THE EFFECTS OF I-CLAIM, AN INSTRUCTIONAL TECHNOLOGY TUTORIAL,
ON FIRST-YEAR COLLEGE ENGLISH COMPOSITION STUDENTS'
ARGUMENTATION SKILLS: AN EXPLORATORY STUDY

by

David R. Beach
A Dissertation
Submitted to the
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The Effects of *i-Claim*, an Instructional Technology Tutorial, on First-Year College English Composition Students' Argumentation Skills: An Exploratory Study

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University

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Summer Semester 2008
George Mason University
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DEDICATION

for Cindy
“They Can’t Take That Away from Me”

and

for JRB
“That and twenty-five cents...”
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ABSTRACT

THE EFFECTS OF I-CLAIM, AN INSTRUCTIONAL TECHNOLOGY TUTORIAL, ON FIRST-YEAR COLLEGE ENGLISH COMPOSITION STUDENTS' ARGUMENTATION SKILLS: AN EXPLORATORY STUDY

David R. Beach, Ph.D.

George Mason University, 2008

Dissertation Director: Dr. Nada Dabbagh

This dissertation describes the effectiveness of the use of i-Claim, an instructional technology tutorial for argumentation skill development. Because persuasion is a critical skill in college writing, argumentation is introduced in the first-year English composition course, and students practice writing arguments in that course and beyond. With an increased use of instructional technology in higher education, can instructional technology tutorials help students develop stronger and more effective argumentation skills in their writing? This study explores that question by investigating the relevance of developing argumentation skills, theoretical models of argumentation in modern composition pedagogy, empirical studies on argumentation skills, and technology-supported interventions to develop argumentation skills and student confidence in learning.
This study examines the use of *i-Claim* in six first-year English composition courses and its effect on students’ argumentation skill development. The findings were inconclusive as to its effectiveness because of the small sample size and limited exposure to the intervention. However, the study concludes by exploring how instructional technology interventions can best be used in instruction of argumentation skills and how to encourage students to use technological tools to support their learning.
1. Introduction


As writing students and instructors supplement learning and teaching with instructional technology tools, and as they begin to examine the elements of argumentation, it becomes imperative to examine if instructional technology tools can be effective in helping students develop skills in argumentative writing and increase their confidence in writing those arguments.


When looking at syllabi in first-year college English composition courses, one will almost always find an assignment on argumentative writing. Given that first-year English composition courses are among the multitude of college courses that are moving
towards blended or hybrid environments, in-class instruction is being supplemented with instructional technology or online learning (Kvavik & Caruso, 2005). Might there be a way to use instructional technology to help students develop argumentation writing skills more effectively?

**Background**

Research (Boyer, 1998; NAEP, 1999; Sommers, 2003; NAEP, 2008) indicated students’ “problems” with academic writing stem from a lack of argumentation skills as well as a lack of understanding of academic expectations and standards which are both discipline- and genre-specific. In 1995, the Conference of College Composition and Communication (CCCC), one arm of the National Council of Teachers of English, drafted an outcomes statement for assessment of student writing. The first four (of ten) statements focused on the social context of writing and language use, critical thinking, critical reading, and development of a variety of writing skills as key elements of assessment in writing courses. Critical thinking and reading were central to argumentation skill development, as were the various contexts within which a piece is written. Since assessment drives instruction, it was imperative to know what would be assessed before designing instruction.

The first statement considered the context of writing, “why, where, and for what purpose it is being undertaken” (Conference of College Composition and Communication, 1995, n.p.). The second statement took into account the social nature of language, leading to the third statement, which focused obliquely on argumentation
within the social context of writing and reading that is written: “What any reader draws out of a particular text and uses as a basis of evaluation is dependent upon how that reader's own language use has been shaped and what his or her specific purpose for reading is” (CCCC, 1995, n.p.). The fourth statement examined the variety and diversity of writing and how instructors cannot view one particular piece of writing as “an indicator of overall literacy” (CCCC, 1995, n.p.).

