Increasing Self Reported Argumentativeness In College Level Public Speaking Students

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INCREASING SELF REPORTED ARGUMENTATIVENESS IN COLLEGE LEVEL PUBLIC SPEAKING STUDENTS

by

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ABSTRACT

Argumentativeness, or the predisposition “to advocate positions on controversial issues and to attack verbally the positions which other people take on these issues” (Infante & Rancer, 1982, p. 72), has been associated with a number of positive outcomes. Research among student populations indicates that compared to people who are low in argumentativeness, people high in argumentativeness display higher ability to learn, higher self esteem, greater ability to creatively manage conflict, and higher ability to see both sides of a situation (Barden & Petty, 2008; McPherson Frantz & Seburn, 2003; Rancer, Whitecap, Kosberg, & Avtgis, 1997). Promoting argumentativeness among college students should prepare students to effectively handle conflict and enhance their overall communicative competence, thus setting students up for increased success in life (Rancer et al., 1997).

Although much research exists on increasing argumentativeness, none could be found that specifically looked at content in the college level public speaking course in relation to increasing argumentativeness. Specifically, this researcher sought to determine whether instruction in Elaboration Likelihood Model as part of the persuasion unit in a college public speaking course increases student argumentativeness more than instruction in Toulmin’s model of reasoning/argument. Students in seven public speaking courses at a large Southeastern college were asked to complete the Argumentativeness Survey by Infante and Rancer (1982) after receiving instruction in either Elaboration Likelihood Model of Persuasion or Toulmin’s model
of reasoning/argument. Overall results did not indicate any difference between scores for students that received instruction in the two different content areas.
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CHAPTER 1: INTRODUCTION

Argumentativeness, or the predisposition “to advocate positions on controversial issues and to attack verbally the positions which other people take on these issues” (Infante & Rancer, 1982, p.72), has been associated with a number of positive outcomes. Research among student populations indicates that compared to people who are low in argumentativeness, people high in argumentativeness display higher ability to learn, higher self esteem, greater ability to creatively manage conflict, and higher ability to see both sides of a situation (Barden & Petty, 2008; McPherson Frantz & Seburn, 2003; Rancer, Whitecap, Kosberg, & Avtgis, 1997). They are also seen as more credible and have more communicative competence than less argumentative persons. Promoting argumentativeness among college students should prepare students to effectively handle conflict and enhance their overall communicative competence, thus setting students up for increased success in life (Rancer et al., 1997).

Enhancing argumentativeness in undergraduate students would therefore seem to be a desirable goal for post-secondary curriculum. Some colleges and universities offer semester-long courses in persuasion and debate that are directly related to argumentativeness skills. Among typical college communication offerings with potential for promoting argumentativeness, however, the introductory public speaking course is likely the most broadly accessible and has the highest enrollment. Such courses are frequently included among options for satisfying institutional general education requirements and are typically taken by students from a wide
spectrum of majors. Public speaking courses usually include an introduction to persuasive speaking along with units on narrative and informative speaking and public speaking textbooks invariably include at least one chapter on persuasion theory (e.g., Brydon & Scott, 2008; Fraleigh & Tuman, 2009; Gamble & Gamble, 2010; McKerrow, Gronbeck, Ehninger, & Monroe, 2003; Sprague, Stuart, & Bodary, 2010; Zarefsky, 2005). Because both the course and textbook contain units on persuasive speaking and formulating arguments, public speaking instructors may already be increasing argumentativeness skills as part of persuasive instruction. However, I could find no research that assessed the impact of teaching persuasive skills on student self reported argumentativeness.

It is important for instructors and designers of public speaking courses to be aware of what pedagogical and theoretical tools can promote desired outcomes like argumentativeness within their students. Unfortunately, the overwhelming majority of the decisions we make on a day-to-day basis about the best way to encourage such skills in our students is based on intuition rather than empirical study. What evidence is available associating communication training with argumentativeness has either explored that relationship with populations that have self-selected to be in argumentative situations (e.g. forensics and/or debate; Allen, Berkowitz, Hunt, & Louden, 1999; Fleury, 2005; McPherson Frantz & Seburn, 2003), has investigated middle school or high school as opposed to college classes (e.g., Colbert, 1993; Rancer, 1997; Rancer, Avtgis, Kosberg, & Whitecap, 2000), or has examined college students’ argumentativeness and verbal aggression in general rather than in association with pedagogy (Infante, 1982; Kennedy-Lightsey & Myers, 2009; Schommer-Aikins & Easter, 2009; Shullery & Schullery, 2003). Data from these studies indicate that although argumentativeness is often construed as a stable personality trait
(Littlejohn & Foss, 2008) and might therefore be presumed to be difficult to influence, it may in fact be possible to increase argumentativeness through educational interventions. It is not yet clear, however, how the trait of argumentativeness can be inculcated or enhanced in undergraduate students who have not self selected to be involved in activities known to increase argumentativeness.

This task is especially challenging in the community college setting. Students attending a community college may be entering as first generation students, have high demands by work and family, bring poor high school preparation/retention in reading, writing, and critical thinking skills, and display low confidence in speaking (Boswell & Munn, 2008; McConnell, 2000). Since persuasive instruction is part of the required curriculum, it is worthwhile for college instructors to find a persuasive construct that is understandable and leads students to an outcome of increasing confidence in the ability to prepare for and defend their stance on important issues.

Although not commonly found in public speaking textbooks, one theory that is occasionally taught in relation to persuasion and that holds promise in that regard is Elaboration Likelihood Model (ELM; Petty & Capaccio, 1986). College students of all ages, levels of preparation, and past academic experience may be able to grasp the concepts of persuasion by exposure to the straightforward theory of ELM as described below (Pryor, 1998).

