another student elaborated in writing, “What surprised me the most was exactly how many people were so involved in it. It was fun, and I thought it was going to be boring.” The students allow a playful environment to emerge with the structured debate discourse.

Zone of Proximal Development

In a game state, pushing boundaries allows those at play to move beyond the roles and limitations in the real world. This establishes a safe space where the ZPD can be engaged, and learners can use the scaffold of structured debate to push the envelope of their personal ideas in a way that does not put their personal ideas and identities at risk. The development of these and other skills may usher debaters out of personal comfort zones momentarily and into a broader scope of social mechanisms of discourse. Strategy in argumentation as play is complex, requiring critical thinking, social competencies, and higher order communication skills, but also requires learners to effectively engage the basic course content.

Some students were vehement about drawing a pro or con position with which they were opposed. However, when they learned that they *must* argue for the position they drew, the debaters seemed to acquiesce to the team’s position. Beyond this, once debaters understood that the choice of teams and the pro/con position was restrained, they seemed to distance themselves from their own deeply held convictions, emotions, and biases. The students appeared to reconcile

themselves with the luck of the draw, even if this was far outside their own individual comfort zones or deeply held convictions. The students appeared to go along with the game.

Scaffolding for Higher Order Thinking

The student seem to be following the processes they had learned in the modules by functioning as a debater. With their position decreed, even if outside of their individual comfort zones, they relegated themselves to an environment in which they had no choice but to argue the team's position. By so doing, the students shut down their natural response to the resolution and went to work to build arguments for their team and to anticipate arguments against their team's position.

Accompanying this compliance, a subtle but substantial shift seemed to occur in thought processes and behavior aligning with what Kahneman (2011) refers to as fast and slow thinking. Fast thinking is marked by the automaticity of brain function including subconscious and stereotypical processes. Slow thinking, by contrast, is effortful, logical, and calculating. In the debate settings described, students appeared to negotiate reasoning, to check defenses, and to suspend preconceived notions about controversial topics, aligned with the agency of Kahneman's (2011) slow thinking.

Conclusion

College science courses have traditionally been lecture intensive, yet science educators are aware of the demand for student engagement in their classrooms. The suggestion of shifting from a lecture format to a facilitator format can create uncertainty and angst (Biggs & Tang, 2011). For example, stepping away from the lectern to mediate learner-centered pedagogy can cause anxiety for educators. Science educators, in particular, seem to feel reluctant to step away from the lectern and try innovative approaches (Herreid, 1998; Powell, 2003). This may be, in

part, because few science professors encountered active participation in their own coursework (Johnson, 2006). So even if educators want to incorporate experiential learning, some may not know where to start (Prince, 2004).

Academic debate is an example of a collaborative learning platform. Helenius, Goldstein, Halm, and Korenstein (2006) maintained that debate is a means by which controversial topics can be taught saliently but that it is underused in education. Omelicheva (2006) endorsed in-class debate as a time-honored way to teach topics of controversy. An in-class debate is much more than a setting for students to be confrontational and competitive. Debates that descend into all-or-nothing tirades do a disservice to learning. By contrast, a class-time debate that is well managed facilitates moments when learners grasp that social and scientific topics have a spectrum of views. Debate reinforces the examination of these views. It leads students into an environment in which they can examine contexts distant from their own. By creating a nurturing debate environment, educators can illuminate that social and scientific issues are rarely black and white.

Creating a safe environment may be a first important step in creating a foundation of security for sharing views in an open forum (Dart et al., 2000). In a safe environment, learners may take greater risks in the form of active listening, research practices, critical and analytical thought, and public address to name a few. Creating a safe environment also has implications for educators, in that; they can remain neutral while introducing topics of controversy. Debate, then, is a teaching tool that can foster student engagement and discussion even when the topics are issues of controversy. Further, learning modules can function to improve debating skills.

CHAPTER 4. THE PHENOMENOLOGY OF OBJECTIVITY: A DEBATE IN DOCTORAL EDUCATION

The on-going debate in the sciences over researcher objectivity versus subjectivity may have its origin in the Cartesian *cogito* from Discourse on Method in 1637 (Descarte & Cress, 1998). Although, history attests that Plato referred to the *knowledge of knowledge* (McKim, 1985) nearly 2500 years earlier, and Aristotle (Aristotle & Chase, 2012) also wrote on the objectivity versus subjectivity:

But if life itself is good and pleasant...and if one who sees is conscious that he sees, one who hears that he hears, one who walks that he walks and similarly for all the other human activities there is a faculty that is conscious of their exercise, so that whenever we perceive, we are conscious that we perceive, and whenever we think, we are conscious that we think, and to be conscious that we are perceiving or thinking is to be conscious that we exist. (p. 174)

The question of researcher relational proximity and the question of researcher perceptual proximity in the investigation of phenomena seems still to rage on in the modern era. One might wonder what new perspectives could yet be drawn from further discourse on the debate about subjectivity and objectivity. An understanding of the subtleties of language and communication versus the distance between observer and observed may provide insights into how a researcher may proceed with greater caution inside scientific inquiry.

This study considers the phenomenology behind an academic debate in which education doctoral students sparred on the topic of researcher subjectivity and objectivity. The setting was a philosophical foundations of educational research classroom in an Education Doctoral Program at a Carnegie Commission on Higher Education in the upper Midwest of the United States. First-

year doctoral students and their professor were interviewed one year after a rigorous in-class debate on this resolution: “Objectivity is essential for good research.”

This phenomenological study may be useful in that (1) it investigates student perceptions about debate at the doctoral level. The use of class-time debates with Ph.D. students tends to be rare (Hockey, 1994; Kamler & Thomson, 2006), despite its reported usefulness as a teaching strategy (Garrett, Schoener, & Hood, 1996; Oliver, 1999; Smith, Blakeslee & Anderson, 1993). This research may be significant in that (2) it evaluates what appears to be the potential of debate to highlight, emphasize, and congeal pertinent concepts in doctoral research. Student debaters must ready themselves for the range of arguments on a given resolution in order to debate the issues at hand. This research may be compelling in that (3) it explores the possible influence of debate as a force to catalyze doctoral student collegiality. When confronting fellow doctoral students, debaters must negotiate the employment of empathy versus the employment of tactics.

In the theoretical framework for this research, the role of language as phenomena is considered in order to call attention to a gap that may be endemic in the application of all scientific inquiry.

Theoretical Frame

Experts agree that language descended upon humans between 100,000 to 50,000 years ago. The lack of empirical evidence leaves the emergence of language in a perpetual state of debate. Pinker and Bloom (1990) supported Continuity Theory, the adherents of which hypothesize a gradual development of language over time. Chomsky (1996) argued, by contrast, for Discontinuity Theory, maintaining that language appeared from nothing in perfect or near perfect form. The argument for the latter is supported in theoretical linguistics by the proposition of digital infinity, that is, the operation of finite means to articulate an infinite array of thoughts

(Chomsky, 1991). An either-or, zero-sum operation, digital infinity in linguistics is not unlike the number system—humans either have access to all numbers or access to none (Chomsky, 1995; Knight & Power, 2008). Neither empirical evidence nor a conceptual rational seem to exist to support the existence of proto-numbers or proto-language (Bidese, Padovan, & Tomaselli, 2012; Botha, 2012). Primates may have been struck with language like the spontaneous formation of a crystal in a super-saturated medium (Chomsky, 2005; Chomsky, 2004a; Chomsky, 2004b).

Language, more specifically, may have descended upon humans as a mutation (Christiansen & Kirby, 2003), and mutations are known to occur in individuals or groups of individuals, for instance, in the case of a virus within a community (Lindgren, 1992). The occurrence of language and the capacity for thought may have emerged together (Bloom & Keil, 2001; Carruthers, 2002; Sellars, 1969; Vernon, 1967). Language may have been transformative, so much so, it is referred to as the great leap forward (Ruhlen, 1994). Humans, in an instant, may have stepped over an abyss into consciousness through the occurrence of language.

This transformation of brain-mind (Sperry, 1952) and its reliance on the phenomena of language was personified in the modern era. Helen Keller described her recollection of the absence of language: “I did not know that I am. I lived in a world that was a no-world. I cannot hope to describe adequately that unconscious, yet conscious time of nothingness” (Keller, p. 108). Keller (1908) continued:

I did not know that I knew aught, or that I lived or acted or desired. I had neither will nor intellect. I was carried along to objects and acts by a certain blind natural impetus. I had a mind which caused me to feel anger, satisfaction, desire. These two facts led those about me to suppose that I willed and thought. I can remember all this, not because I knew that it was so, but because I have tactual memory. It enables me to remember that I never

contracted my forehead in the act of thinking. I never viewed anything beforehand or chose it. I also recall tactually the fact that never in a start of the body or a heart-beat did I feel that I loved or cared for anything. My inner life, then, was a blank without past, present, or future, without hope or anticipation, without wonder or joy or faith. (p. 113)

With the sudden emergence of language, Keller (1908) wrote, "When I learned the meaning of 'I' and 'me' and found that I was something, I began to think. Then consciousness first existed for me" (p. 117).

Keller's (1908) reflection upon the moment language descended upon her may serve as a model for the occurrence of language in the human condition. Language, according to Discontinuity Theory, may have emerged in an instantaneous flash. Before that instant, language had not occurred. After that instant, language had occurred. The argument is that language struck its victim from nothing, and the consciousness that was awakened also came from this nothingness. Language gave rise to consciousness, and consciousness relies upon language (Merleau-Ponty & Edie, 1964); therefore, human consciousness is a linguistic phenomenon.

Leaping the gap from nothing to brain-mind crystalized by language may have provided the perceiver access to a perceived world, but did this chasm leap offer thinking primates access to reality? Language provided a bridge to consciousness, but did language provide a bridge to anything beyond phenomena? In all its glory, language, it seems, can only describe a perception of reality and even that at a distance. In effect, the brain-mind leap presented a philosophical dilemma for the ages. Throughout all of contemplation, the epistemological impasse of solipsism (the belief that only one's mind is sure to exist) has been at the center of inquiry and has been contrasted with realism (the belief that reality is ontologically independent of one's perceptions).

The existence of a reality outside the solipsistic mind can only be hypothesized (Robbins & Sadow, 1974). However, in order to dwell in a world outside the mind, the philosopher is left to leap the problem of brain-mind (Chalmers, 1995) and of solipsism. Stepping over the void between a dichotomous subjective inner world and an objective outer world causes a linguistic dilemma too. Leaping the gap requires linguistic acrobatics, but linguistic leaping is so common, so endemic in the human condition that few take note. However, examples of the gap-ness in human language are readily available. One example is the use of dummy pronouns in syntactical constructions.

In English, dummy pronoun constructions (also known as expletive or pleonastic pronouns) have no semantic meaning (Cardinaletti & Starke, 1999; Partee, 1978; Rothstein, 1995; Seppänen, 2002). In usage such as *It is* and *There are*, the reader must leap over the empty semantics to seek textural and structural meaning further in the sentence. Here are examples of *It is* and *There are* constructions followed by an explanation:

1. It is important to consider the possible outcomes before beginning any task.
2. There are several reasons to begin with the end in mind.

In both examples, the dummy pronoun carries no semantic meaning; rather, it is a function of syntax. Speakers and readers of English must step over the meaninglessness of the construction to glean a socially manufactured context. A prescribed meaning emanates only from reliance on content words that show up deeper in the sentence structure. The empty pronoun constructions are added only as an artifact of syntax. The phenomenon of the dummy pronoun may serve as an exemplar of *being* versus the expression of *being*; of *knowing* versus the expression of *knowing*; and of *intending* versus the expression of *intending*. These dichotomies of subjectivity versus objectivity illustrated in socially constructed meaning and housed within

constructions such as dummy pronoun may contribute to an understanding of how language users become dissociated from the function of language as meaning-making phenomena.

Because of the arbitrary nature of language and its distance from a supposed objective reality, humans must leap a linguistic gap in order to say (or do) anything. Metaphysical assumptions about what reality and the world are like are drawn in an attempt to make sense of both subjective and objective proclamations. The attempt at making sense of phenomena by stepping over the occurrence of language, and so, then, understanding, may have profound implications for argumentation in research. The debate over subjectivity versus objectivity in research is a debate about “is-ness” (Moran, 2000, p. 53) and remains at the core of all scholarly inquiry (Peshkin, 1988). For the purposes of this paper, the authors are arguing that in order to conduct science, all researchers, due to the impoverished nature of human language, must leap a chasm between what they believe they may know and what a scholarly community (to which the researchers belong) purport as knowledge.