The Writing Program Administrators’ (WPA) Outcomes Statement for First Year Composition (1999) operationalized the assessment concepts of CCCC, stating the following for students’ skills in critical thinking, reading, and writing: “By the end of first year composition, students should: Use writing and reading for inquiry, learning, thinking, and communicating; understand a writing assignment as a series of tasks, including finding, evaluating, analyzing, and synthesizing appropriate primary and secondary sources; integrate their own ideas with those of others; and understand the relationships among language, knowledge, and power” (p. 62).

George Mason University’s Composition Program Goals Statement for English 100/101 (the first-year English composition course) states the following: “[Students] are expected to develop college-level abilities for handling a range of texts, including… abilities to create texts that respond to varied rhetorical situations in a range of written genres, to include (but not be limited to) US academic argument and research-supported texts” (“ENGL100/101 Goals,” 2006).

These three sources, from the national umbrella organization of teaching English, the writing program administration association, and a university’s English composition
program policy, indicate that a common goal of college English composition instruction is to ensure students can develop and master persuasive writing skills resulting in an argument, “the effort to convince somebody of the validity of a viewpoint” (Eckhardt & Stewart, 1979, p. 340), and use the resources they find to support their arguments with writing in a variety of contexts for a variety of audiences.

Overbay (2003) pointed to many studies about argumentation and persuasive writing from the 1980s and 1990s which indicated that students’ mastery of persuasive writing was lacking. For example, Anderson and Hamel (1991) claimed “students have difficulty presenting full or convincing arguments because they have little experience with well-reasoned argumentation” (p. 44). Because of the complexity of language, if students do not have a strong command of basic argumentation skills, they may have problems working with complex assignments.

Johns (1993) claimed argumentation is a “mystery to many undergraduate and graduate students, despite its having been identified as central to many disciplines” (p. 76). As a composition instructor, I concur with Johns’ claim—first-year English composition students struggle with making valid claims, finding supporting evidence, constructing qualifiers and rebuttals, and articulating all this in a polished essay. The National Assessment of Educational Programs (NAEP) study in 1998 indicated almost half of all twelfth graders in the United States left high school without having to write a persuasive essay or letter (NAEP, 1999). The 2007 NAEP study showed that only 60% of twelfth graders wrote “sufficient” or better persuasive essays (NAEP, 2008). First-year
college English composition instructors face a challenge to develop a pedagogy that makes teaching and learning argumentation skills more effective.

However, those challenges have long existed. Seminal theories by Rogers (1951), Toulmin (1958), and Perelman and Olbrechts-Tyteca (1969), Fahnestock and Secor (1988) and many studies (Johns, 1993; Atkinson & Ramanathan, 1995; Gleason, 1999; Davis & Shadle, 2000; Cioffi, 2005) explored the complexity of argument and how to transmit that complexity pedagogically. Do English composition instructors teach formal rhetoric? The Toulmin method? Rogerian argument? Statis theory? Feminist approaches? How do we, in an assignment (or a semester or more), explore claims, evidence, warrants, counterarguments, positioning, audience, and, today, visual and aural components of all the above so students master the complex task of argumentation?

**Statement of Problem**

If students do not learn appropriate and expected argumentation skills early in their college education, they will be ill-equipped to make supported claims in their writing, not only in their first-year English composition course, but in courses across the disciplines and later in work situations. Since there is a common focus on teaching argumentation in the first-year English composition course, and students are expected to write argumentative essays in other disciplines, students need to learn argumentation skills more effectively and efficiently than they currently do. Increasingly, students and instructors are using instructional technology and other tools to support learning and teaching (Allen & Seaman, 2004; Kvavik & Caruso, 2005; Oblinger & Oblinger, 2005).
Therefore, there is a critical need to explore of how instructional technology can aid students with their argumentation skill development as early as possible in their college courses. Since the first-year English composition course is typically taken in the first or second semester of matriculation, it becomes the logical course in which to address this need.