In brief, ELM proposes that people listening to an argument use two distinctly different routes to process an attitude change. People who engage in central processing use more critical thought and consideration of an argument because they are interested in the issue and have the ability to understand the message. That is, they mentally elaborate more on the issue; they
engage in more issue-relevant thinking. People who make decisions based on the *peripheral processing* usually have lower interest in the issue or lack the ability to understand the issue. In such cases, the person tends to make decisions on the basis of heuristic cues such as the credibility of the speaker or the attractiveness of product packaging. That is, they mentally *elaborate less*. Processing by either route may result in a change of attitude, depending on the receivers’ ability to understand and/or process the information.

It is my contention that teaching of ELM is especially suited to increasing argumentativeness in community college students for three reasons: 1) commonly taught persuasion models such as Monroe’s five-step motivated sequence or the six figure chart that illustrates Toulmin’s model (referred to synonymously in literature as Model of Reasoning or Model of Argumentation/Argument, hereafter will be *Toulmin’s model*) are complex, and may be simply memorized by students in preparation for a specific assignment or quiz, then quickly forgotten or not thoroughly understood well enough to apply in “out of class” situations. In comparison, the simplicity of ELM with only two routes to persuasion is appealing and is more likely to be remembered and applied outside of the speech classroom. 2) Recognizing the possibility of appealing to either central or peripheral processing routes in their audiences may increase students’ self-confidence in their ability to argue their own positions (Cacioppo, Petty, Feng Kao, & Rodriguez, 1986). In other words, they may realize that they need not be a debater to successfully stand up for their own opinions. 3) By gaining an understanding of how important it is to engage in issue relevant thinking, students may learn to listen more carefully to arguments opposed to their positions and therefore be more confident in supporting their own positions (Petty & Cacioppo, 1986).
Despite the apparent fit between the theoretical tenets of ELM and the characteristics of argumentativeness, I was unable to locate any research that evaluated the effectiveness of instruction in ELM for increasing argumentativeness in college students. Therefore this study will investigate the effect of inclusion of a unit on the Elaboration Likelihood Model on students’ self-reported argumentativeness in a college level introductory public speaking course.
CHAPTER 2: LITERATURE REVIEW

Defining Argumentativeness

For some people arguing conjures up images of verbal battles, unpleasant feelings, and negative experiences. For others arguing invites thoughts of stimulating conversations, thought provoking communication, and time spent debating important issues. Infante and Rancer (1982) define argumentativeness as a “generally stable trait which predisposes the individual in communication situations to advocate positions on controversial issues and to attack verbally the positions which other people take on these issues” (p. 72). The trait of argumentativeness does not mean that people are constantly looking for opportunities to argue about anything and everything. The motivation to argue may originate in the fact that an issue is very important to them and they are positively energized by engaging in critical analysis and debate. When faced with a situation about which they feel strongly, people high in trait argumentativeness tend to willingly engage in arguments, while those low in trait argumentativeness tend to avoid situations that could lead to an argument (Infante, 1988).

Infante (1988) describes four facets of personality, two constructive and two destructive. Assertiveness and argumentativeness are viewed as positive traits and may increase or improve interpersonal communication. Someone possessing assertive behavior may be characterized as having leadership skills, being able to defend his or her rights, or being comfortable conversing with strangers. Argumentativeness is characterized by a person’s approach to controversial issues. People may choose to approach or avoid discussion on a controversial issue. The two destructive traits, hostility and verbal aggressiveness are viewed as negative qualities and may
impede interpersonal communication. Expressing negative feelings toward others through words or actions are hostile characteristics (Rancer & Avtigis, 2006). Aggressive communication involves attacking the person rather than just the issue, leaving the person with poor feelings of self and possibly psychological pain (Infante, 1988).

Verbal aggressiveness is the construct most closely related to argumentativeness; the two are often seen together in the literature. Both traits can be viewed as aggressive communication but with a different locus of attack. Whereas argumentativeness is attacking another person’s position on an issue, verbal aggressiveness is attacking the other person’s self-concept in addition to the issue (Johnson, Becker, Wigley, Haigh & Craig, 2007; Rancer, Kosberg, & Baukus, 1992; Rancer et al., 1997). Unfortunately, these behaviors are often confused and the terms misapplied. In particular the word argument is often used to refer to behaviors such as fighting, name calling, insulting someone, and constantly disagreeing, whereas trait argumentativeness refers to the tendency of a person to present and defend his or her ideas. It is very important to keep the two traits separate in the discussion of argumentativeness, so as to be clear why argumentativeness is seen as a positive communicative behavioral trait.

Argumentativeness is further understood to be manifested in behavior that predisposes a person to either approach or avoid arguments. People who approach arguments tend to do so willingly and have little inhibition when presented with an opportunity to engage in arguments on issues of personal importance. Such people have high self esteem as well as self-efficacy regarding their ability to argue. Conversely, people low in argumentativeness display little confidence when confronted with a controversial issue and tend to avoid arguments. When they
are made to engage in arguments they suffer from unpleasant feelings during the entire interaction (Infante & Rancer, 1982). These two aspects of trait argumentativeness are represented symbolically with: \( \text{ARG } \text{gt} = \text{ARG } \text{ap} - \text{ARG } \text{av} \). The equation is read “the general trait to be argumentative (ARG \text{ } \text{gt}) \text{ was viewed as an interaction of the tendency to approach arguments, (ARG } \text{ ap), and the tendency to avoid arguments, (ARG } \text{ av)’” (Infante, 1982, p.142).

Positive Outcomes of Argumentativeness

The value of argumentativeness has been studied in relation to the workplace, interpersonal relationships and education. I will consider the first two of these briefly, and then focus on evidence related to the educational context, which is the focus of the study.

Argumentativeness in the Workplace

Being comfortable discussing issues of importance and having the ability and opportunity to voice concerns in the workplace is seen as an important factor in encouraging employee participation in problem solving and conflict resolution. Many companies now want employees to speak up and share thoughts about issues and how they can be solved. Competence in argumentativeness may offer employees the benefit of being able to engage in issue-related discussions in the workplace.