In the following segment, the origin of a relatively new science for scholarly argumentation is highlighted as a mechanism for leaping expeditiously. Phenomenology may act as a means for examining subjective versus objective ideas about perceived realities.

Phenomenology as Intermediary

Phenomenology may provide engaging perspectives for the problem of solipsism, for the challenge of language, and for the gap in research. From the Greek *phainómenon* meaning “that which appears,” phenomenology is both methodology and method. From an existential perspective, phenomenology has the function of revealing the core framework of human experience, including existing and living in the world. The phenomenologist seeks to examine the distinctive lived experience of the individual and the collective shared experience of groups

of individuals (who shared a circumstance or event) (Polkinghorne, 1989). Flowing from this epistemology, phenomenology was developed into a method for examining these experiences (Bryman, 1984; Foucault & Faubion, 1998; Husserl & Lauer, 1965), and may serve as a powerful ally in the examination of language for the purpose of scholarly discourse.

Edmund Husserl (1859-1938), mathematician turned philosopher, is credited as being the father of phenomenology (Lauer, 1965; Laverty, 2003; Macann, 1993). If Husserl is the parent, then Franz Brentano (1838-1917), defrocked priest turned psychognostic (i.e. the study of mentality, character, and personality), is its grandparent (Antonelli, 2002; Glock, 2013; Roy, 2007). Teacher to Husserl, Brentano did not consider himself a phenomenologist, but what he promulgated became phenomenology through thinkers he influenced, which, beyond Husserl, included Freud, Höfner, Twardowski, Meinong, and others.

If Brentano and Husserl could participate in a point-counterpoint debate about their perspectives of the subjective and the objective, several key components of understanding this dichotomy may emerge from the former to the latter in order to offer phenomenology as a tool and strategy in argumentation.

Whereas Aristotle contemplated the form of the body (psuchê); whereas Descartes contemplated the rational subject; and whereas Hegel contemplated objects as (dialectical) processes of change, Brentano (1973) contemplated the characteristic exclusivity of mental phenomena [mental acts] (as distinguished from physical phenomena [physical world]), which he referred to as intentionality (Chisholm, 1957). Every psychological act contains content and is directed at an object. Brentano (1973) coined the expression "intentional inexistence" to refer to objects as thoughts in the mind (p. 91). Being intentional remained a central feature in Brentano's philosophy in order to distinguish between psychological and physical phenomena;

Brentano suggested that physical phenomena could not manufacture intentionality; instead, intentionality is distinct in “the ability to differentiate the perceiver from the perceived” (Ferrari & Sternberg, 1998, p. 273). However, intentionality—even in the midst of something that behaves relationally—cannot be reduced to causality: the object can exist despite the non-existence of the object. Therefore, a co-investigator can ask what is the ontological status of that intentional object because the intentional object is essential to the intentional state, but the physical object is inessential (Mohanty & McKenna, 1989).

To illustrate, Ponce de Leon desired to find the Fountain of Youth in Florida. In this instance, the intentionality of the object is tied to the (desired) experience. For an object to be an intentional object does not require that it have any particular existential status. Instead, it is enough that intentionality be directed toward a possible intentional state. The Fountain of Youth is a nonexistent object, yet it was the object of de Leon’s consideration (Crane, 2003; Harmon, 1990; O’Conaill, 2010; Tözsér, 2009;). In order to have an intentional state there has to be an intentional object—that is, a desire. Ponce de Leon was impassioned to find the Fountain of Youth, but the intentional object did not exist; yet de Leon was not seeking for something mental. He was seeking a physical object. The threshold of existence and nonexistence of a desired object and intentionality is the hallmark of what is known as Brentano’s Dilemma (Føllesdal, 1979; Jacquette, 2004; Kersten, 1969). Is the intentional object itself mental or physical? A dilemma has an either or: Either the object is a part of the physical world (a real thing), or the object is only in the mind (a mental thing). In the latter case, the intentional object remains in the mind, and the seeker may retreat into interiority (Schmitz & O’Herron, 2007).

Husserl introduced counterpoints to his teacher’s phenomenological beginnings. Husserl determined that the characteristic framework of the Brentanian subjective versus objective

paradigms was not adequate to describing the structure of human experience (Moran, 2000).

Husserl (1970) asked five questions as distinctions from Brentano's earlier work:

1. How can experiences as consciousness present or make contact with an object?
2. How can experiences be mutually legitimated or corrected by means of each other, and not merely replace each other or confirm each other subjectively?
3. How can the play of a consciousness whose logic is empirical make statements objectively valid for things that are in and for themselves?
4. Why are the rules of play, so to speak, of consciousness not irrelevant for things?
5. How is natural science to be comprehensible in absolutely every case, in its claim at every step to posit and to know a nature that is in itself — in itself in opposition to the subjective flow of consciousness? (p. 88)

Husserl deliberated against Brentano's two-part scheme (i.e. objective versus subjective) and argued for a three-part scheme that added intentional content of experience (Farber, 1943).

Harmon (1990) wrote,

One thing that philosophers mean when they refer to this as the intentional content of experience is that the content of the experience may not reflect what is really there.

Although it looks to me as if I am seeing a tree, that may be a clever illusion produced with tilted mirrors and painted backdrops. Or it may be a hallucination produced by a drug in my coffee. (p. 34)

Husserl concentrated on a tripartite structure of metaphysics emphasizing subjectivity, intersubjectivity, and the world (Zahavi, 1994). Illustrating each, as a subject gets closer to an object, the object resolves into more detail to create a form of the experience. The subjective flux of the experience is constantly transforming the private consciousness of the experience, a kind

of Heraclitian flux (Husserl & Landgrebe, 1973). The phenomenologist describes the intentional structure of that experience. The form or the shape of an unfolding private conscious experience in virtue of which it presents the subject with an enduring object which the subject is steadily approaching while describing the experience at varying levels of specificity or generality (Depraz & Cosmelli, 2003). In this, Husserl provided a solution to Brentano's Dilemma by attending to the actual conscious experience (which is always transforming) in which the intentional content of experience remains a constant. In other words, the private forms of experience instantiating a form (with all its flux) in virtue of having that form present the subject with an enduring object, which is ultimately the subject and object of experience (Husserl & Koestenbaum, 1998).

Brentano would need to concede the debate because he could not capture the intentional content of experience because he had conceived of only the subjective-objective dichotomy (i.e. mind-matter, private-public, etc.). Husserl's (2012) revolutionary breakthrough of adding the content-object (of experience) placed the object as a real thing in the world (i.e. a mind independent object). The content of the experience is what presents a particular object in a particular way, with the understanding that the subject cannot have an intentional experience without intentional content. The form is the shape of the consciousness; therefore, the subject is not trapped in his/her mind (Lotz, 2007; Sanders, 1982; Schuhmann & Smith, 1993).

How does Husserl's Brentanian clash point relate to argumentation, a scholar's inquiry, or a community of scholars? Two or more people can have intentional content of the same form with a subjective flux (Crane, 2003)—not as an object in the mind but as a form, that is, a form not located in space and time (Chamberlain, 2002). When the form gets instantiated, that instantiation is in space and time and can be shared by many. Ultimately, this shared intentional

content of conscious experience is the object of phenomenology. This investigative pursuit is not undertaken by any of the natural sciences, neither is the private conscious state investigated by psychology. Husserl (2002) argued for a separate, individuated science:

A new fundamental science, pure phenomenology, has developed within philosophy: This is a science of a thoroughly new type and endless scope. It is inferior in methodological rigor to none of the modern sciences. All philosophical disciplines are rooted in pure phenomenology, through whose development, and through it alone, they obtain their proper force. Philosophy is possible as a rigorous science at all only through pure phenomenology. It is of pure phenomenology I wish to speak: the intrinsic nature of its method and its subject matter that is invisible to naturally oriented points of view. (p. 124)

Husserl (2002) proposed a new way of examining lived experience, which actually emerged as a kind of point-counterpoint debate with the earlier work of Brentano. In this new research paradigm, researcher and participant share access to phenomena as co-investigators viewing a horizon of determinately indeterminate further possible views (Hilmy, 1981). Co-investigators are presented with more than just an observation of phenomena. What occurs is a kind of a horizon (a penumbra) of further possible views (Freenberg, 2014). If co-investigators examine one facet of the phenomena, a further possible view is present. Moving to consider another perspective gives yet a further possible view, and by so doing, the object and subject of shared experience are constructed (Husserl, 1970). A point-counterpoint experience is created for co-investigators to examine and to debate.

The phenomenologist as co-investigator is like a rhetor who uses language to argue objective versus subjective perspectives of being. Unlike the rhetor, however, the

phenomenologist does not seek to persuade about what the world is like (Mohanty, 1978). After all, an argument can be still be waged by the solipsist that there is no world, but since the phenomenologist as co-investigator is observing the structures of shared experience (rather than seeking agreement about the world), s/he can still do phenomenology as a point-counterpoint exchange in lived experience. The phenomenologist acknowledges self as a structure of shared experience, and as a partner in the phenomenon of language viewing a horizon of further possible views; as such, the phenomenologist as a linguistic phenomenon assumes there is less to leap over.

In the methods section of this research, the authors attempt to (1) illuminate a historical bias that persists in the academe. That bias appears to be toward quantitative analyses and methodologies as a gold standard in scholarly research. Notwithstanding, qualitative research emerged over one hundred years ago and has found its place in scientific inquiry. The question remains whether qualitative research is pervasively viewed as authentic research. The authors also (2) illuminate the methods employed in this research.

Methods

Despite the advancement of methodologies in qualitative research over more than a century, quantitative inquiry may still be considered the gold standard in minds of many scientists (Krefting, 1991; Maynard, 1994; Fielding, N., & Schreier, M., 2001; Sale, Lohfeld, & Brazil, 2002; Barone, 2007; Cooper & Hedges, 2009). The lingering attitude may be, in part, due to what Flyvbjerg (2006) refers to as the five misunderstandings about qualitative research:

- Misunderstanding 1: General, theoretical (context-independent) knowledge is more valuable than concrete, practical (context-dependent) knowledge.

- Misunderstanding 2: One cannot generalize on the basis of an individual case; therefore, [a qualitative] study cannot contribute to scientific development.
- Misunderstanding 3: [A qualitative] study is most useful for generating hypotheses; that is, in the first stage of a total research process, while other methods are more suitable for hypotheses testing and theory building.
- Misunderstanding 4: [A qualitative] study contains a bias toward verification, that is, a tendency to confirm the researcher's preconceived notions.
- Misunderstanding 5: It is often difficult to summarize and develop general propositions and theories on the basis of specific [qualitative] studies. (p. 221)

Popper (2005) held that only research that can be empirically falsified is bona fide science. Popper (1962) wrote,

Thus science must begin with myths, and with the criticism of myths; neither with the collection of observations, nor with the invention of experiments, but with the critical discussion of myths, and of magical techniques and practices. The scientific tradition is distinguished from the pre-scientific tradition in having two layers. Like the latter, it passes on its theories; but it also passes on a critical attitude towards them. The theories are passed on, not as dogmas, but rather with the challenge to discuss them and improve upon them. (p. 50)

By the idea of falsification, Popper did not mean that something is made false; rather, if a thing is false, then falsifiability can be shown by empirical experimentation. This led Popper to a resounding criticism of ideas that could not be falsified such as Freud's psychoanalysis or Einstein's thought experiment that light is deflected toward solid bodies (which was proven accurate in 1919 by Sir Arthur Eddington). Eventually, Popper (1974) recanted regarding

Einstein's theory of relativity. Some things simply cannot be proven to be false and, so, cannot be falsified.