Early studies of computer-mediated tutoring (Downs & Linnehan, 1993; Wachholz & Etheridge, 1996) supported the concept of mastering writing skills using instructional technology outside of the classroom. As students and instructors became more facile with instructional technology, interventions, both standalone and web-based, were being used more and more in and outside of classroom environments to supplement instruction and learning.

Instructional technology can be comprehensively defined as any computer-based software application, or collection of applications, which integrates technological and pedagogical features and facilitates student interaction with learning content (Dabbagh & Bannan-Ritland, 2005). For example, Mayer (1997) found that the combination of narration and animation in CD-ROM (compact disk, read-only memory) technology helped students retain more information than did either element by itself. This combination of narration and animation allowed students to interact meaningfully with learning content which was complementary and/or supplementary instruction.

However, as students’ levels of skill and process vary, instruction must also vary and become interactive in order for learning to be successful. Argumentation skill development tools or technological interventions contextually designed around tutoring
can supplement classroom instruction, ensuring that students’ argumentation skills are developed to a point moving towards mastery in order to successfully complete complex writing assignments. *i-Claim* is an example of such an intervention.

*i-Claim*

Clauss (2005) developed *i-Claim: Visualizing Argument* for the publishing house, Bedford St. Martin’s, as supplementary instruction to be included with a variety of college English textbooks for composition and literature courses. This CD-ROM, typically packaged with rhetoric and reading texts (though it can be packaged with any Bedford St. Martin’s text), is an interactive, computer-based tutorial for students to develop their argumentation skills. The CD-ROM offers over 70 multi-media arguments for students to review, interactive tutorials for students to review and practice the elements of argument and writing arguments, and a glossary of terminology from argumentation theory. *i-Claim* guides students through tutorials which “offer a concrete introduction to fundamental qualities good arguments share” (Clauss, 2005, n.p.). Students can explore different types of arguments: “by genre and medium (advertisements, comics, speeches, commercials), by types of appeal (ethos, logos, pathos), and by purpose (proposal, definition, evaluation)” (Clauss, 2005, n.p.).

In the *i-Claim* tutorials, six elements of argumentation are reviewed: claims, context, goals, support, multiple viewpoints, and logic. In each tutorial, the user is given a textual and visual example (e.g., a videoclip of a presidential campaign commercial, a comic strip panel) of an argument. An overview of the argument is provided, along with
an analysis. Hyperlinks to key terminology related to argumentation theory are used throughout the tutorial are then given an interactive assignment. The user reads text, views visual elements, and completes assignments which can then be downloaded and printed or emailed to an instructor for feedback.

A more comprehensive description of *i-Claim* will be presented in Chapter III.

*Purpose of the Research*

The main purpose of this study was to examine if first-year English composition students’ mastery of argumentation in a timed writing test was enhanced by using *i-Claim*. The secondary purpose of this study was to investigate if students felt more confident about their argumentation skills as a result of using the *i-Claim* tutorial, and if students felt more confident overall about using computer-based tools to facilitate their learning. Specifically, the study examined the following research questions:

1. Is a student’s mastery of argumentation skills in a timed writing test enhanced by using a computer-based tutorial (*i-Claim*) for argumentation skills?
2. Do students feel confident about their argumentation skills as a result of using *i-Claim*?
3. Do students feel more confident about using computer-based tools to facilitate their learning as a result of using *i-Claim*?

It was hypothesized that students who used *i-Claim* would have more improved argumentation skills and increased confidence in writing arguments and using technology for learning than students who did not use *i-Claim*. It was anticipated that the participants
who received supplementary instruction with *i-Claim* would develop significantly increased argumentation skills as measured by timed-writing tests than those who did not receive supplementary instruction with *i-Claim*. It was also anticipated that participants who received instruction using *i-Claim* would have increased confidence in writing arguments in timed-writing tests and increased confidence in using instructional technology overall to support their learning.