The trait of argumentativeness is generally seen as being higher in men than women (Infante, 1988). However, Darus (1994) found that women who work in places that encourage argumentative communication appeared confident and capable of engaging in issue related arguments. Shullery (1998) found argumentativeness in women in business to have mixed
benefits. Although she reported that persons who were adept at arguing may have the benefit of more workplace success due to the ability to make better decisions and solve problems, she also found that argumentativeness in women was not as highly respected as it was in men. In addition, Shullery found evidence that occasional use of assertive communication such as argumentativeness was associated with both men and women’s upward movement in the company to positions of authority. Although some employees may find the idea of workplace arguments threatening, Shullery found that argumentation on the job is typically viewed as appropriate when presented in an affirming manner that is friendly and relaxed (see also Infante, 1988).

Employees high in argumentativeness have also been shown to be lower in verbal aggressiveness (Infante & Gorden, 1991). These employees tend to find ways to discuss issues instead of resorting to more aggressive communication such as fighting or bickering. In fact, according to Infante and Gorden, promoting argumentativeness in the workplace is good for the employer as well as the employee. When a company’s organizational structure is one that allows employees to freely voice concerns and new ideas, the employees are more committed to the company. The employees feel a connection to the company and want to be part of the success of the company. Even employees who are low in argumentativeness reportedly are more satisfied with the management of a company when they know they can speak up regarding corporate issues.
Argumentativeness in Friendship and Romance

Argumentativeness also affects friendships and romantic relationships. Knowing how to argue and attack the issue not the person may reduce negative interpersonal communication situations and reduce uncertainty in relationships (Infante, 1988). In this vein, Weger (2006) reported that arguments were shown to be associated with both productive and unproductive outcomes. Among couples that resorted to ad hominem arguments normally characterized by verbal aggressiveness, were often damaging to the relationships. If, however, couples were able to communicate about their differences on issues using reasoning and rational discussions without resorting to personal attacks—that is, in line with the definition of argumentativeness—couples were often able to build the relationship rather than tear it down. Being able to argue in an effective manner may help couples avoid high levels of negativity in the relationship, and can even mean the difference between solving disagreements with or without physical violence. Some arguing may actually repair relationships by resolving difference of opinion on substantive issues. Constructive arguing, argumentativeness, allows relational partners to solve both personal and public issues in a more positive manner than individuals that resort to verbal aggressiveness (Johnson et al., 2007).

Findings regarding the relationship of argumentativeness to positive relational and social outcomes, however, are mixed. Venable and Martin (1997) explored argumentativeness and verbal aggression in regard to satisfaction in dating relationships. When college students were assessed as to how argumentativeness related to communication satisfaction and relational satisfaction, no association either positive or negative was found. Furthermore, when students were asked if they would prefer to associate with either high or low argumentative people in
different situations, the results showed that in social situations the non-argumentative person was preferred. When negotiating skills were needed, there was no significant difference between preferring the friend to be argumentative or non-argumentative (Waggenspack & Hensley, 1989). Variables such as gender, duration, and type of relationship may have an impact on how argumentativeness affects close personal relationships. Although some positive evidence has been found for high argumentativeness in romantic relationships, I was not able to find any conclusive evidence as to argumentativeness being positive or negative in friendships.

*Argumentativeness in the Classroom*

Literature supports the premise that argumentativeness confers a range of benefits on students. Kennedy-Lightsey and Myers (2009) compared the behavior of verbally aggressive versus argumentative students. They reported that argumentative college students are more likely to be on task, and that they display positive classroom communication behavior such as classroom participation, which is often seen as indicative of learning. Students who score high in trait argumentativeness or who participate in argumentativeness training have also been found to be better at assimilating data than those who are not, and are more willing to discuss logical positions on issues. They are also more likely to have positive listening skills and appreciate feedback on their arguments regarding issues of personal importance. The critical thinking skills of students who are willing to engage in effective argumentative behavior appear to be higher than are those of students who do not approach arguments (Wigley, 1987). Students with the tendency to approach arguments also report higher grade point averages than those who do not (Infante, 1982).
Conversely, verbally aggressive students often engage in direct attacks on other people’s abilities, tease other students, and swear or make threats. These students do not appear to be bothered by the reciprocation of verbal aggressiveness (Kennedy-Lightsey & Myers, 2009). The behavior of verbally aggressive students is perceived more negatively by their peers than that of argumentative students, because argumentativeness is associated with overall communication competence. Furthermore, argumentative students can distinguish between appropriate and inappropriate communicative behavior with an instructor (Kennedy-Lightsey & Meyers), whereas verbally aggressive students may not always be able to make that distinction.

College and University Training in Argumentativeness

Debate

Given the value of argumentativeness in many areas of life, and particularly in the college classroom itself, the question then becomes what is known about the effects of training in argumentativeness among college students. One aspect of the college experience that is clearly tied to argumentativeness is debate. Ryan and Sovacool (2006) investigated the effect of teaching debate and argumentation in post secondary educational institutions, and especially in sponsored debate organizations. Their results highlighted five positive traits that were observed in most students involved in debate and argumentation instruction: 1) social responsibility, 2) cultural tolerance, 3) higher academic GPA’s, 4) moral grounding and flexibility, and 5) positive psychological adjustment (p. 51). Argumentativeness and debating skills have also been found to
be related to students being more informed citizens, more tolerant of differences, and cognizant of current issues (Allen et al., 1999; Fleury, 2005; McPherson Frantz & Seburn, 2003).

Although his research employed a sample of high school students, Colbert (1993) obtained a similar result in an experimental study using debate as the independent variable. Students were required to conduct extensive research in preparation for various forms of debate training such as oratory, dramatic, persuasive, Lincoln-Douglas, and negotiation. This training and preparation also was shown to develop critical thinking skills and increase communication skills (Colbert). Among all types of training, policy (critical thinking) and value debate training had the most impact on increasing argumentativeness scores and reducing verbal aggressiveness scores as measured by Infante and Wigley’s (1986) verbal aggressiveness scale. For those with no previous debate experience, value debate training was shown to have the greatest impact on increasing argumentativeness. Students with previous experience in debate and forensics showed the most argumentativeness increase with policy debate training.