Popper's views of falsification may have been somewhat dogmatic in themselves. Kuhn (1962) wrote,

No theory ever solves all the puzzles with which it is confronted at a given time; nor are the solutions already achieved often perfect. On the contrary, it is just the incompleteness and imperfection of the existing data-theory fit that, at any given time, define many of the puzzles that characterize normal science. If any and every failure to fit were ground for theory rejection, all theories ought to be rejected at all times. On the other hand, if only severe failure to fit justifies theory rejection, then the Popperians will require some criterion of 'improbability' or of 'degree of falsification.' In developing one they will almost certainly encounter the same network of difficulties that has haunted the advocates of the various probabilistic verification theories [that the evaluative theory cannot itself be legitimated without appeal to another evaluative theory, leading to regress. (pp. 146-147)

The atomic age and thought experiments about phenomena such as subatomic particles gave rise to new and far-reaching thought experiments that have become mainstream science (Gilbert & Reiner, 2000). Ideas ranging from quarks to black holes weakened the resolve of positivism, and other perspectives for scientific inquiry emerged out of necessity. Science needed a means to account for the observer as well as the observed (Cassell, 1977; Krieger, 1985; Umpleby, 1990).

An apt illustration of the observer-observed paradigm is the Hindu legend called "The Blind Men and the Elephant" (see Figure 4.1). In this story, six blind men encounter an elephant.

Each man touches a distinguishing part of the beast, and each man determines that what he has encountered is true beyond reckoning.



Figure 4.1. The blind men and the elephant.

The American poet John Godfrey Saxe (2007) wrote a poem of the same name in 1872. The poem is an artful reminiscence of Husserl's (2002) horizon of determinately indeterminate further possible views.

The Blind Men and the Elephant

It was six men of Indostan, to learning much inclined,
who went to see the elephant (Though all of them were blind),
that each by observation, might satisfy his mind.

The first approached the elephant, and, happening to fall,

against his broad and sturdy side, at once began to bawl:

'God bless me! but the elephant, is nothing but a wall!'

The second feeling of the tusk, cried: 'Ho! what have we here,
so very round and smooth and sharp? To me tis mighty clear,
this wonder of an elephant, is very like a spear!'

The third approached the animal, and, happening to take,
the squirming trunk within his hands, 'I see,' quoth he,
the elephant is very like a snake!'

The fourth reached out his eager hand, and felt about the knee:

'What most this wondrous beast is like, is mighty plain,' quoth he;
'Tis clear enough the elephant is very like a tree.'

The fifth, who chanced to touch the ear, Said; 'E'en the blindest man
can tell what this resembles most; Deny the fact who can,
This marvel of an elephant, is very like a fan!'

The sixth no sooner had begun, about the beast to grope,
than, seizing on the swinging tail, that fell within his scope,
'I see,' quoth he, 'the elephant is very like a rope!'

And so these men of Indostan, disputed loud and long,
each in his own opinion, exceeding stiff and strong,

Though each was partly in the right, and all were in the wrong!

So, oft in theologic wars, the disputants, I ween,

tread on in utter ignorance, of what each other mean,

and prate about the elephant, not one of them has seen! (pp. 259-261).

In the collective view of the observers, the outcome was a single phenomenon, but to each, the observed occurred as a further possible view. The following is a rendition of how an elephant may have occurred as a single phenomenon but from a shared phenomenology of the blind men (see Figure 4.2).

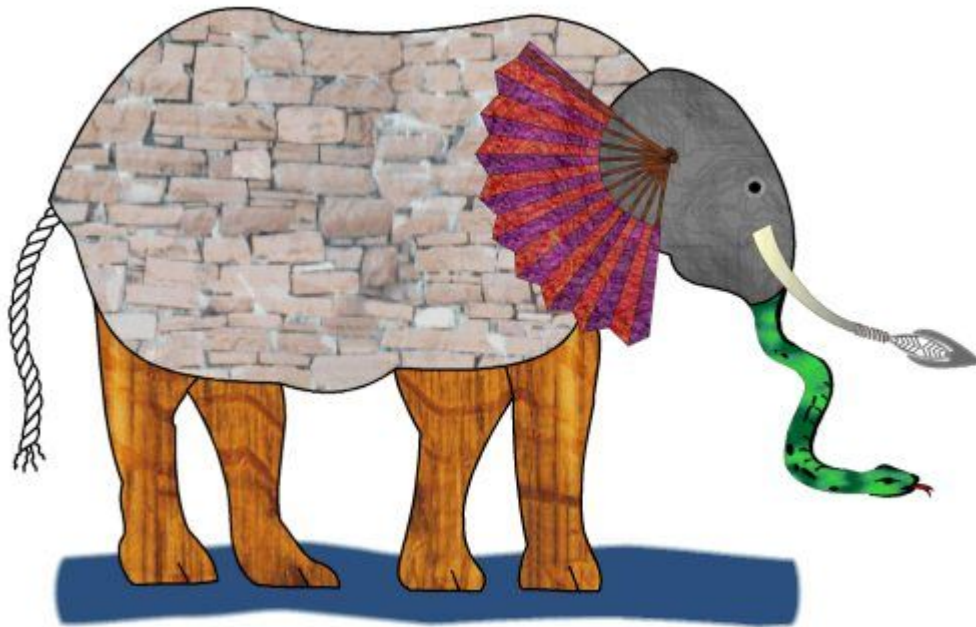


Figure 4.2. Fictitious likeness of the lived experience of the blind men encountering an elephant.

Each of the blind men was, at once, experiencing the occurrence of elephant-ness, and, at the same time, each was stepping over aspect of elephant-ness. The blind men could not have experienced the whole of elephant-ness even if they were not blind. Even with five fully functional sense organs, elephant-ness can only come into focus partially. Something is always missing. For example, humans cannot talk to elephants to gather a linguistic understanding of elephant-ness. Instead, language is used to step over what cannot be known to make a guess about what the world is like for an elephant. These missing links to actual knowledge are basis for all inquiry. The reason to argue anything is always uncertainty (Zarefsky, 2012). Debate, in

itself, is the admission that the debaters do not have and cannot have the entire picture of any phenomenon.

Science mirrors the attempt of the blind men; in that, science endeavors to explain the way the world works. This explanation is never complete. There always remains something missing in the explanation of the world. The model in Figure 4.3 illustrates the incompleteness of scientific inquiry.

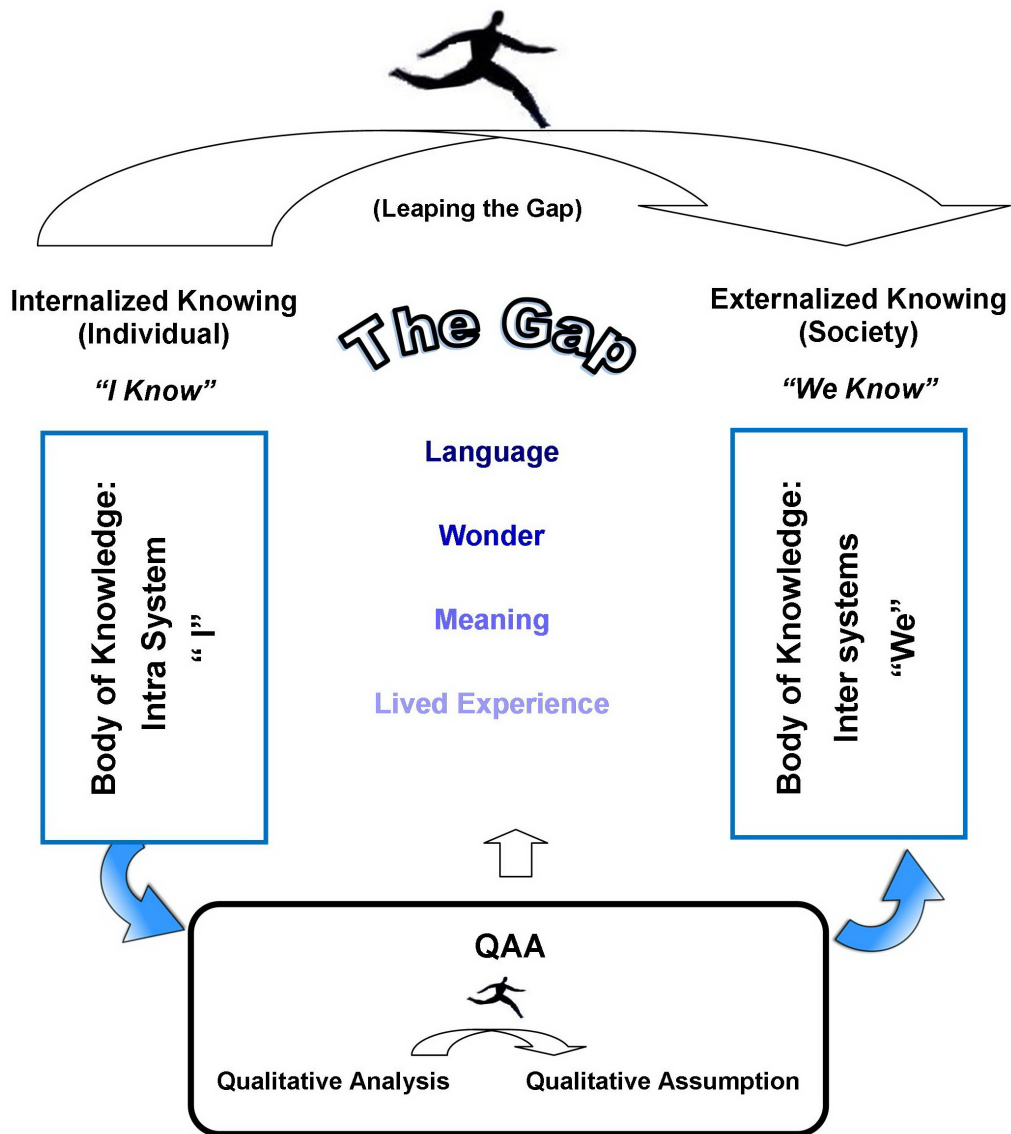


Figure 4.3. Leaping the gap.

Phenomenology acknowledges and confronts the gap in scientific inquiry. Van Manen (1999) suggested that phenomenology as a methodology in science splinters the taken-for-grantedness of the most mundane aspects of life. Van Manen (n.d.) continues,

When we are struck with wonder, our minds are suddenly cleared of the clutter of everyday concerns that otherwise constantly occupy us. We are confronted by the thing, the phenomenon in all of its strangeness and uniqueness. The wonder of that thing takes us in, and renders us momentarily speechless as when the mouth hangs open while being taken in by the wonder of something. Perhaps it is strange to speak of wonder as a method. But if we understand method as *methodos*, as path or way, then we may indeed consider wonder an important motive in human science inquiry. The way to knowledge and understanding begins in Wonder. From this moment of wonder, a question may emerge that addresses us and that is addressed by us. It should animate one's questioning of the meaning of some aspect of lived experience. It also should challenge the researcher to write in such a way that the reader of the phenomenological text is similarly stirred to the same sense of wondering attentiveness to the topic under investigation. ("The heuristic reduction: wonder," paras. 2-3)

Giorgi (2009), like Van Manen (1999), patterned his methods for research in phenomenology after Husserl's work, and both altered Husserl's phenomenology for their own purposes. Van Manen (1990), for example, took his work in phenomenology toward a more heuristic approach. Giorgi (2009), on the other hand, modified the Husserlian method toward description and explanation for doing research in the context of the social sciences, but no less for the lived experience of the co-investigators encountering a phenomenon. The approaches of Giorgi (2009) better suit this research because it remains more authentic to Husserl's (1980)

eidetic science (i.e. science of possibilities) allowing for irreal objects in its analyses within the social sciences.

By way of comparison, Husserl (2008) laid out phenomenology in four steps. Giorgi (2009) modified these steps. Understanding the intention of the originator of phenomenology can be instructive in following the modified application. Husserl's (2008) original steps began, first, with (1) epoché, also known as bracketing, which refers to a natural attitude, a phenomenological attitude, toward the experience of co-investigation. The researcher uses epoché authentically when suspending judgments about the phenomenon that are normal to the thinking and experiencing mind.