These hypotheses were tested by participant students’ performance on an online writing test at the beginning and end of the study. Students in the treatment sections used the *i-Claim* tutorial to supplement their classroom instruction on argumentation skill development. To further test the hypotheses, students answered surveys on personal demographic information, attitudes towards argumentation, and attitudes towards using instructional technology tools to supplement argumentation and writing skill development. Volunteer student participants were also interviewed to discuss their use of argumentation skill development and instructional technology tools.

*Significance of Study*

Regardless of the method of instruction, a valued skill across disciplines in colleges and universities is the ability for students to produce logical and substantiated arguments. Instructors can offer instructional technology tools to provide students with 24/7 tutorials that complement face-to-face instruction. As it is, existing literature regarding teaching English composition, and specifically argumentation skills, *with computer-based tools* is scant, partly because the field has not had an opportunity to
conduct many longitudinal studies to examine the effectiveness of such tutorials on students’ argumentation writing skills. This study contributes to the literature on (a) students’ argumentation skill development in first-year English composition courses and (b) technological interventions for argumentation skill development.

**Generalizability of the Study**

This research study was designed with the intention of exploring the effectiveness of an instructional technology tool to aid first-year English composition students develop stronger written arguments. As no studies had been done on *i-Claim*, this study begins to evaluate its use and effectiveness in the first-year English composition classroom. The research methods used in this study are replicable with other studies.

**Limitations**

The biggest limitation of this study was the small sample size preventing the overall results of this study to be generalized to other student populations. This study was conducted in first-year English composition (English 101) classes at a public university in Virginia during the spring semester. Fewer students take this course in the spring semester than in the fall semester. Because of enrollment and transfer declines prior to the start of the spring semester in which this study was conducted, overall enrollment in English 101 dropped, and few instructors were given more than one section of English 101. It was desired that three pairs of English 101 classes, each pair taught by the same instructor, would be studied; however, only two instructors (of four) with pairs of English
101 classes agreed to participate in the study. In addition to these two pairs of classes, one pair of English 101 classes with similar designs and curricula, but taught by different instructors, was studied. More than half the students in the six classes studied participated in the research study pre-test, but only one-third completed the post-test; however, the percentage of participating students in treatment and control groups were disproportionate.

Other limitations included threats to internal and construct validity. A history threat occurred when students were not motivated to participate and some who participated in the pre-test did not participate in the post-test. A maturation threat naturally happened since students were already receiving instruction on argumentation in their course. A selection-maturation threat occurred when students in the treatment group scored worse on the pre-test than those in the control group, then scores for both groups dropped on the post-test. As there was no specific measure for “argument” in the online essay evaluator used as a measurement tool, multiple measures not specifically labeled as “argumentation” were used, and this posed a threat to construct validity. The drop in scores from pre-test to post-test for both the control and treatment groups also threatened construct validity. No threats to external validity were apparent.
**Operational Definitions**

In this study, several terms are used frequently. To ensure the terms are interpreted consistently throughout the study, the following operational definitions are supplied.

- **Argumentation**: “inferring a conclusion from propositions premised” (Oxford English Dictionary, 1989)

- **Argumentation skills**: the discrimination amongst claims, context, goals, support, viewpoint, and logic in creating premises leading to a conclusion (Clauss, 2005)

- **Computer-based tutorial**: hardware and software employed for discrete instruction

- **Instructional technology tool**: hardware and software developed to support student learning

- **Student confidence about using technology**: the trust placed in hardware and software to support and enhance learning

**Summary**

This chapter has described the importance of students learning argumentative writing skills early in their college career in order to succeed with such writing tasks in future courses and the workplace and how the proliferation of instructional technology to support learning and teaching may benefit students with their skill development. Despite
a common goal of first-year English composition courses being instruction in argumentative writing, students need more practice with writing arguments to achieve a level of mastery as well to increase their confidence in writing arguments, and instructional technology tools for argumentation might help students with skills and confidence. This study will examine the effectiveness of i-Claim, an interactive CD-ROM tutorial specifically designed to supplement instruction on argumentation skill development, in first-year English composition timed, argumentative essays.
2. Review of Literature

The theory and literature review for this study includes several discussions. The first examines the relevance of developing argumentation skills in not only English composition but other academic disciplines. The second focuses on the theoretical models of argumentation in modern composition pedagogy. The third considers empirical studies on argumentation skills. Finally, this review examines instructional technology and its role in English composition pedagogy by examining studies related to technology-supported interventions to develop both argumentation and basic writing skills, and some technological interventions to support student confidence for learning.