As beneficial as organized debate participation appears to be, it is somewhat exclusive of diverse populations of students. Bruschke (2004), a college debate coach, reports that university populations are on an average 55% female, but only 35% of the college debaters are female. Additionally, minority populations average 25% in colleges and universities but minority students comprise only 15% of debate teams. Because demographic research shows only around one-third of all college students participate in formal argument training such as debate, it is essential to find other ways of exposing students to argumentativeness education (Bruschke, 2004).
The General Education Public Speaking Course

In many colleges and universities the more broadly available training in argumentation takes place in the general education communication or public speaking course. These courses typically serve as a prerequisite for communication majors, and also as components in the general education requirements (Levasseur, Dean, & Pfaff, 2004). Whether the course offered is an introduction to communication course, which only allows a single public speaking assignment or a public speaking course which allows numerous speech assignments, most college level communication courses have a persuasive speech assignment. Typically the goal of the persuasive speech is to gain audience support for an issue that is important to the speaker and be able to refute differences of opinions on the issue. If we compare that goal with the definition of argumentativeness, “to advocate positions on controversial issues and to attack verbally the positions which other people take on these issues,” (Infante & Rancer, 1982, p. 72), it is clear that persuasive speaking instruction is connected to argumentativeness.

Numerous theoretically based models of persuasion are employed in such courses to introduce students to methods of persuasion and critical thinking. The Toulmin model, inoculation theory, Mitchells VALS typology, fear appeals, and Monroe’s Motivated Sequence are just a few of the theories and methods that are regularly used across the country to instruct students in preparing persuasive messages (McKerrow et al., 2003; Pryor, 1998).

In addition to the traditional public speaking classroom, some institutions embrace speaking across the curriculum in higher education in which certain courses across majors are marked as “speech intensive,” and are designed to provide students with training in public
speaking within the disciplinary context. Fleury’s (2005) assessment of the strengths of such programs points toward argumentativeness as a key outcome: “Communication across the curriculum can help the student become a model citizen, able to not only argue well for a position but embody a democratic mix of multiple voices, to articulate the world from many positions” (p. 72). He proposed that allowing students to use the communication skills, especially persuasive and argumentative skills, in all classes would increase the students’ ability to rationally argue a point instead of just expounding on it.

So far as I was able to determine, the impact of public speaking courses on student argumentativeness has not been directly studied in the college environment. However, several studies on similar issues lend credence to the idea that an increase in student argumentativeness is a conceivable outcome of instruction contained within a course. For instance, working with 7th grade students Rancer et al. (1997) tested the effect of a 7-day training program focused on argumentativeness. In comparison to the control group who received the regular public school curriculum, students in the experimental group who were taught the difference between argument and fighting and were trained via Infante’s Inventional System on the concepts of problem, blame, solution, and consequences evidenced a range of positive behaviors. Students significantly increased self-reported trait argumentativeness immediately after training as measured by Roberto and Finucane’s Adolescent Argumentativeness Scale (1997). They were also able to construct and sustain an argument without becoming aggressive. Follow up research one year later with the same students, showed students had maintained higher argumentativeness over the period of a year (Rancer et al., 2000).
The Elaboration Likelihood Model

Although it is encouraging for communication departments and relevant for university administrators to be aware of the sorts of student outcomes that can reasonably be expected from introductory public speaking courses, it is even more useful to isolate the components of courses that contribute most strongly to those outcomes. Among the available topics for instruction on persuasion in the basic course, Elaboration Likelihood Model (ELM), as developed by Petty and Cacioppo holds particular promise for impacting students’ ability to argue. The following section describes the basic principles of ELM.

As a dual process approach to information processing, ELM suggests that people use two routes of thought toward an attitude change: central or peripheral. Processing by the central route involves careful examination of all the facts, and a determination of whether or not the information is cogent and compelling. This issue relevant thinking is what Petty and Cacioppo (1984, 1986) refer to as elaboration. Thus the information that influences persuasion via central processing is message-related arguments. However, humans have limited capacity to process the wide range of stimuli that assault their senses moment by moment. They cannot afford the time required to carefully examine every decision; some cognitive shortcuts are essential for survival. Receivers may, therefore, process persuasive information via the peripheral route. Peripheral route processing depends on simple inferences or attractive heuristic properties of messages rather than on quality of argument. Peripheral processing is evident when rather than assessing the strength of the argument being presented, a receiver concentrates on cues such as, how much (s)he likes the speaker, whether the speaker seems credible, or whether he or she believes that
most people agree with the stance the speaker is taking. When people process an issue peripherally they do not elaborate as much as when they process centrally.

Depending on the issue, a person may make decisions based on either central or peripheral routes of thinking at any point during the process of persuasion. It is important to note that either route may produce the desired change a speaker is seeking.

Two main factors have been identified as affecting the likelihood of elaboration; motivation and ability (Cook, Moore, & Steel, 2004; Jones, Sinclair, Rhodes & Courneya, 2004; Petty & Cacioppo, 1984). In ELM literature, motivation is most often tied to personal relevance of an issue. That is, the more important the issue is to the receiver, the more likely the person is to engage in thoughtful decision making strategies or central processing. However, if the issue is not motivating, or is irrelevant to the receiver, then peripheral processing is more likely to take place. The second factor is the ability to process a given message. Lack of ability may be in the form of distractions to the message that may prohibit elaboration, as lack of prior knowledge of an issue (Petty & Capaccio, 1986). The use of too much complexity, technical terms, and jargon on the part of a communicator may keep a receiver from being able to mentally elaborate and incline the individual instead to be persuaded by heuristic cues that are easier to process (Cacioppo et al., 1986). For a communicator who realizes that an audience is unlikely to engage in cognitive elaboration due to lack of motivation and/or ability, appealing to the peripheral route of persuasion may be a wise persuasive tactic (Park, Levine, Westerman, Orfgen, & Foregger, 2007; Schroeder, 2005). Conversely, when communicators want a message to be processed
centrally, they should ensure that messages contain no distracting information, enough repetition to increase understanding, and an appropriate mode of delivery (Cook, Moore, & Steel, 2004).