Husserl's (2008) second steps were the hugely controversial (2) noema and noesis, both of which are still up for interpretation because Husserl continued to work on the concepts within phenomenology until his death in 1938. The terms are used in tandem, and a distinction about both brings each to light. Smith (2013) accounts for as many as four accepted interpretations of noema, but promulgates a singular interpretation:

The noema is not something at the terminus of the ray of intention, but rather something internal to the ray of intention: the ideal content of experience; as it were, the medium of intention. The noema is distinct from the object of the act of consciousness.... Moreover, the noema is not a part of the object itself. Rather, the noema is part of the intention reaching toward the object. Specifically, the noema is the content of the act, that 'in' the act which embodies the way the content is 'in' the act, being a 'moment' of the act, and thereby mediates the intentional relation between the act and the object. (pp. 306-307)

On the other hand noesis, according to Smith (2013), "is the real content of an act of consciousness, 'in' which the ideal content or noema occurs or is realized; the noetic part or

moment of an act of consciousness, the part that consists in the act's intending or presenting an object in some way, a part that occurs in time, as does the act itself" (p. 440). Providing a plain-English explanation of noema and noesis robs these binary stars of their radiance, so at the risk of oversimplification, noema describes the object of the researcher's attention, and noesis represents how this object appears as a reflection for the researcher as a space-time phenomenon.

Third, Husserl (2008) elaborated on (3) eidetic variation. An understanding of this concept may best begin with clarity of the Greek term *eidos*, which refers to the essences of a thing that can be shared. Smith (2013) refines Husserl's concept as "the technique of varying the properties of an object in imagination or phantasy, with the aim of judging which properties are essential to an object of that type, an object with its *eidos* or essence" (p. 431). In considering the possible aspects of a phenomenon, including using the imagination to grant fluctuations to the phenomenon, eidetic variation tests the limits of variation to the point that the phenomenon stops being itself. In such, the researcher may alternate thoughts of attention, subtraction, context, figure, background, etc.

The final step in Husserl's (2008) original work is (4) conclusions. This last step entails a discovery process in which the researcher investigates original meaning from the occurrence of the phenomenon. The researcher seeks to describe invariant facets and primordial modes of constitution in the experience (Husserl, 2001).

By contrast to Husserl's (2008) original four steps, Giorgi's (2009) methods may seem cursory, but one is reminded the purpose of such a rendering: Husserl's (2008) philosophically heavy strides may have restricted access for some. Giorgi's (2009) work keeps the essence of the originator, but delivers the force of the method to a broader audience. Giorgi's (2009) steps include the following:

1. Assume a phenomenological attitude
2. Read the transcripts or written account for a general sense of the whole experience
3. Determine the meaning units
4. Transform the co-investigators' expressions into statements representing their lived meanings, and
5. Synthesize the structure of the experience.

The authors followed each of Giorgi's (2009) five steps for a descriptive phenomenology method. In step one, the first author assumed a phenomenological attitude with a complete understanding of epoché also known as bracketing (Moran, 2000). However, it was not until the first author was considering a deeper analysis of the process of phenomenology that the realization came that bracketing as a method begins prior to the study, that is, prior to data collection or any analysis (Bednall, 2006). Epoché begins with an attitude adopted at the genesis of the study. This was an important learning regarding the methodology. In essence, the first author had to bracket not having bracketed at the outset of the research.

In step two, the first author read and reread the interview transcripts to gain an account of the experience of the co-investigators. Examining the transcripts was tantamount to a revisiting of the actual interviews, remembering the anxieties and the insecurities that arouse during those interviews. In the reading of the transcripts, similarities between the comments began to recur. The co-investigators did have disparate experience, of course, but what was more engaging than the differences were the similarities that each experienced as a part of their class-time debate.

In steps three, the first author delineated units of meaning by separating them into textural and structural units. The textural units were an inquiry into the "what" of experience, and the structural units were an inquiry into the "how" of the experience. The textural and

structural delineations provided context to understand how co-investigators viewed the phenomena of a class-time debate on subjectivity and objectivity in a doctoral classroom.

Step four entailed transforming the participants' expressions into statements that represent their shared meaning of the experience, and, in step five, author one synthesized the structure of the experience as an interpretation of the phenomena based on the flow from individual views to collective views to researcher interpretation. In Figure 4.4, the process is outlined.

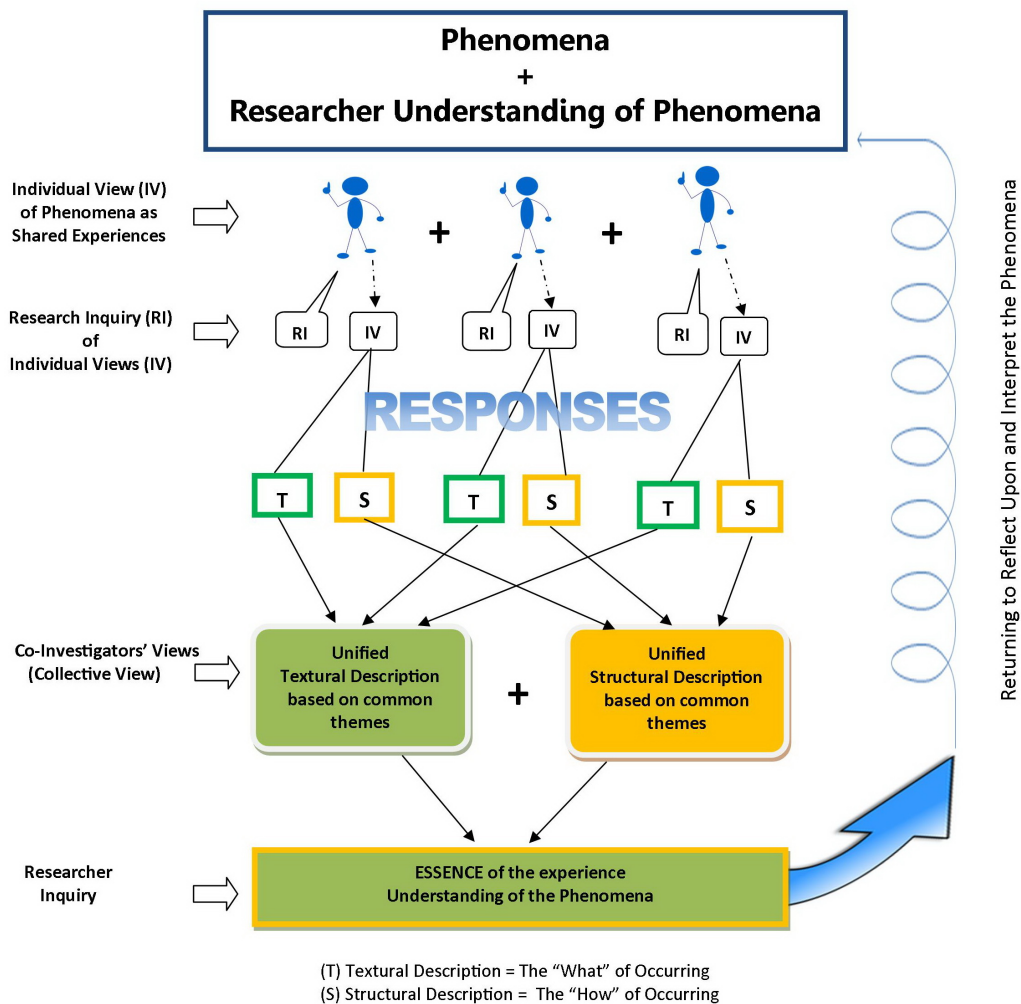


Figure 4.4. Phenomena and the researcher understanding of phenomena.

Participants

The participants in this debate study were first-semester doctoral students in a philosophy of education course emphasizing the fundamentals of educational research. Out of 12 students in the course, 7 responded to email requests to be interviewed. The invitation to participate in the study was sent out by the instructor who identified the author as a fellow doctoral student in the program working on his dissertation. The instructor of the course was also interviewed for a total of 8 participants in the study. The ratio of women to men was 5 women and 3 men. Participants were provided with informed consent prior to the commencement of the interview. Signatures for the informed consent were not requested.

Materials

The debate centered around Gould's (1996) critique of objectivity in science titled *The Mismeasure of Man*. Students were required to read the book before the debate began. Beyond the reading, four modules were developed for the debate. The four learning modules were administered approximately one month prior to the debate to provide participants with basic knowledge of argumentation skills. Modules 1 through 3 provided instruction in debate terminology, reasoning processes, quality of arguments, and formulating rebuttals. Module 4 laid out the process and logistics of a class-time debate. The modules were made available through the course learning management system. Each module took approximately 40 minutes complete. A judge's score sheet was provided for the debate judges.

Procedures

In 2011, the co-authors visited about an undergraduate research project already begun by R.L.W. and H.V.G. The study entailed using learning modules to teach debating skills. A quantitative study, the debate study included survey research on the question of whether learning

modules improve argumentation and debate skills for undergraduate learners in communication and biology. Prior to the undergraduate research study, R.L.W. had used the modules in an English language learning environment in Asia. The modules were adjusted to meet the level of the students in a prescribed environment. N.W. asked whether the modules could be adjusted for doctoral students from the previous level fitted for undergraduate students. If they could be adjusted, N.W. continued, would R.L.W. consider co-facilitating a 2011 course titled Foundations of Educational Research, a philosophy of educational research course taught to first-year doctoral students? Both agreed, the modules were adjusted, and during fall 2011, R.L.W. became student co-facilitator of the EDUC 707.

In 2012, the following fall semester, N.W. decided to administer the debate again with some minor adjustments to the process and the modules. Following the semester, N.W. expressed his experience with an unusually cohered group of first-year doctoral students. What factors had come to play to bring these students together? Did the debate play a part in this cohesion? These inquiries were the genesis of this research.

The co-authors developed questions for the phenomenological study using Creswell (2007) and Wertz' (2011) guidelines:

1. The questions asked should reveal the lived experience of the participants.
2. Fill in the gap between knowledge and reality to understand what occurred.
3. Seek to understand the everyday lived experiences and what those experiences meant to the individuals
4. Use open-ended questions which assist human understanding about a given phenomenon.

Given these guidelines, the authors created the following questions and sub questions:

1. Please think back on your EDUC 707, 2012 class. Do you remember the debate from that course?
 - a. Could you tell me about that experience?
 - b. How did you feel about the assignment, generally?
2. You didn't know which side of the debate you would be arguing. Was this difficult for you?
3. Could you tell me about the academic experience of this debate?
 - a. What lead up to the debate in that class?
 - b. Were you wrestling with any of the concepts or vocabulary surrounding the debate topic?
 - c. Did you feel any anxiety about the communicating openly, knowing other people involved in the debate had varying views about the same topic?
 - d. What regional perspectives came to play in this debate setting?
4. What has come of this debate experience in relation to your fellow classmates (those with whom you still interact in other classes or in the program)?

Once the interview questions were completed, an application to conduct human subjects research was submitted to North Dakota State University's Office of Research and Creative Activity.

Upon approval, N.W. sent out the following email to prospective participants:

Hello all:

I am sending a second request for interview participants on behalf of Rob Walsh, a student in the EDP program. For his dissertation study, he is conducting research related to the use of debate as a teaching tool. All of you were enrolled in EDUC707 last fall (2012), when we engaged in a class debate, and Rob would like to recruit you to

participate in a brief interview (20-30 minutes) in order to understand your experiences of that debate activity. Rob will provide Informed Consent document for a more detailed description of his study at the time of the interview. If you are willing to participate, please contact Rob (email address) schedule a time for an interview. Please note that, while I think this is an important study and I hope all of you will consider participating, I do not want you to feel any pressure from me to do so. Rob and I decided that I should contact you on his behalf in order to make sure he is not aware of your identity unless you choose to contact him first. In turn, Rob will not share with me the identities of any of his participants, so that I will not know who does or does not choose to participate. If you have any questions about the study, you are welcome to contact me or Liz (Rob's advisor) – or you can certainly contact Rob directly.

Thanks for your consideration,

N.W.

Offers from student participants trickled in starting with three participants. No incentives were used to entice participants. The co-authors had determined that the study needed at least 6 participants; 7 would be good, and 8 or more would be ideal. After two weeks and only three participants on board, R.L.W. determined to use snowballing to encourage more participation. The previous interviewees used Facebook to encourage classmates to join in. Within three weeks, 7 total student participants had signed on. N.W. had already agreed to participate in an interview, but it was decided to interview him as the last participant so as not to bias perceptions toward the student participants.

The interviews were conducted on the campus of North Dakota State University. If weather or distance were apparent, the interviews were conducted on Skype as video and voice

interviews. The interviews were voice recorded with a primary and a back-up device. Following the interviews, the voice recordings were transcribed. The transcripts were read and reread and expressions relevant to the phenomenon were identified and thematized as noted in the methods section of this report. Meaning units were extrapolated for synthesis.