Relevance of Developing Argumentation Skills

The relevance of developing argumentation skills has a long history in modern composition pedagogy, with a consensus that English composition students should develop such skills but some disagreement through the decades on how to teach those skills. When these are combined with the natural theoretical shifts in what argumentation “means,” we find a complicated and sometimes confusing teaching and learning situation. Though some shifts in argumentation theory have occurred, the pedagogical
concerns certainly have not been resolved, and adding instructional technology into combination makes pedagogical approaches even more complex.

Henry (1928), in an essay in *The English Journal*, extolled the importance of the argumentative essay: “Students are urged to write the argumentative essay first for purely practical reasons. From the argumentative essays the instructor can judge early in the course which students have keen and logical minds” (p. 142). Indeed, in his listing of long paper assignments (average length, 2,000 words) for the 1926-27 school year, the first assignment was an argumentative essay in which students were to choose “some current, controversial question” (p. 142). Eighty years later, many instructors of writing might cringe at the value-judgment of whether or not “students have keen and logical minds,” yet the focus on teaching written argumentation remains strong.

In a follow-up article ten years later, Reedy (1938) ranked elements of composition based on their usefulness. The highest value, Rank 5, or those elements which were deemed “indispensable” to the success of a composition, listed 64 elements, all related to grammar, punctuation, syntax, and mechanics. Rhetorical style was nowhere on the list of “indispensable” elements. The first ten elements in Rank 4, or “very useful,” all related to mechanics. Only then did rhetorical styles appear. Eleventh was “use of definite techniques for writing expository compositions,” twelfth was “knowledge of the principles of narration,” and thirteenth was “knowledge of the principles of *argumentation*” [italics added] (p. 130). Nevertheless, Reedy’s placement of the principles of argumentation as third of all rhetorical styles and in the “very useful” column denoted its importance to the composition curriculum.
In 1966 during a session at the 17th Annual Conference on College Composition and Communication, participants concurred on the importance of teaching argumentation in first year composition classes for accurate reasoning, further adding that teaching argumentation helps students develop “the ability to see and develop the world around [them]” (“Argumentative Papers,” p. 191).

Fennell (1980), in response to L. Behrens’s 1980 article in *College English* about the types of writing students do in undergraduate courses, conducted an informal survey of the faculty of the College of Arts and Sciences (with English Department faculty not participating) and the School of Business at a mid-sized, urban university. The number of faculty was not reported; however, with a 43% response rate, Fennell found that while the majority of assignments were expository, 17% of the assignments were argumentative.

Sitler (1993) conducted an informal survey of instructors in every academic department at her university about what they expect of first-year students’ writing. “Nearly all” (p. 23) instructors ranked the analytical, argumentative paper as the most frequent type of writing expected.

Despite the commonness of assigning argumentative writing to students, scholars tend to agree that teaching argumentation, while important, can be challenging. Gleason (1999) noted that argumentative writing is complex for general education students, requiring them to shift from dialogue to monologue and to organize their writing conceptually and structurally. Johns (1993) noted that argumentation, a commonly used skill in school (and work), is “sensitive to task, audience, and community,” difficult for all students and “particularly difficult for non-native speakers” (p. 76). Atkinson and
Ramanathan (1995) also focused on the difficulty of argumentation for non-native speakers of English (NNSs). In their ethnographic study of native speakers’ (NSs) and non-native speakers’ academic writing and academic writing instruction, they found that while argumentation is downplayed in NNS instruction (in which the “norm of writing [is] aimed at clear, straightforward communication of facts and ideas” [p. 559]), it is nevertheless addressed since argumentation is, as reported by one participant instructor, “the kind of thing that the professors are comfortable with and want” (p. 556). Hartwell (1979) indicated that while non-native speakers typically have some “dialect interference” (p. 3) when structuring an argument, native speakers do not.