Although both central and peripheral processing are both legitimate routes to persuasion, the two types of processing have disparate long-term results. The amount of elaborative thought that takes place during a persuasive message may determine how long an individual’s attitude change will persist over time, the person’s ability to analyze counter arguments, and the person’s ability to engage in supportive argument for their position on the issue. Less thought processing is predictive of temporary attitude or behavioral changes; more processing is predictive of long-term changes (Barden & Petty, 2008; Jones et al., 2004; Petty & Cacioppo, 1984). Thus when the goal of persuasion is to create a long-term attitude change, the use of central processing would be most desirable.

*Instruction in ELM as a Means of Increasing Students Argumentativeness*

The college level course in public speaking may be an excellent forum for enhancing argumentativeness in students through the standard course requirements of persuasive speaking. The purpose of the persuasive unit in the public speaking course is not only to teach persuasive methods that can be used in speeches, but also to offer an introduction to a “rhetoric that affords students a chance to better understand their own and others’ perspectives” (Novak & Bonine, 2009, p. 11). As Infante (1982) explains, “a central assumption of the speech communication curriculum [is] that the individual who is predisposed to advocate and refute ideas in social situations is able to participate more fully in a democracy and is better equipped to achieve personal goals” (p. 141).
Teaching ELM as part of the speech course aligns well with this goal for several reasons. First, it provides students with an understanding of the diverse ways that audience members may engage with a topic and suggests the most appropriate strategies for dealing with the specific rhetorical situation. Through the process of making decisions about whether to focus on providing strong logical arguments for audiences inclined to process centrally, on embedding heuristic cues for audiences inclined to process peripherally, or on demonstrating the relevance of the topic to the audience so as to encourage them to shift from peripheral to central processing, students can gain confidence in their own ability to argue a position. With instruction in the importance of persuading toward long term change on important issues, the use of central processing as described in ELM should prompt students to engage in solid research and discovery of relevant sources for the speech.

Second, as a theoretical framework, ELM is readily understandable and memorable. Especially for community college students, who frequently come to public speaking class without the benefit of strong academic preparation, Monroe’s five steps in the motivated sequence or the six figure chart that illustrates Toulmin’s model can be daunting. Although students memorize these theories in preparation for a specific assignment or quiz, as mentioned previously, they quickly forget them. In comparison, the simplicity of ELM depicted by only two routes is appealing and is more likely to be remembered beyond any specific assignment.

Third, in addition to student speakers applying the principles of ELM to prepare for their persuasive speeches, the tenets of ELM can assist students learning how to respond to arguments. By gaining an understanding of how important it is to engage in issue relevant thinking, connect
past experiences with the suggestions being made, listen for strong versus weak arguments, and
decide which issues they will attack, listeners become active participants in the persuasive
process (Petty & Cacioppo, 1986). In the discussion that happens after a speech, student listeners
use what they have learned in studying ELM to process the issues that are of high importance
and use issue related information to argue their side of the topic. In this way students are being
taught that argumentativeness not aggressiveness is best engaged in for important issues and that
the verbal argument is focused on the issues not the speaker (Johnson et al., 2007).

There is no lack of support in literature for the benefits of increasing argumentativeness
in college students (Allen et al., 1999; Colbert, 1993; Fluery, 2005; Infante, 1982; Rogers, 2005;
Shullery & Shullery, 2003). I propose that public speaking courses are the logical place to
provide students with argumentativeness training. Because ELM is a framework that supports the
importance of the listeners/ receivers attitude toward an issue and the listener’s/receiver’s
motivation and ability to process the information, as well as instructing the speaker how to
prepare an argument, it is an excellent theory to use in teaching argumentativeness skills. An
argumentative approach to communication involves both informative and persuasive information
(Infante, 1988), the college level course in public speaking is prime to enhance
argumentativeness in students through the standard course requirements. The college level
course with instruction in ELM offers the developing speaker and listener an opportunity to
increase argumentative behavior.

Previous research has found that adding ELM to the persuasion unit of public speaking
courses did increase student argumentativeness significantly above that of the control group. In
Long’s (2010) study, one instructor teaching eight sections of the public speaking course at a community college was identified and agreed to participate in the experiment. She randomly selected four classes to receive only Toulmin’s model during preparation for the persuasive speech. The other four classes received instruction in both Toulmin’s model and ELM. Both groups of students had lecture, classroom activities, quizzes, and reading assignments related to the theoretical perspectives and in preparation for the persuasive speech assignment. The classes that received instruction in ELM had approximately 75 more minutes of persuasive instruction than the classes that only received instruction in Toulmin’s model. Results showed that students in sections that received both methods of instruction scored higher in trait argumentativeness at the conclusion of the persuasion unit. However, it was impossible to determine from these results if higher argumentativeness scores were because of the increased amount of time spent on persuasive instruction or specifically because of the content of ELM itself. More study needed to be conducted in order to tease out the reason behind these findings. Therefore, the researcher proposed the following hypothesis:

H1: College students in public speaking classes who are instructed in ELM will self-report higher argumentativeness scores than will college students in public speaking classes that receive instruction in Toulmin’s model.
CHAPTER 3: METHODS

To determine whether instruction in ELM had a positive effect on self reported argumentativeness, this research employed a posttest only, control group design with two conditions. The control group was composed of four public speaking classes that received persuasive speaking instruction in Toulmin’s model. The experimental group comprised public speaking classes that received persuasive curriculum that included instruction in ELM. The dependent variable was self-reported argumentativeness scores.

The research was judged exempt from written and signed informed consent by the IRB review board at the institution where the data was gathered and the institution where the research was submitted (see Appendices A and B).