Findings

Two primary themes emerged from the phenomenological data analysis of using a class-time debate in a doctoral classroom. These themes were (1) the textural description of the debate, and (2) the structural description of the debate. The textural perspective described the “what occurred?” for the participants in the class-time debate. The structural perspective described the “how it occurred?” collectively in the class-time debate as a shared experience.

Textural

Meaning units became evident from the recurring responses of the participants and the subsequent analysis of these data. The identified textural themes are as follows:

- Anxiety
- Preparation
- Safety
- Trust
- Fun
- Long-term effect

Each of the meaning units provide context to the overall occurrence of the class-time debate for individuals. For this reason, each of the meaning units is elucidated and examples of participant perspectives are provided.

Anxiety. The participants reported experiencing anxiety in a range of intensity. Some participants admitted feeling a mild sense of angst due to the debate particularly if they had never participated in a formal debate before. Others expressed their experience of anxiety because of the public speaking threat inherent in a debate setting. Still others expressed concern over being exposed as vulnerable or incompetent in some aspect of the debate material. Two participants equated this fear to imposter syndrome, a phenomenon in which graduate students are unable to internalize their previous accomplishments that led to their admittance into the doctoral experience (Gardner & Holley, 2011). Participants relate a range of concerns about anxiety. Clusters units of relevant textural meaning anxiety examples are as follows:

- Over-arching feeling was one of anxiety for the debate.
- Anxiety about whether or not I knew the material.
- I was a speaker, which is probably why I felt a kind of higher level of anxiety.
- We flipped a coin, and we had to be ready to go, which was part of the anxiety.
- It was so stressful; it was the most stressful assignment I've had.
- I've had a great fear and anxiety of speaking, of academic speaking.
- I experienced anxiety in presenting my viewpoints and exposing my thoughts.
- I had a lot of anxiety...because now here I am exposing myself to give a really shitty response where classmates are depending on me.

Preparation. Debaters were required to prepare to debate both pro and con arguments for the resolution "Objectivity is essential for good research." At the beginning of the debate, a coin toss determined which team would defend the pro and con positions. Some students commiserated about the level of effort this required, but most students seemed to realize the benefit (1) of not knowing which position they would defend ahead of time and (2) of having to

prepare for both positions. Clusters units of relevant textural meaning preparation examples are as follows:

- It was difficult envisioning arguing the side that I didn't believe because crafting those arguments is harder, finding the reason why you believe that is like "but I don't, so I've got to make this credible"
- We had to investigate both sides of [the resolution] and had to be ready, we had to come that day ready to argue either side.
- [We] worked together as a scholarly team to research both pros and cons of issues that were related to the debate.
- There was a tremendous amount of teamwork on our team just rallying, everybody had to have their stuff prepared, and they were sharing it out rather quickly and everybody had a pretty good role in it.

Safety. Ideas revolving around the concept of safety were prevalent, but sometimes implied, in the comments of the participants. Safety seemed to mean a secure place to share openly. Clusters units of relevant textural meaning safety examples are as follows:

- We had that sense of "this is an ok place to be vulnerable" which is really essential if you are ever going to let yourself change your mind about something.
- That "safe" kind of space where you can engage in this because this was going to require vulnerability especially for people who aren't naturally debaters.
- There are some who just refused to be a speaker, who just said they wouldn't speak.
- I could tell some people really had to be the shining star and be the talker.

- The way in which we all seemed to kind of communicate it just seemed natural that we were just kind of having these conversations it didn't necessarily feel like a classroom structured debate process.

Trust. Although similar to safety, trust was distinguished because of the attitude participants seem to have about one another in the cohort. There seemed to be an added dimension of a willingness to be vulnerable around classmates, which seems distinct from safety.

Clusters units of relevant textural meaning trust examples are as follows:

- We trusted one another that if I say something slightly wrong they're not going to take offense because they understand the spirit with which it was intended.
- The entire thing that I sort of just came to is that environment of trust.
- An environment of caring and trust as opposed to one that's more about competition.
- To honor and acknowledge the stuff that we don't necessarily agree with.
- We can hurt each other and those types of things so we have to know that we have to rely on each other.

Fun. Participants indicated that the debate was not all seriousness. A sense of camaraderie appeared to emerge as part of the preparation and practice of the debate. Group members appeared to have bonded through the process. Clusters units of relevant textural meaning fun examples are as follows:

- The team that I had with me was so sharp and we just had so darned much fun.
- What an exciting assignment to do actually.
- An experience that leads to growth.
- I just really think this assignment forced us to think deeply and in such a wildly fun compressed way, it's one of the most fun assignments I can recall doing.

- It was a little bit like I think maybe law school would be, it was fun.
- I mean you add that element of technology it certainly didn't harm the debate at all it really got us engaged to have fun with one other.
- I felt if ever I've gotten my money's worth, in terms of my time, you know the cash isn't the big thing but my time, that was a good lesson.

Long-term effect. Participants seemed to have remarkable recall of the details of the debate despite that interviews took place a year after the end of the course. Some of the long-term effects seem to be total recall of the resolution, debate terms connected to the preparatory materials, and vivid experiences that occurred during the debate itself. Clusters units of relevant textural meaning long-term effects examples are as follows:

- The terminology helps you now because there's a nuance to it that helps you put a name to what you're really wrestling with.
- The victory that [N.W.] was trying to build inside us is to be better broader thinkers so the academic prep work.
- Going in was to pre-determine where clash points are going to arise and then to think through that as opposed to reacting, to have more of an intellectual response.
- We had to talk about um, how we formulate our arguments, how we balance out our arguments and then how we go from a subjective lens to an objective lens.
- Reading more about the objectivity and how those work, and subjectivity and how those work within the different paradigmatic frameworks was very helpful to connect those two things.

Structural

Meaning units also became evident as structural themes that recurred in responses of the participants and the subsequent analysis of these data. The table # illustrates these structural themes. The identified structural themes are as follows:

- Scaffolding
- Environment
- Teaching strategy
- Cohesion
- Transformation

Each of the meaning units provide an overall context of the lived experience of the class-time debate for groups individuals, a collective occurring. The meaning units may illuminate the group experience and examples of these perspectives are provided.

Scaffolding. The debate was structured around four learning modules that were provided approximately one month prior to the class-time debate. Participants had varying responses to how the debate was organized and structured. In some cases, participants had no experience with argumentation and debate, and in other cases, the participants had experience in high school or undergraduate courses or extracurricular activities. Clusters units of relevant textural meaning scaffolding examples are as follows:

- We did have to do those [learning modules], so they should have been familiar with the debate structure, it's, it was putting it all together.
- N.W. structured that debate and it was structured...from a curriculum instruction standpoint that was a powerfully built lesson.

- [The learning modules] were basically definitions of kind of the processes within academic debate and it seemed to be kind of, for me it seemed to be the underlying platform in how to engage in an intellectual conversation.
- [The learning modules] helped focus the conversation, but [the modules] also helped to identify the linear nature of argumentation.
- I think maybe that part of the terminology like the resolution and those other things, you know, I went through and I did all of the practice exercises, but I still didn't feel that comfortable with it and the reason for that might have been because the person that I practiced with.

Environment. The environment refers to the atmosphere generated for the purpose of the debate. By definition an academic debate is a game (Strait & Wallace, 2008; Trapp, 1993), and games may have reflection of reality, and the participants seemed to be responding to the balance between the debate as a serious activity and nature of a game. Clusters units of relevant textural meaning environment examples are as follows:

- I felt like even if my views weren't the same as others that they would be accepted I also felt like because the debate is a slightly artificial environment.
- In terms of why the debate itself was exciting for me, it had an element of competition which I just get a kick out of because at the end it didn't matter, there was no prize, but it just was kind of that "game on" really tight few minutes.
- The debate process really seemed to be the bedrock for understanding how to facilitate an academic conversation.
- We were placed in an argumentative environment and so this you know, having the debate is wonderful.

- Our judges called it as a tie, and I thought that was pretty, that was good, I'd rather have it be a tie than have one group win over the other group and then hold it against the other group.

Teaching strategy. Beyond being an academic game, participants seem to recognize and acknowledge that debate is an elaborate teaching strategy that needed to be planned carefully for it to be executed in the classroom. The teaching strategy is distinct from scaffolding from the perspective that the scaffolding were the actual materials provided, and the teaching strategy was the pedagogical thought placed in preparing the complexity of the debate itself. Clusters units of relevant textural meaning teaching strategy examples are as follows:

- I remember several things about the debate really clearly. I remember a lot of the preparation and the approach that we took for preparing for it.
- The whole idea was to get us all familiar with that kind of a process to use [the debate] as a teaching tool.
- I was thinking about why was it memorable enough that I can actually recall it as a specific assignment, and I think it was because of how it was built and how it was executed.
- Having the debate in the class made you really synthesize the information and apply it and I think we're at a level where that's our expectation not just from our instructor but from our future colleagues.
- Since it was a debate and it was more competitive it was a little bit harder than your average classroom discussion.
- It was a good exercise at the time because it allowed us to be competitive but then also allowed us to work together as teams and to not be too serious about it.

- It was really an enlivening exercise in how to engage in an academic conversation.

Cohesion. The participants seemed to believe that a cohort-wide collegueship had already begun by the debate, yet many participants seemed to believe that the debate intensified the existing unifying experience. Clusters units of relevant textural meaning cohesion examples are as follows:

- Seeing your viewpoints in somebody else similar is reaffirming to you, and especially if that person is someone who you think and you value as pretty sharp, you're identifying with them and that seems to give you more value.
- There was a tremendous amount of teamwork on our team just rallying
- Because you're looking for meaning and if you think you're kind of getting it, if somebody else sees it similarly you think "well, at least two of us kind of, we're at least, we can communicate" so I think that's good.
- I mean you add that element of technology it certainly didn't harm the debate at all. It really got us engaged to have fun with one other so we grew kind of close, but it was equally fun to connect over IVN with the other people in the room on kind of this high intensity.
- I don't remember if [N.W.] actually drew, he might have drawn our names and or, or just had us, I know he picked the teams, and I think he picked the teams intentionally. He didn't do that at the beginning of the semester, [the debate] was towards the end of the semester where he could kind of put certain patterns together.

Transformation. The debate seemed to have a transformative effect on the participants. Debaters appeared to relate to the before-and-after impact of the debate. Mezirow (1996) suggested that transformative learning is "[t]he process of using a prior interpretation to construe

a new or revised interpretation of the meaning of one's experience in order to guide future action" (p. 162). The transformations that seemed to occur within the debate appear to be related to empathy and other-ness in respect to perspective-taking. Clusters units of relevant textural meaning transformational examples are as follows:

- It was a transformative experience for us to be able to engage in that kind of debate and that kind of dialogue in class and still, and come out of it with a better understanding of each other and an acceptance that we might just believe entirely different things or there's some areas where we just came together too.
- It is if you are dedicated to building scholars, for people who can think long after class is over but can think about...right and wrong, but the many different ways of looking at an issue. I think of like a spider with eight eyes and you know we only have two so we talk about two, and two sides to an issue and I think one thing we've learned is there's all kinds of sides.
- You have to also be aware of what is the opposite view, or what is the subjective view against your objective view, so I'm going all around this it seemed to me that it really high-lighted the doctoral process in general.
- To put your head in a frame of thinking that you just can't spout out things and have absolutely no understanding where that information came from and where within you that opinion is.

Discussion and Conclusion

The debate over subjectivity versus objectivity is practically a koan in scientifically inquiry (i.e. If a tree falls in the forest...). However, closely examining the dichotomy causes doctoral students, at least, to consider the implications of the resolution "Objectivity is essential

for good research.” In the case of this study, the debate assignment required students to prepare for both the pro and con arguments for that resolution. Students were expected to be ready to defend stances on objectivity and subjectivity in research. In the process, the essence of debate as a game and debate as a catalyzing factor seemed to emerge. The authors sought to investigate the lived experiences of these essences. However, the ability to generalize beyond this study is limited.