Whether the student is a native speaker or a non-native speaker of English, their skills in critical thinking are closely aligned with argumentation skills. Elander, Harrington, Norton, Robinson, and Reddy (2006) stated that critical thinking (analyzing and synthesizing information to construct knowledge) corresponds with argument (using evidence to support a claim) resulting in integrated and complex skills in college writing. Atkinson and Ramanathan (1995) argued that cultural presuppositions about critical thinking operate in curricular instruction, and NNSs are at a disadvantage since those presuppositions are learned during childhood. Benesch (1999) explored a number of articles written between 1995 and 1997 (including Atkinson and Ramanathan) which argued against including critical thinking in the curriculum of NNS composition courses. Benesch argued such claims are politically loaded and antithetical to the core concept of “awareness as a central feature of teaching” (p. 579).
This sense of awareness, whether working with native speakers or non-native speakers, is grounded in inquiry, as Emmel (1994) posited in the enthymemetic approach to writing argumentative compositions. This pedagogical approach, which focuses on “the process of discovering and shaping claims (the realization of intention) and the process of discovering relationships between claims (the realization of function)” (p. 133), leads students to invent, explore, and come to conclusions about claims and grounds.

However, many advocate a more explicit method of teaching argument. Karras (1995), in discussing argumentation in the discipline of history, supported explicitly teaching argumentation in an orderly manner, but realized that higher order thinking is a prerequisite for successful argumentation, especially in first-year students. Cioffi (2005), in the Chronicle of Higher Education, opined that students’ understanding of “argument” as a concept has eroded since curricula have failed to provide a forum for argumentative discourse. Cioffi claimed part of this problem is because “argument” in modern parlance means both “argumentation” and “heated, contentious verbal dispute” (p. B-7). (This latter definition is reflected in Jolliff’s (1998) concept of teaching students argument as “how to fight with others…ideas, and…themselves” [p. 151].) Cioffi suggested teaching how intellectual discourse works, explicitly presenting and emphasizing counterargument to the original claims. Davis and Shadle (2000) reported that research writing textbooks “tend to provide standardized concepts” of academic writing along with “stock advice on the ‘rules’ of logical argumentation” (p. 418). They did posit, though, that argument has
been fundamental to all research writing, since “persuasion is needed…to hold writing together and provide an understanding of what the data means [sic]” (p. 427).

Textbooks provide students with plenty of models of argument; however, the style modeled by writers is often difficult for students to achieve in their own writing without practice, feedback, and revision. Beason’s (1997) examination of a wide range of college-level textbooks from 1991 to 1996 found that the definition of “argument” is not altogether clear, though some commonalities were found. Both Martin Luther King’s “Letter from a Birmingham Jail” and Jonathan Swift’s “A Modest Proposal” appeared in nine of the 24 texts examined (and Thomas Jefferson’s Declaration of Independence appeared in eight); overall, the models for argumentation students read showed the following: an ethos of fairness, judiciousness, and trustworthiness; a formal style of complex wording and syntax; multiplicity (acknowledging multiple layers of purposes, audiences, and forms); and a focus on rights and responsibilities (individual rights and the responsibility people have for preserving the rights of others). Renchen (2007) reviewed four recent rhetoric/readers focused on visual argument and found that the combination of visual argument with textual argument a key concept for today’s students. While arguing the merits and deficiencies of the texts, Renchen determined a “solid” text would cover the complexities of argumentative writing, focus on counterargument, and incorporate a range of composing tasks in both textual and visual argument.

These studies and opinions indicate that developing argumentation skills, which follow from critical thinking skills, is central to persuasive writing in both college
English composition courses and college courses in other disciplines, but that developing those skills is difficult and that no single approach has been shown to be most effective.