Participants

Undergraduate students were recruited from seven introductory public speaking courses at a large southeastern community college. Of the 108 students that completed the argumentativeness survey, 102 were used in the analysis. One was removed due to incorrectly completing the survey (it was answered T and F instead of indicating the number on a Likert-type scale), the other five did not completely or correctly fill in the demographic part of the survey.
Self-report data showed that 54 students received instruction in ELM (experimental) and 48 received instruction in Toulmin’s model (control). The average age of the 102 respondents (female \(n=55\), male \(n=47\)) was 25.24 years old (minimum=18, maximum=52, range=34 years). The modal age was 19. Of the sample, 38.2% \(n=39\) of the students identified themselves as freshman and 61.8 \(n=63\) of the students identified themselves as sophomores in college. None of the 102 participants selected “non-degree seeking” as an option for year in school. With respect to ethnicity, students self-identified themselves as: 37.3% Black, 29.4% White, 15.7% Hispanic, 8.8% Other, 4.9% American Indian, and 3.9% Asian/Pacific Islander.

**Procedures**

The researcher identified two instructors to participate in the experiment. Both instructors normally teach persuasive speaking as part of the public speaking course. Both instructors regularly include instruction in Toulmin’s model and ELM as part of the persuasion curriculum. Sections were randomly assigned to ELM only or Toulmin’s model only conditions using a permutated blocks technique. Each class received approximately 3 hours of classroom time for instruction in the topic. Instruction included assigned readings from the textbook and supplemental information, a classroom lecture and discussion using power point, and activities that have students analyze ads for persuasive properties related to the instruction in ELM or Toulmin’s model (see Appendices D and E).

After completing the unit on Toulmin or ELM, preparing for the same persuasive speech assignment, the students present in class that day were asked to complete Infante and Rancer’s
argumentativeness scale (see Appendix C) and four demographic questions. Any student who chose not to complete the survey was allowed to opt out at no penalty. No student requested to opt out. Questionnaires were completed anonymously and were coded by class section. Once students turned in the questionnaires they were informed about the purpose of the research and allowed to ask any questions they might have had.

Instrumentation

To measure argumentativeness, the argumentativeness scale developed by Infante and Rancer (1982) was administered. Despite some criticism about specific terminology in the scale (Flint & Dowling, 1989), it is the scale used in most argumentativeness studies. The 20-question Likert-type scale uses self-reporting to measure a person’s likelihood of approaching or avoiding an argument. Respondents score each statement on a 5-point scale, with 1 “being never true of you” and 5 being “always true of you”. Approach is assessed by questions such as “arguing over controversial issues improves my intelligence”, and avoidance by questions such as “when I finish arguing with someone I feel nervous and upset.” Computing of the argumentativeness score is done by subtracting the total avoidance tendency questions from the total approach tendency questions. Computed scores may range from -40 to 40.

Reliabilities reported by Infante and Rancer (1982), at initial validation of the scale were .91 for the 10 approach items and .86 for the 10 avoidance items. Test-retest reliability was .87 for ARGap, .86 for ARGav, and .91 for ARGgt” (pg. 89). Subsequent research has reported
Cronbach’s alphas of .86 to .91 for ARGap and alphas of .79 to .84 for ARGav (Colbert 1993; Infante & Gorden 1985).
CHAPTER 4: RESULTS

Preliminary Analysis

Argumentativeness scores were computed for students in line with Infante and Rancer’s instructions. For the 102 students that took the survey, Cronbach’s alpha on the argumentativeness scale results were .83 for ARGap (approach) and .72 for ARGav (avoidance).

Hypothesis One

Hypothesis one predicted that students who received instruction in ELM would self-report higher argumentativeness scores than would students who received instruction in Toulmin’s model.

To test the hypothesis an independent samples t-test was run with argumentativeness as the dependent variable. Significance was set at p<.05. The self-reported argumentativeness mean for the 52 students that received instruction in ELM was 8.29 with a standard deviation of 9.52. (Argumentativeness scores are computed by subtracting the total avoidance tendency questions from the total approach tendency questions. Computed scores may range from -40 to 40.) The mean argumentativeness score for the 48 students that received instruction in Toulmin’s model was 10.06 with a standard deviation of 11.77. No significant difference in argumentativeness was found (t= -.837, df = 100, p=.405). Based on these results, the null hypothesis was not rejected and hypothesis one was not supported.
Therefore, instruction in ELM did not produce a significant increase in argumentativeness scores for students in public speaking courses when compared with students who received instruction in Toulmin’s model.
CHAPTER 5: DISCUSSION

It is well documented that people high in argumentativeness have a greater ability to learn, can manage conflict better, and show higher levels of self esteem (Barden & Petty, 2008; McPherson Frantz & Seburn, 2003; Rancer, Whitecap, Kosberg, & Avtgis, 1997). All of these characteristics are beneficial for college students. Therefore, it is important for instructors to find areas of the curriculum that support the development of argumentativeness in students.

Because public speaking is a required course for many degree seeking community college students, it may be the right place to incorporate argumentativeness as part of the curriculum. Although no research directly related to instruction in ELM increasing argumentativeness could be found, numerous studies on the benefits of high argumentativeness traits in students and influencing argumentativeness prompted interest in looking at the public speaking course as grounds for argumentativeness training. Even though most public speaking coursework does not focus specifically on increasing a student’s argumentativeness, I wanted to see if there was a relationship between the two.

The focus of the current research was based on the premise that 1) ELM is likely to be more easily understood by students than the 5 step Toulmin model, 2) instruction in ELM may increase self confidence in a student’s ability to argue by learning to appeal to both central and peripheral routes of processing information, and 3) instruction in ELM may increase issue relevant thinking and listening in students (Petty & Cacioppo, 1986).

Previous work by the author found that students who received instruction in both ELM and Toulmin’s model scored higher in argumentativeness after the persuasive unit, than did
students who studied Toulmin’s model alone. This study was undertaken to determine whether the previous findings were due to the effect of ELM itself, or to the fact that the instructor approached argumentativeness from more than one theoretical perspective and spent more time on the persuasive unit.