What must researchers leap over in order to do science? Is it enough to try to be objective? Or is objectivity a lark, and must researchers concede that subjectivity is endemic any research endeavor? After all, even in quantitative undertakings, the researcher is setting up the experiments and assigning meaning to the parameters of the measurements. In this way, it seems that quantitative researcher steps over several layers of authenticity to call this research a gold standard. Notwithstanding, qualitative researchers must do more to detail their inquiry processes, that is, more than just whimsical statements such as, “The authors began coding the data and themes emerged.” Such machinations may show up as magic for some scientists who need to understand a more linear process.

The genesis of this study came out of a desire for authentic discussion in the doctoral classroom. When prompting for discussion had mixed results, a class-time debate was devised which pushed students out of the passive role of “learner.” This may have caused anxiety because students had to explore perspectives different from their own, and some of these perspectives may have been the product of many years of living and working. Mezirow (1981) referred to this anxiety, skillfully introduced by an educator, as a disorienting dilemma in which the students are invited to challenge their own assumptions, whether about subjectivity and objectivity in science, a socially engrained structure such as racism, or global crises. Mezirow

(1997) believed that an essential element of learning is challenging deeply ingrained perceptions by critical examination of personal insights. Such reflection sheds light on the assumptions that have been acquired through education and experience. Added to this, Mezirow (2003) highlighted that “the transformed frame of reference in communicative learning requires critical-dialectical discourse” (p. 61), which portends the need for this discourse to occur in a scholarly community. In the doctoral experience, students are encouraged to contribute to the academic environment. A shift in the locus of learning must take place for this contribution to be authentic. Doctoral students must actively cease being receptacles of knowledge (Baumgartner & Payr, 1996) and insistently engage in critical reflection of assumptions, perspectives, expectations, and intentions. This type of commitment to self and others can guide meanings and actions in the academe and the world.

The doctoral educator and the doctoral student are charged to make these transformations in the learning environment. The attempt at power shifting and sharing can be slippery. Professors who want genuine scholarship with doctoral students committed to engagement may need to give up power-over and shift to power-with (Kahane, 2010). A sense of play may need to emerge. When the first author interviewed N.W., the professor for the debate, a powerful image surfaced in the form of kittens playing. Kittens in a litter share some measure of care and concern. Competition within the playing shows up, but these bouts are inclusive in nature. There is not one winner and several losers. Instead, when one goes too far and another gets hurt, an “ouch” is sounded, and the others check in. A safe environment is established. At the same time, these kittens are learning skills such as boundaries, flexibility, stealth, and know-how, which will be needed later on.

This may be a difficult metaphor to mix when equated to doctoral students. Perhaps lion cubs would have been a surer comparison. In this context, play does not happen naturally. Play must be acted on; it must be intended and allowed. When such an environment is created, learners may the process of collegial give and take with the ability to check in with others, particularly when an “ouch” happens, by asking questions such as “where were you coming from when you said that?” or “here is how that landed on me.” When communication occurs for others as a way to build community, nothing that really matters gets stepped over because community members are charged to own the space that each has created. The community of scholars in this study seemed to prize the sense of security present and seemed to suggest that this sense of safety made exploration possible.

Within a community of play, an academic debate can thrive because debate is a game, and everyone in the community can adjust to the artificial playing field. This does not mean that the game is not taken seriously. Anxiety may still be a subset of the experience because debates include confrontation, public speaking, and strategizing. Not everyone is comfortable with these aspects of debate. Through the fabrication of play, however, deep learning can materialize because the players become critical of their own systems of values, beliefs, attitudes, and behaviors. The play formalizes the scaffolding of the debate, and the structure and art of discourse can be internalized.

CHAPTER 5. CONCLUSION

Debate can be used an instructional method that may accomplish the goals of traditional lecture (Shakarian, 1995). Academic debate can have a domino effect in learning. For example, it appears to be a way to implement teaching techniques that reinforce student interest on a topic. This interest may then lead to critical thinking on that topic. This critical thinking may engage students in a variety of complex tasks. Omelicheva (2006) heralded debate as a motivating factor for students because learners deliberated over their own and other students' views. Debate, according to Omelicheva (2006), is a method and style of thinking that simulates action research.

Omelicheva (2006) elevated debate above other teaching activities for its apparent flexibility. Different learning outcomes can be managed by adjusting the structure to match the sought-after goals. Beyond this, Omelicheva (2006) suggested that educational debate was easier to evaluate than writing or other forms of presentation. Azzam (2008) highlighted debate as causing academic benefit for students. Because students must account for both sides of an argument, they may learn that problems are always complex. Debaters are charged with making an argument and formulating a rebuttal. In short, debate is multifaceted, such that learners are summarizing positions, weighing rebuttals, and examining weaknesses of the other team. Perhaps the most humanizing element of debate is this: in order to manage each of these intricate tasks, a debater must listen.

Omelicheva (2006) cautioned, though, that debate can be stressful for students, and by being particularly explicit about expectations for debaters, the instructor can alleviate much of the anxiety by making the same effort equitable for each student. This dissertation attempted to address the advantages and challenges of academic debate in a three-article examination. Article one is a practitioner journal that provides a system for in-class debate for the instructor and

scaffolding for students. The materials for executing such a debate are made available. Article two was a quantitative study using survey research to explore the use of learning modules for the instruction of debate within an undergraduate setting. The research was conducted over three years with participants (n=349) from courses in communication and biology. Article three was a qualitative study investigating academic debate at the graduate level. This phenomenological research was undertaken to inquire about the power of debate to influence the atmosphere of a graduate learning environment.

Discourse Through Debate in Higher Education

This manuscript served as the underpinning of the second and third articles of this dissertation. As practitioner research, the manuscript provided the picture of the research and of debate as a pedagogical tool; it provided the sketch of the researchers and the setting in which the research was conducted; and it outlined how the research was laid out in practitioner fashion such that educators can use the materials in their own teaching.

Four learning modules were created to provide scaffolding for learners of the debate. The modules furnished the comprehensive overview of argumentation and debate for learners who have little or no experience for its practice. Module 1 introduced debate by definitions of key terms as well as opinions and reasons (see Appendix A). Module 2 highlighted how to build support for an opinion through examples, common sense arguments, expert opinion, and statistics (see Appendix B). Module 3 presented how debater can predict and refute opponents (see Appendix C), and Module 4 provided a debate structure that served as guidelines for conducting an in-class debate (see Appendix D).

Learning modules for debate allowed the instructor to furnish support for learners, but the students still remained at the center of investigation. In other words, the instructor provided the

starting point, but the students remained free to discover the power of argumentation and debate on their own. By using modules to teach basic debate skills, it was anticipated that modular instruction could allow the educator to keep a neutral stance on emotionally charged topics. Notwithstanding, the modules can be used to introduce and instruct on ethical dilemmas such as stem cell research. The use of debate in this way was congruent with structured academic controversy approaches where the adult learner accepted the responsibility for his/her own learning (Townsend & Fitzgerald, 1996).

This study was designed to direct students into moral predicaments through cooperative learning and to show the improvement of argumentation through debate via a class time debating event. A collaborate group-based effort may require positive interdependence, individual accountability, interpersonal skills, and face-to-face interaction and processing” (Johnson, Johnson & Smith, 1998). Each of these cognitive and meta-cognitive skills was at the heart of learning cooperatively, and this module-based study sought to elucidate the efficacy of prescribed units of instruction as means of imparting various academic contexts and across curricular thresholds. This study investigated self-efficacy in delivery for inexperienced debaters while simultaneously maximizing their time and effort for mastery of content.

Using Learning Modules for Teaching Debate in a Cross-Curricular Environment

This manuscript was a report of quantitative research on the employment of learning modules in an undergraduate environment to teach debate. Critical thinking paired with the ability to express ideas of critical thought was at the heart of this research. Unfortunately, educators commonly report that neither skill appear to be commonplace in the toolbox of the typical student, despite that these skills may be needed in the workplace (Resnick, 1987; Thomson, Martin, Richards, & Branson, 2003). Instructors seem to demand critical thinking

skills of their students without providing the information, training, and practice to validate this expectation (Wagner, 2008). Without a means by which educators can teach and students can learn critical thinking skills, professors may continue to expect critical thinking skills while students will continue to graduate without them.

Module-based instruction for students of debate may encourage learners to take ownership to learn the skill sets they will need. The competencies of academic debate— basic debate vocabulary, recognizing opinions versus reasons, listening actively, predicting arguments, and offering rebuttals—may give students the tools necessary to participate in critical thought processes. Web-based learning modules, as segmented units of instruction, can be used to enhance argumentation and, more specifically, to hone debating skills. Competencies learned in the modules may assist students to function as an active participant in a class-time debate and to begin balancing perspectives on sensitive topics (Lubetsky, Harrington, LeBeau, & Semaka, 2007).

The learning modules were a teaching tool, one in which a student completes a tutorial of varying length in a flexible online and self-paced delivery format. The learning that was done in a module may be reinforced in a face-to-face environment, related to content of the learning module. Johnston (2010) purported that when students demonstrate their learning outcomes from web-based modules through classroom-related activities, these outcomes showed up as higher-order faculties such as planning to learning, developing relevant skills, finding useful information, and evaluating this information for later use.

Students preferred modular learning in some instances because the work that was required could be done on their own time, although some of these same students felt that complimentary face-to-face instruction created an important balance to learning modules.

Instructors found that web-based modules were often the most efficient method of delivery to entire group of learners, large or small. Johnston's (2010) findings revealed that online modules achieved the researcher's goal of providing student with essential information that led to further skill development in cognate areas and that strengthened overall learning strategies for students.

The Phenomenology of Objectivity: A Debate in Doctoral Education

During fall semester 2011, Dr. Nathan Wood, North Dakota State University Assistant Professor, invited me to co-facilitate EDUC 707, Foundations of Educational Research. I collaborated with Dr. Wood as he mentored me from the planning stages of the course to its completion. I was part educator and part student to witness the ebb and flow of educator as facilitator and student as learner. My primary role in the course was to organize a debate between teams made up of members of the class. I contributed to the creation of debate materials for a class debate and participated as a judge in the debate itself. Together, we organized an academic debate that required students to move beyond surface level analysis of the course readings. Preparing and administering a debate for EDUC 707 caused me to reflect on argumentation generally.

During fall 2012, Dr. Wood told me that he was planning to persist with a debate in a new class of students for EDUC 707. He wanted to use the debate materials I developed from the year before. Then, at the beginning of 2013, Dr. Wood contacted me with the news that something had caused the fall 2012 EDUC 707 class to congeal in an unexpected way, but he could not be sure whether the esprit de corps was related to the debate. Without investigation into the occurrence, the progress that happened over a two-year span may never come to light. The phenomenon of how and why EDUC 707 congealed will be lost. Therefore, I conducted a

qualitative, phenomenological, study to explore the “lived experience” of the 2012, EDUC 707 class debate.

Phenomenology has a rich history, and a brief inclusion of its background sets the stage for the practice itself. Edmund Husserl (1859-1938) is credited as the founder of Phenomenology, a study of the nature of consciousness as experienced by the individual (from Greek, meaning “that which appears as such”) (Kockelmans, p. 98). Phenomenology has its roots in the philosophies of Immanuel Kant who intuited the dichotomy between *phenomena* (objects as interpretation by the senses) and *noumena* (objects as “things in themselves” existing a priori of the senses) (Hicks, p. 43-44). In phenomenology, however, the philosopher does not take on the question of material reality in order to avoid solipsism. Rather, a reality outside the individual is assumed in order to seek to understand being consciousness of things rather than arguing about the existence of things. The tenets of phenomenology step over *nothing* in order to actuate scholars, freeing them to impart ideas, notions, and concepts. As such, phenomenology is both a philosophy (i.e. methodology) and a method.

Limitations

Newton and Wood (2009) acknowledged that learning modules can be a powerful addition to an educator’s arsenal, but noted that facilitator preparation was a crucial part of the learning module success. Three main obstacles may need to be leveled to better ensure hope of success in implementing learning modules. The first was weighing content versus process. Because most teachers may have little training using learning modules, they may struggle with the focus of a module’s content rather than the process that leads to a desired outcome. Too much focus on content may sacrifice the learning potential of the module itself. Newton et al. (2009) suggested that modules may be valuable in the context of problem-based pedagogy,

assisting learners to concentrate on what they already know and building what needs to be learned. The temptation of those educators unfamiliar in the practice of learning modules may be to put too much emphasis on content rather than process.