Theoretical Models of Argumentation in Modern Composition Pedagogy

Before delving into how argumentation skills are taught using both traditional and instructional technology methods, it is important to discuss the theoretical models of argumentation which provide the constructs of argumentation pedagogy in modern composition courses. This discussion of theory and literature will address the history of formal and symbolic logic and their relationship to argumentation after the mid-20th century paradigmatic shifts in theories of logic and argumentation and their relationship to discourse. This discussion will not address Aristotelian formal logic and its application to modern composition pedagogy.

The mid-20th century post-modern, structuralist, and post-structuralist movements renewed scholarly focus on ancient works in rhetoric, political science, and oratory paving the way for a rhetorical renaissance (Hauser, 2001). Johnstone (1952) considered the connection between philosophy and discourse. A dialectician, Johnstone was a firm adherent to the rules and conventions of logic, yet he posited that the argument depended on the arguer’s intent. The arguer, Johnstone stated, had a responsibility to provide the context of an argument and not create paradoxical statements within the argument. Johnstone’s theories provided the intellectual leap from formal logic (the use of explicit content or premises to result in some conclusion, [Teller, 1989]) and its role in argumentation to more constructive and useful approaches of creating arguments.
One of the more noted figures in developing these approaches was Toulmin, who is often referenced in any discussion of argumentation as his methodology for constructing an argument has informed several generations of students. Toulmin’s (1958) six explicitly stated, interrelated components of argument (claim, grounds, warrant, backing, rebuttal, and qualifier) have found their way into rhetorics and handbooks for the past four decades. While Toulmin based this methodology on legal arguments, he aimed towards a different type of argument, the “practical argument” (p. 41), which rhetorical scholars have found to be a neat and precise pedagogical tool to help students understand how arguments are supported, contextual, and multi-sided.

Taking the field one step further, Perelman and Olbrechts-Tyteca (1969) focused on the audience to whom the argument is addressed. They posited that those who argue consider not only the facts and reasonableness of the argument, but the particular and universal (or the ideal) audiences, as that consideration will “increasing adherence to the values” (p. 50) of the argument.

However, prior to Johnstone’s, Toulmin’s, and Perelman and Olbrechts-Tyteca’s works, Rogers (1951) seeded a theory of argumentation by postulating a humanistic or phenomenological theory to psychotherapy after finding the use of logical reasoning ineffective in treating patients. This “client-centered” approach (also termed non-directive) shifted the role of the therapist from “healer” (arguer) to “facilitator” (guide) to help the client uncover his or her own truth. This concept was applied to argument theory and composition pedagogy as Rogerian rhetoric by Young, Becker and Pike (1970). They reformulated Rogers’s theory as a collaborative method of invention, showing each side
of an argument shares common ground with the other. Missing from these theories, though, was an examination of the types of argumentation.

Fahnestock and Secor (1988) explored stasis theory within the context of scientific and literary argument as “an invention tactic,” “a principle of arrangement and a probe for the analysis of audience and context” (p. 428). They indicated five stages of argumentation: fact, definition, cause and effect, value, and procedure and/or policy. By focusing on the stasis [italics added] or type of argumentation (for example, defining the representation of a character in a work of fiction), the “analysis…can reveal dimensions of the fit between argument and audience usually overlooked” (p. 441).

Toulmin’s, Perelman and Olbrechts-Tyteca’s, Rogers’s, Young, Becker and Pike’s, and Fahnestock and Secor’s works are seminal in argumentation theory and its application in composition pedagogy. However, scholars in composition have argued about argument over the past three decades, often adapting elements of formal logic and the prescriptive approach of Toulmin to more organic and accessible methods.

While Fairbanks (1993) suggested Toulmin’s methodology was no substitute for formal logic, Kaufer and Neuwirth (1983) questioned whether formal logic should play a role, if any, in teaching composition. They argued that the traditional patterns of reasoning and inference could certainly be applied to updated rhetorical forms, yet they considered philosopher Preston Covey’s argument that a recursive factor exists in which philosophers move between validity and plausibility when developing and evaluating arguments. Kaufer and Neuwirth adapted this concept to the first-year English composition course via a four-stage heuristic in which students (1) read an essay and
construct “a logically sound argument” based on the reading, (2) reevaluate their argument in more detail (the recursive element), (3) weigh opposing frameworks of the issue, and then (4) write an essay.