The fact that this experiment found no significant difference in self-reported argumentativeness scores between the two methods of persuasion instruction indicates that the significant difference in the previous study between two groups may well have been attributable to multiple perspectives, time on task, or the culminating speech requirement. Although that is not the result this researcher anticipated, it is nevertheless important information. Public speaking instructors in community colleges would be well advised to consider approaching the topic of argumentation and persuasion from several perspectives when designing their courses. Using pedagogy that includes practice in debate, role playing, and discussion of controversial topics may elicit more thinking from students and assist them in gaining confidence in engaging in issue relevant discussions. Designing the culminating speech to offer the speaker a chance to practice argumentative techniques and developing an assessment for listeners to analyze the arguments, may also increase the student’s comfort and competence in issue discussions. Educators need to constantly evaluate the effectiveness of the instruction and strategies used to increase argumentativeness as well as how argumentativeness is assessed. Examining the research that has been previously mentioned may offer some suggestions in developing curriculum that increases argumentativeness in college level students, just as it reportedly did in the workplace and high school students.
Limitations and Future Research

Several limitations to this study should be mentioned. First, the sample in this study was composed of community college students and therefore cannot be generalized to students of public speaking classes in four-year colleges and universities. Second, although it might have been interesting to examine the possible change in self-reported scores over the term, I was concerned that during a short 10-week summer session introducing a pre-test might have produced a testing effect. Conducting the experiment in a full 16-week semester might allow for a pre-test/post-test design without negatively impacting validity.

Finally, the surveys were collected before the students presented their final persuasive speeches of the term. Both instructors taught the specifically requested theoretical material (either ELM or Toulmin’s model), gave the survey, and then taught the other content (either ELM or Toulmin’s model) before having the students prepare and present their persuasive speech. Although the instructors gave students a thorough learning experience that included class discussion, exercises, and application of the concepts in class for either ELM or Toulmin’s model, it is often the actual presentation of the speech and critique of other speeches that completes the learning experience. Having students complete the argumentativeness survey after the completion and discussion of persuasive speeches might have given students time to reflect and feel more confident in reporting their ability to approach arguments and thereby resulting in higher-and perhaps more divergent-scores in argumentativeness.

These limitations withstanding, I would still suggest further research in using the public speaking course as a place to infuse argumentativeness instruction into the curriculum. Other
combinations of teaching units could be tested including instruction in both ELM and Toulmin’s model, as well as instruction in different patterns of organization for persuasive speeches.

Finally, adding opportunities for students to learn and practice debate in public speaking classes may increase argumentativeness skills. Literature strongly supports the contention that students who participate in structured debate training develop higher argumentativeness skills (Bruschke, 2004). Using classroom activities that have students prepare for arguments in groups, research their side of an issue, and openly debate the issue in class may increase their confidence and understanding of argumentativeness. Attending a debate or watching a previously held debate and then analyzing it may also help students understand how to verbally project and/or defend ones position on an issue.

Empirical investigation into the effectiveness of pedagogical tools in terms of increasing desirable skills and traits should be a critical component of the scholarship of teaching and learning in the communication discipline. Research literature offers great support for the positive benefits of argumentativeness, “including greater decision-making and problem-solving skills, credibility and competence in communication” (Schullery & Schullery, 2002). Educators should make the effort to evaluate methods of instruction and examine the outcomes of including different theories such as ELM in college level public speaking courses.
APPENDIX A: IRB APPROVAL LETTERS
Approval of Exempt Human Research

From: UCF Institutional Review Board #1
FWA00000351, IRB00001138

To: Kim E. Long

Date: July 07, 2010

Dear Researcher:

On 7/7/2010, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Influencing Argumentativeness with Persuasion Instruction
Investigator: Kim E. Long
IRB Number: SHE-10-07009
Funding Agency: Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in IRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Mancini on 07/07/2010 10:48:12 AM EDT

IRB Coordinator
VALENCIA COMMUNITY COLLEGE
Human Research Protection (HRP) Institutional Review Board (IRB)

IRB Determination Form

Title of Research Protocol: Argumentativeness for Persuasion

Principal Investigator (PI): Kim Long

Date Received by IRB Chair: 03/15/10 (original), 03/25/10 (additional information), 05/13/10 (extension request)

IRB Number: 10-015 and 10-015a

Based on the IRB Protocol Initial Submission Form (or, as appropriate, the IRB Continuing Review/Termination Form or the IRB Addendum/Modification Form) submitted by the Principal Investigator and for the project identified above, the following determination has been made by the Valencia IRB:

☒ The research is exempt from IRB review. Exemption category: 
☒ The research is eligible for expedited review and has been approved.
☐ The research is eligible for expedited review but requires modifications and re-submission before approval can be given.
☐ The research is subject to full review and will be discussed at the next IRB meeting, currently scheduled for date.
☐ The research has been subjected to full review and has been approved.
☐ The research has been subjected to full review and has been disapproved.

Period of Approval: 04/01/10 to 08/01/10
(cannot be retroactive)

Exemption from Valencia IRB review does not exempt the PI or Co-PI from compliance with all applicable institutional, Federal, State, and local rules, regulations, policies, and procedures.

Although the IRB has determined that this application is exempt from IRB review, the Principal Investigator is encouraged to read, understand, and apply the attached Investigator Responsibilities document, which is required of Principal Investigators whose research protocols are approved under the Valencia IRB full or expedited review process.

If you have any remaining questions about Valencia’s IRB process, contact the IRB Chair at irb@valenciacc.edu.

Signature of IRB Chair or Designated Representative 6/5/10
Signature of IRB Chair or Designated Representative Date

C: IRB File, IRB Members, PI Supervisor/Administrator
Participant Informed Oral Consent Form

June 2010

I am conducting a study to see what methods of teaching persuasion help students in preparing arguments for speeches. In this study, you will be asked to complete a survey on argumentativeness. Participation should take about 10 minutes during a class period. There are no risks to you in participating in this survey. All survey information will be submitted anonymously, so that no one will be able to identify you when the results are recorded. All information is subject to the Family Educational Rights and Privacy Act (FERPA) of 1974, which is designed to protect the privacy of educational records.