The second obstacle to overcome in modular pedagogy may be process standardization. Educators must think through what learners may be likely to know about a topic. What previous experience have learners already had related to the information in a module? What process of learning may be likely to have the greatest impact on the most learners? Determining the common denominator of a target audience *and* standardizing the process of delivery can be a tripwire for educators unschooled in the use of modules (Newton, 2009). Standardizing the threaded look and feel of a module may be a crucial. One module to the next can function to invite the student into a recognizable learning context.

The third obstacle, according to Newton et al. (2009), may be module logistics. Varied experience and time constraints of the target audience should be weighed. Non-participation by learners could have a devastating effect on an outcome in which the process is dependent on module completion. Notwithstanding, Cusack and O'Donoghue (2012) built a strong case that students positively endorse learning modules when they are skillfully crafted and presented. As a pedagogical tool steeped in adult learning theory, modules encourage students toward setting learning goals; motivate students toward learning outcomes; and empower students toward participating in their own education. Learning modules created the type of learning environment that would make John Dewey salivate. Mason (1990) recounted Dewey's hypothesis that authentic education increases the capacity of the learner toward subsequent learning that is self-directed. Learning in the Deweyan sense may need to include a transfer of power to educate knowledge from the teacher to the student.

Recommendations

Controversial topics may foster lively debates. Embryonic stem cell use in biomedical research may ensure passion on both sides of the issue. Dresser (2010) characterized a natural rift that is prototypical for academic debate: supporters of embryonic stem cell research stressed possible medical advancements whereas opponents advanced the possible therapeutic benefits of adult stem cells. Immediately, ardent and split views may be apparent as the two camps caucus. Dresser (2010) suggested, notwithstanding, the stem cell debate must begin as a diversity of ethics and policy. Researchers have an ethical responsibility to report with accuracy the current state of scientific inquiry, no matter their philosophical stance. They also have a duty to balance civic discourse on the topic. The stem cell debate may be an inquiry into social justice. Dresser (2010) argued that when a topic creates fertile ground for hyperbole, the debaters must play fair. Doing so may require supporters to supply accurate information and detractors to offer argumentation palatable enough to be accepted by those who do not share their beliefs. Such a dichotomous topic may be ideal to create resolutions for a debate as an instructional strategy, particularly when the educator wishes to remain neutral while imparting information equitably.

The instructor who marshals a classroom debate on topics of controversy may struggle to maintain neutrality. The intent to remain unbiased can become mired in controversy within the research itself. The embryonic stem cell debate, for example, may have a horizontal dichotomy of ethics and policy, but it also appears to have a vertical one as well. A scholarly debate on embryonic stem cells has a shortage of neither medical advancements nor controversy, yet an educator should take caution not to mislead students by adopting support materials that do not register the heart of the matter, betraying a bias.

Instructors should be aware of their own biases and inclinations toward topics that have multi-varied viewpoints. Students have a right and a responsibility to investigate all facets of a topic, not only those perspectives the instructor deems necessary or worthy. By posing and presenting sensitive material in a format in which the instructor and the student are partnered in their investigation may be a more fair and balanced means to represent any controversial view that surfaces. In such an arrangement, the instructor would seek out balanced materials to initiate student research, and the students have the freedom to incorporate these materials or seek out others that could be presented inside a forum. The motivating elements of debate were highlighted by the skillful choice of a controversial debate topic, encouraging students to learn by doing. Such a topic should, according to Omelicheva (2006), maintain the standards of being interesting and current.

Elliot (1993) deemphasized the competitive nature of debate in three ways. First, grades for debating prowess were not assigned; instead, everyone received the same point total for participation. Second, students were reminded throughout the semester to work together in the preparation of the debate for the betterment of the entire class. Third, the judges rulings were always neck-and-neck, usually within 2 or 3 points. The low-point spread served to reinforce that no absolutes are available in research.

Elliot (1993) related an increase in class participation due to debate in at least three ways. First, participation was required on a debate team, amounting to experiencing public speaking. Second, judging and timing facilitated involvement, and fellow students managed these tasks. Third, discussions followed the debates in which every student had taken part. Whether the debaters agreed with the position or not, joining in afforded students with an opportunity to think through their position and voice those thoughts. Elliot (1993) recognized academic debates in the

classroom as access to critical and cooperative engagement in three important ways: the students had to read, comprehend, and analyze complex information; the students had to develop logical arguments that reflect a given position and demonstrate that position; and the students as judges had to think critically about the issues presented, rather than just taking notes during lecture.

Suggestions for Research

Participants in a study such as illustrated in this dissertation may have participants in the treatment group that will complete a total of four modules. The control group made no preparations for the debate, other than general instructions about the debate itself (i.e. module four). No direct instruction of debating skills occurs during class times. Also the modules are not be shared across course sections. Future researchers may wish to adopt a mechanism to ensure students in the treatment group actually use the modules prior to the debate. Students who may have little or no experience with debate and who avoid the use of modules may end up profoundly influenced by their lack of preparation. The modules may have an ameliorating effect on knowledge and skills that may translate to overall comfort of the debate experience. In short, it is advised that students' use and comprehension of modules be monitored. For instance, when students complete module assignments as prompted in the learning modules, these assignments can be submitted electronically through a Learning Management System or by hard copy.

Temple (1997) advanced debate as a strategy for teaching health literacy skills but warned that outcomes were more predictable when the topics were selected prior to the actual debate, giving students adequate time to gather information and prepare arguments. Notwithstanding, students developed a broader perspective on a topic by requiring them to choose a pro or con side right before the debate. Temple (1997) encouraged students to investigate both sides of an issue by discovering research along a full spectrum, ranging from the

textbook to journal articles. By gaining a broad purview of health literacy issues, the students postured position arguments, learning analytical skills along the way. When an entire class had familiarized themselves with a body of information, Temple (1997) purported a lively atmosphere within the volley of the debate as long as the instructor has planned diligently to eliminate problems and controversies such as vindictiveness, sensitivity, or personal insult. No winner was announced, only to say that everyone has won through participation. Temple (1997) notified administrators or health advocates about sensitive topics.

Moeller (1985) examined debate from a social science lens as a means to improve thinking and oral communication skills but primarily to teach students about controversial issues. Analytical skills of graduate students were identified as the most valuable aspect of their education. Moeller (1985) posited debate as a means to prosper higher order cognitive thought and structured a class-time debate, arranging teams according to academic ability based on exam scores and subjective impressions of intelligence. Teams usually had four members, and in a 50-minute debate, eight speeches were limited to approximately five minutes each with five-minute recesses between rounds. The instructor supplied reference materials. Moeller (1985) limited sources purposefully, arguing that the point of a debate was to reflect powerfully on information already possessed rather than that of finding more information. Moeller (1985) propped the virtues of debate but warned that student anxiety and reticence were ongoing headaches and grading speeches (as more taxing than grading writing) and 50-minute class times period were problematical.

More research should be conducted on the blended learning aspect of debate. Blended learning combines what may appear at first to be contradictory modes of teaching and learning—triangulating behaviorist, cognitivist, and constructivist theories (Alonso, Lopez, Manrique, &

Vines, 2005). Peering deeper shows blended learning as a systematic and complementary delivery mechanisms for optimizing learning and skill mastery (Singh, 2003). Pereira, Pleguezuelos, Meri, Molina-Ros, Molina-Tomas, and Masdeu (2007) found that blended learning improved pass rates on examinations with higher scores overall. The literature on blended learning is impressive, but what happens when a contingency is added to this pedagogy? What happens when learning modules are a factor in blended learning? Research supports the marriage of both.

Blending traditional face-to-face learning with innovative online learning requires adjustments for instructor and student. A transformation of pedagogical techniques and expectations is necessary to garner salient learning outcomes (Dalsgaard & Godsk, 2007). A blended paradigm may portend a social constructivist approach, one in which a departure from lecture is sought and one in which problem-based, self-directed, and goal-oriented activities empower the student to construct knowledge and meaning (Vygotsky, 1978; Dewey, 1916). Taylor (2011) combined 20th century pedagogical thought with 21st century knowhow to suggest that face-to-face class time is much too valuable to spending time spewing content at students. The content that students require can be accessed, quite literally, in the palm of their hands. A teaching environment in which learning modules are utilized offers the educator and learner the opportunity to see themselves in the future by providing requisite skills for a task (Taylor, 2011). For the purposes of this proposed research, the relative task would be an academic debate.

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APPENDIX A. DEBATE MODULE 1

Introduction to Debate

A. Basic Terms

- **Debate:** a game in which two opposing teams make speeches to support their arguments and disagree with those of the other team.
- **Resolution:** the opinion about which two teams argue.
- **Affirmative team:** agrees with the resolution.
- **Negative team:** disagrees with the resolution.
- **Rebuttal:** explains why one team disagrees with the other team.
- **Clash point:** an opinion, reason or evidence by the opposing team that is debatable.
- **Judges:** decide the winner.

B. Opinions and Reasons

- A resolution is an opinion about which there can be valid disagreement. Debaters either agree or disagree with the resolution regardless of what they personally believe. An opinion can be introduced by an **opinion indicator**:
 - **"I think/believe that** smoking should be banned in public places..."
- A reason explains why that opinion is held and can be introduced by a **reason indicator**:
 - **"...because/since** secondhand smoke is harmful for nonsmokers."

C. Strong Reasons versus Weak Reasons:

- According to Lubetsky, Harrington, LeBeau, Semaka (2007), a strong reason has the following qualities:
 - it logically supports the opinion.
 - it is specific and states the idea clearly.
 - it is convincing to a majority of people.

Assignment #1: Use the example debate above (i.e. smoking) and determine what you believe is one strong reason and one weak reason. Explain why you believe your examples are strong and weak. (5 points)

Assignment #2: To give examples of strong reasons versus weak reasons, develop a multiple-choice exercise such as the following:

- Smoking should be banned in public places because
 - it is a health risk;
 - it gives people bad breath and makes their teeth yellow;
 - secondhand smoke is harmful for nonsmokers.

Do not use the this multiple-choice answers; instead, develop your own. (5 points)

Assignments #3: With a partner (from class or not), practice generating reasons for opinions as the four resolutions listed below. (20 points)

Part 1: With Your Partner, think of at least one strong reason for each resolution (these examples are intended to have two debatable sides and may occur as controversial).

1. Women should quit their job after they get married.

REASON:

2. Love is more important than money.

REASON:

3. Being married is better than being single.

REASON:

4. Health care is a civic right and access should be provided.

REASON:

D. Generating Resolutions: Generate Your Own Resolutions

Assignment #4: Identify three issues that people are likely to disagree about; these issues must be suitable as debate resolutions. In other words, the resolutions you create must have two debate-able sides (pro *and* con). They can be controversial (*the death penalty should be banned*) or less divisive (*love is more important than money*). (15 points)

Total points available: 45

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APPENDIX B. DEBATE MODULE 2

Module Two

Supporting Your Opinion

1. Warm-up

This exercise called *The Devil's Advocate* assists you to generate reasons for opinions. Please read the instructions and try this exercise before reading further into the module.

The Devil's Advocate

- In this exercise, you will need to get a partner—a member of our class (or not) is okay.
- Take two minutes to argue one side of a resolution (below). After two minutes, switch partners and allow the new partner to take two minutes to argue the opposite side of the resolution. You mustn't recycle arguments already used.
- Once you and your partner have argue both sides of the first issue, move on to the next one and so forth through each resolution.
- Note that these topics have polar arguments to quickly create a two-sided debate.
- Do not change the wording of the resolutions.
 - For example, if you are debating *pro* arguments for *Human cloning should be permitted in the United States*, you would start, "I agree that *human cloning should be permitted in the United States* because..."
 - If you are debating the *con* argument for *Human cloning should be permitted in the United States*, you would start, "I disagree that *human cloning should be permitted in the United States* because..."

Resolutions:

1. Human cloning should be permitted in the United States.
2. Being single is better than being married.
3. Parents should avoid purchasing war toys for their children.
4. Zoos do more harm than good.