Your participation in this study is totally voluntary and you may withdraw at any time without negative consequences. To withdraw at any time during the study, simply contact Kim Long at 407-582-1246 or klong@valenciacc.edu or Dr. Ann Miller, UCF School of Communication at aemiller@mail.ucf.edu or 407-823-2602. In addition, please feel free to contact Kim Long if you have any questions about the study. Or, for other questions, contact the Chair of Valencia’s Institutional Review Board at irb@valenciacc.edu. You may also direct questions or contact UCF IRB about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact:
I am at least 18 years of age and completing this survey/assignment constitutes my informed consent.
APPENDIX C: IRB APPROVED ARGUMENTATIVENESS SURVEY
This questionnaire contains statements about arguing controversial issues. Indicate how often each statement is true for you personally by assigning each question the appropriate number from the list below: 1. Almost never true of you. 2. Rarely true of you. 3. Occasionally true of you. 4. Often true of you. 5. Almost always true of you.

___ 1. While in an argument, I worry that the person I am arguing with will form a negative impression of me.

___ 2. Arguing over controversial issues improves my intelligence.

___ 3. I enjoy avoiding arguments.

___ 4. I am energetic and enthusiastic when I argue.

___ 5. Once I finish an argument, I promise myself I will not get into another one.

___ 6. Arguing with a person creates more problems than it solves.

___ 7. I have a pleasant, good feeling when I win a point in an argument.

___ 8. When I finish arguing with someone, I feel nervous and upset.

___ 9. I enjoy a good argument over a controversial issue.

___10. I get an unpleasant feeling when I realize I am about to get into an argument.

___11. I enjoy defending my point of view on an issue.

___12. I am happy when I keep an argument from happening.

___13. I do not like to miss the opportunity to argue a controversial issue.

___14. I prefer being with people who rarely disagree with me.

___15. I consider an argument an exciting intellectual challenge.

___16. I find myself unable to think of effective points during an argument.

___17. I feel refreshed and satisfied after an argument on a controversial issue.

___18. I have the ability to do well in an argument.

___19. I try to avoid getting into arguments.

___20. I feel excitement when I expect that a conversation is leading to an argument.
Please check the space or fill in the blank for the questions below:

1. What is your age? ______

2. What is your sex? ___ Male ___ Female

3. What year are you in school? ___ Freshman ___ Sophomore ___ Non degree seeking

4. What is your ethnicity?
   ___ American Indian ___ Black ___ White ___ Asian/Pacific Islander ___ Hispanic
   ___ Other
APPENDIX D: SAMPLE MATERIALS FOR ELM INSTRUCTION
Persuasive Strategies

Ethos, Pathos, Logos
(tools the speaker will use to be persuasive)

• Do they all process the message in the same manner?
• Do they all come to the same conclusions?
Class activity

What makes you more likely to “engage in critical evaluation” of a persuasive message?

Elaboration Likelihood Model

How do “listeners” process persuasive messages?

Which persuasion route do “listeners” take?
Persuasion Routes
to evaluate persuasive messages…

Central Route: Based on the arguments
Peripheral Route: Not based on the arguments
Elaboration Likelihood Model
How likely will the audience be to engage in “mental elaboration” of your persuasive message?

**Central Route**
High evaluation of arguments
Decision based on strength & quality of the arguments related to the issue

**Peripheral Route**
Low or no evaluation of arguments
Decision based on reasons not-related to the issue (likeable source, slogans, social support, packaging, pressure, issue-irrelevant reward)

**Effects of persuasion**
- Long term
- More predictive of behavior
- More resistant to counter-persuasion (competing messages)

Audience more likely to "elaborate" if they have…
1. Motivation to listen (topic relevance)
2. Ability to understand message (prior knowledge, cognitive skills, clear message, repetition, time to process)

Audience less likely to "elaborate" if they are…
1. Not motivated (irrelevant topic)
2. Unable to understand… (no prior knowledge, lack of skills, unclear message, distracting delivery, not enough time to process)

Example: car insurance
Advertising cereals to kids

http://www.abcnews.go.com/GMA/Parenting/study-healthy-cereals-marketed-children/story?id=8913808

Peripheral Route

Peripheral Processing Cues....

1. Speaker/source of message
   (Likeable, dynamic, confident)
2. Slogans/name recognition
3. Social support (popularity)
4. Packaging, color, aesthetics, music
5. Pressure (peers, reciprocity)
6. Issue-irrelevant reward
ELM as a continuum

- Routes not mutually exclusive
- Peripheral cues can stimulate cognitive elaboration (leading to central route processing)

Your persuasive speech...

- Central Route?
- Peripheral Route?
APPENDIX E: SAMPLE MATERIALS FOR INSTRUCTION IN TOULMIN’S MODEL
Persuasion

I want you to…

Step by Step Persuasion

1. What do you propose?
   - Judgment
   - Debatable
   - Proof
     - fact, value, policy
2. Level and Influence on…
   - Change, instill, intensify
   - Value, belief, attitude, behavior
3. Type of appeal (pattern)
   - Problem/solution, need/want, fear, Monroe, refute
4. Type of argument
   - example, cause, authority, analogy, deduction
5. Theory/models of persuasion awareness
   - Toulmim’s Model of Reasoning
Modes of speaking

- Ethos
- Logos
- Pathos

Toulmin

The grounds for the argument

Data → Warrant → Backing → Claim

Logical connection

Support

Warrant

Position or purpose of the argument

Claim → Reservation → Qualifier

Exceptions and limitations

Strength of the argument (will probably)
Toulmin

- Claim: What you want the audience to accept.
- Warrant: Connects that claim to evidence
- Evidence: Facts, statistics, and/or examples that provide support for the claim.

Types of Evidence

- First order: personal testimony
- Second order: expert testimony
- Third order: facts, statistics, examples
Example

- Claim: Florida should adapt a new state song...
- Warrant: ...because “old folks at home” no longer unites our citizens.
- Evidence: Governor Crist would not play it at his inauguration and said that some are offended and he, “can’t condone it.”
- Source: www.sunsentinel.com

Your Speech

- What is your claim?
- What will you use to connect the claim to evidence? (warrant)
- What evidence will you find?
REFERENCES


*Communication Research Reports, 11*(1), 99-106.