Assignment #1: Write a reflection: With your partner, were you able to come up with arguments on both sides of these issues? Was one side (i.e. pro side or con side) more natural or more supportable than the other? Why? (15 points)

2. Giving Support for Your Reasons

Support consists of evidence. The four kinds of evidence, adapted from LeBeau, Harrington, Lubetsky (2007), are as follows:

- **Example:** from your own experience or from what you heard or read.
- **Common Sense:** things that you believe everybody knows.

- **Expert Opinion:** the opinions of experts -- this comes from research.
- **Statistics:** numbers -- this also comes from research.

In this next section, note the examples for what a debater might say when using arguments with *example*, *common sense*, *expert opinion*, or *statistics*. Consider that as the debater moves from 1 to 4, the argument becomes more difficult to refute and, therefore, more difficult to rebut.

Resolution: *Smoking should be banned in all public places.*

Example: For example / for instance / let me give an example

“Whenever I go to a restaurant or bar and there are people smoking near me, I feel that I am breathing their smoke. This makes me a smoker even though I don't want to be.”

Common Sense: Everyone knows / if...then / it's common knowledge that

“Everyone knows that secondhand smoke is very unhealthy for nonsmokers....”

Expert Opinion: According to.../ to quote.../ the book _____ says...

“According to the Environmental Protection Agency in a report dated June 2009, secondhand smoke causes approximately 3,000 lung cancer deaths in nonsmokers each year.”

Statistics:

“*Time* magazine in August of 2009 in an article titled *Be a Quitter* reported, [s]econdhand smoke causes about 250,000 respiratory infections in infants and children every year, resulting in about 15,000 hospitalizations each year.”

Important: When designing support for an *expert opinion* or *statistics*, use as many of the following as possible:

- ✓ Author: “According to John Miller...”
- ✓ Title: “...in an article titled *Be a Quitter*...”
- ✓ Source: “...in *Time* magazine...”
- ✓ Date: “June 2008,...”

“According to John Miller in an article titled *Be a Quitter*, Time magazine June 2008,....”

Assignment #2: Rank the above reasons according to their strength. For a review of strength of reasons, review *Part C* of Module One. (5 points)

- it logically supports the opinion.
- it is specific and states the idea clearly.
- it is convincing to a majority of people.

Assignment #3: Write a pro reason and a con reason for each of the following resolutions. For each of the resolutions, use one of the four supports (above). At the end of this exercise, you will have used each of the four supports at least once. (15 points)

1. Human cloning should be permitted in the United States.
2. Being single is better than being married.
3. Parents should not purchase war toys for their children.
4. Zoos do more harm than good.

Total points: 35

Reference

Lubetsky, M. H., Harrington, D., LeBeau, C., & Semaka, T. (2007). *Discover debate: Basic skills for supporting and refuting opinions*. Taipei: Crane Publishing.

APPENDIX C. DEBATE MODULE 3

Module Three

Rebuttals: Predicting and Refuting the Other Team's Arguments

1. Predicting the other team's arguments

During the actual debate, each team must brainstorm a list of strong reasons that their opponents might use, given their stance (whether pro or con). In order to debate skillfully, each team must build their own arguments *and* predict their opponent's arguments.

To rebut an argument strategically, each team member must learn a five-part strategy for a rebuttal. Following the five steps is part of a strategy, but a debater can alter the phrasing to fit one's personality. Some examples are given as a guide.

While debating, each team member must listen carefully to the opponent's arguments. While the other debaters are talking, TAKE NOTES. When a **clash point** becomes obvious, write it down!

What is clash point? When a debater notices an argument from the other team that *clashes* with their own opinion or position, this is a *clash point*. A clash point is the beginning of a rebuttal.

2. Five-Step Rebuttal

- **Step 1: Signpost**
 - "Their first point was....," "Their second point was....," and so on.
 - Orient the other team (and the judge) to the clash points.
- **Step 2: Rephrase**
 - "They claimed that....," "They suggested that....," or "They mentioned that..."
 - State the argument so that the other team (and the judge) can follow easily.
 - Take notes during the opposing team's speeches; this will ensure clarity in creating a rebuttal.
- **Step 3: Negation**
 - "This is not true!" or "Even if that were true, it's not important!"
 - Use tone of voice to express disagreement with the opposing team's point of view.
- **Step 4: Why Statement**
 - *Example 1:* "It can't be accurate that....," "It's not necessarily important that....," "The whole point about _____ is not relevant," "Everything they said about this point can be easily solved."
 - *Example 2:* "Their example is not relevant to the issues of this debate because..." or "The statistic they gave is not necessarily true because..." or

“The problem mentioned by their expert is easily solved...”

- **Step 5: Rational**

- **“There is *no* connection between *A* and *B*...” or “The reason that...” or “Just because *X* is true does not necessarily mean that *Y* is also true.”**

Example: The resolution for the following debate example is *Cats are better pets than dogs*.

Signpost: **Their first point was** about care.

Rephrase: **The rebuttal one speaker claimed that** cats require less care.

Negation: **That’s not important!** (Remember: Use voice inflection!)

Why statement: Example one: **The whole point about** the *amount* of care **is not relevant** to owning a pet because pets require care. Example two: **That is not important because the whole point about the amount of care is not relevant** to owning a pet.

Rational: **The reason that** we have a pet is to enjoy taking care of it!

Assignment 1: Practice Writing Rebuttals

Resolution: Burning the America flag should be illegal.

Imagine you are on the Affirmative (Pro) side of this resolution. You are in the rebuttal speaker position. Brainstorm a list of strong reasons that your (imaginary) opponents could use. Compose short rebuttals for the strongest three opposing team's arguments.

Write those three rebuttals and submit them at Bb. (30 points)

Reference

Lubetsky, M. H., Harrington, D., LeBeau, C., & Semaka, T. (2007). *Discover debate: Basic skills for supporting and refuting opinions*. Taipei: Crane Publishing.

APPENDIX D. DEBATE MODULE 4

Module Four

Debate Structure and Guidelines

In this lesson, we will learn how the debate itself will be run. We will also examine some guidelines to assist debaters.

1. Formal Debate Structure

The following debate structure will guide your debate. Speakers are required to stand when they are presenting. Please review the example debates provided with Module One and Four titled *Surveillance Cameras Should Be Used in Schools*.

Round One

Introductory Speaker (PRO): The **first affirmative (pro) speaker** introduces the affirmative position and the team’s four arguments developed by a full team effort. Maximum speaking time is four minutes.

- Here’s how to start: “My name is _____. I am the introductory speaker for the affirmative team. I will provide our four arguments for the resolution _____ (state the resolution).

Introductory Speaker (CON): The **first negative (con) speaker** introduces the negative position and the team’s four arguments developed by a full team effort. Maximum speaking time is four minutes.

- Here’s how you start: “My name is _____. I am the introductory speaker for the negative team. I will provide our four arguments against the resolution _____ (state the resolution).

Four-minute recess: each team prepares their rebuttal speech. For instructions, see #2 (below) *Brainstorming Arguments*.

Round Two

Rebuttal 1 Speaker (PRO): The **first rebuttal speaker (pro)** rebuts the first negative introductory speaker and states (and rebuilds) the pro team’s first two arguments. Maximum speaking time is four minutes.

- Here’s how you start: “My name is _____. I am the first rebuttal speaker for the affirmative team. First, I will be rebutting the arguments of the introductory speaker of the negative team. Second, I will be re-building my team’s first two arguments for the resolution _____ (state the resolution).

Rebuttal 1 Speaker (CON): The **first rebuttal speaker (con)** rebuts the first affirmative

introductory speaker and states (and rebuilds) the con team's first two arguments. Maximum speaking time is four minutes.

- Here's how you start: "My name is _____. I am the first rebuttal speaker for the negative team. First, I will be rebutting the arguments of the introductory speaker for the negative team. Second, I will be re-building my team's first two arguments against the resolution _____ (state the resolution).

Four-minute recess: each team prepares their rebuttal speech.

Round Three

Rebuttal 2 Speaker (PRO): The second rebuttal speaker (pro) rebuts any argument so far given by the opposing team and rebuilds the pro team's second two arguments. Maximum speaking time is four minutes.

- Here's how you start: "My name is _____. I am the second rebuttal speaker for the affirmative team. First, I will be rebutting the arguments of the introductory speaker *and* the first rebuttal speaker of the negative team. Second, I will be re-enforcing my team's *second* set of arguments for the resolution _____ (state the resolution).

Rebuttal 2 Speaker (CON): The second rebuttal speaker (con) rebuts any argument so far given by the opposing team and rebuilds the con team's second two arguments. Maximum speaking time is four minutes.

- Here's how you start: "My name is _____. I am the second rebuttal speaker for the negative team. First, I will be rebutting the arguments of the introductory speaker and the first rebuttal speaker of the affirmative team. Second, I will be re-enforcing my team's second set of arguments against the resolution _____ (state the resolution).

Four-minute recess: each team prepares their concluding speech.

Round Four

Concluding Speaker (PRO): The concluding speaker (pro) makes any final rebuttals on any arguments presented in the debate by the opposing team and concludes the pro-side debate by summarizing the pro team's position and arguments. Maximum speaking time is four minutes.

- Here's how you start: "My name is _____. I am the concluding speaker for the affirmative team. First, I will be providing a final rebuttal on the arguments of the negative team. Second, I will be providing a review of our four arguments for the resolution _____ (state the resolution).

Concluding Speaker (CON): The concluding speaker (con) makes any final rebuttals on any arguments presented in the debate by the opposing team and concludes the con-side debate by summarizing the con team's position and arguments. Maximum speaking time is four minutes.

- Here's how you start: "My name is _____. I am the concluding speaker for the negative team. First, I will be providing a final rebuttal on the arguments of the affirmative team. Second, I will be providing a review of our four arguments against the resolution _____ (state the resolution).

2. Brainstorming Arguments

When you are working during your **4-minute** breaks...

- First, each team member must contribute to create strong rebuttals. At this time, use the information that team members prepared about potential arguments that could be used by the opposing team.
- Second, prepare to rebuild and strengthen your team's existing arguments based on the rebuttals of the opposing team.
- Remember that each argument consists of a stated reason followed by ample support (i.e. examples, common sense, expert opinion, and statistics). Consider that all supports and arguments are in doubt until proven. Just because the other team offers evidence as support does not mean the evidence is valid or that the support is necessarily true. We doubt or test the evidence given in supports or arguments by asking questions about the source of the evidence. For example, consider the following questions:
 1. Is there source given for the evidence?
 2. Does the source explain its claim satisfactorily?
 3. Is there a date on the source?
 4. If the support is a statistic, is the statistic valid?
 5. Is the author of the support an expert in the field?
 6. Is the source biased?

By concentrating on these questions, team members can work together to rebut the other team's positions.

3. Guidelines for Debate Delivery

Manner

In debate, the goal is to convince an audience that an opinion is correct. To convince the judge and audience, use strong materials, for example, strong reasons, support, and refutations. However, in addition to strong materials, debaters also need strong manner, which means that you must speak in a way that is interesting, not boring. Manner includes gestures, eye contact, posture, voice, and humor.

Gestures

Use gesture when you speak. For example, show one, two, or three fingers when you begin your first, second, or third point. You can make a fist to show that you are outraged, or you can point to the other team when you paraphrase their points. When you are not making gestures, let your hands relax. Don't play with your pen, fix your hair, hold the table, or put your hands to your face while you are speaking.

Eye Contact

While you are speaking, face your opponents. Do not look out the window, at the floor, or at your own team members. You want to convince the other team, so you must speak directly to them. Of course, you can read evidence and check your notes, but don't keep your head buried in your notebook. Look up often to make eye contact.

Posture

Posture is important when you are speaking. To be convincing, you must project confidence. Stand up straight, balance on both feet, shoulders back, and head up high. Don't slouch, wobble, or lean on the table. You can walk a bit between making points, but not while delivering them.

Voice

Voice control is crucial. Speak clearly and loudly so that everyone in the room can hear your arguments. Many people become nervous when they speak, and they speak very softly in a monotone voice. A monotone voice has the same speed, volume, and pitch. Monotonous speeches are boring. The audience will want to fall asleep! When you speak, show emotion in your voice. Vary your rate of speech, volume, and pitch. For example, you should stress important words in a sentence. Talk louder or softer during the most important parts of your speech. Pause and change your voice between points.

Humor

Finally, when you are giving your speech, everyone will respond if you can make them laugh. Remember that a debate should be fun!