While Fulkerson (1986) considered argument as underlying any writing with a unifying thesis or built around an assertion, the methodology of constructing arguments needed to be made easier for instruction and learning. Fulkerson found Toulmin’s methodology more useful for understanding an argument rather than creating one, and emphasized argument as dialectical discourse, “developing a sense of arguing for purposes greater than simply winning” (Reynolds, 1997, p. 337). Anderson and Hamel (1991) also found Toulmin’s terminology difficult and inaccessible for students, and thus derived simple questions for the terms: “1. Claim—What is to be done? 2. Grounds—Why? And for evidence, how can you be so sure? 3. Warrant—So what? 4. Backing—What makes you think so?” (p. 44). Trail (1995) offered a different set of principles, almost Rogerian in style, in which arguments are located in place and time, and the pathos (appeal to the audience) is considered in psychological, emotional terms versus logical (logos), or credible (ethos) terms. However, these were not the only perspectives.

Applying feminist approaches to argumentation, Gearhart (1979) claimed argument, or persuasion, was an act of violence, and teachers of argument were merely “weapons specialists” (p. 198). This approach, building from Rogerian theory, posed the question if there was a way to relate and participate in change in some way other than adversarial. Twelve years later, Lamb (1991) furthered Gearhart’s ideas, defining the traditional “monologic argument” as “what we want comes first” (p. 13) in order to refine
argumentation as (1) negotiation and mediation, (2) learning to articulate places of conflict, and (3) either living with or transforming that conflict. This cooperative approach to argument focused on the future, not the past. Expanding Gearhart’s and Lamb’s work, Hunzer (1999) formalized three alternative styles of argument: a personal narrative approach which grants confidence and voice to silenced students, a search for common ground and cooperation, and the use of engagement as a process of inquiry.

From the mid-Nineties onward, a more holistic approach to teaching argumentation begins to appear, both dissecting and merging many of the previously mentioned theories. van Eemeren, Grootendorst, Jackson and Jacobs (1993) emphasized public commitment over personal beliefs, and defined argument as a rule-governed discussion in order to resolve a conflict of opinion. Lynch, George and Cooper (1997) noted that novice student writers typically chose between competitive (either/or) or collaborative (synthesis of information) arguments, and did not consider an argument position between these two. Lynch, George and Cooper claimed students should be taught a more cooperative argumentation process which is multi-faceted, conflicting and agonistic, yet understanding and communicative, bridging competitive and collaborative argumentation. Sunderbruch (1998) supported this concept further in defining argument’s foundation in multiple perspectives.

Klausman (1998) reinforced stasis theory, categorizing questions to organize the argument and understanding the relevant issues in order to determine the most persuasive direction in the argument. Clauss (1999) continued the discussion by claiming arguments are evaluative, multi-sided, supported, and contextual. Kastely (1999) argued that
prescriptive argumentation (à la Toulmin) focuses on “an empty formalism” (p. 223) which has no bearing for students in the real world. Johannessen (2001) found students need to focus on problem-solving and inquiry which leads to argumentation, while Rice (2003) considered sampling, taking a portion (or cutting) and locating it (pasting) within the whole, to help students research and form arguments.

Cho and Jonassen (2002) noted that while some research studies indicate direct instruction enhances organization skills, other research studies demonstrate no positive effects for direct instruction on improving argumentation skills. Stewart (2001) suggested providing students with opposing evidence which students must consider when arguing their claims thus helping them raise their analytical skills. Brunk-Chavez (2004) found students have a hard time understanding that an essential part of an argument must be inferred, or “exist in the mind of the audience” (Wood, 2001, p. 135, in Brunk-Chavez) for if the warrants of an argument are shared by the arguer and the audience, the argument will be acceptable to the audience whereas if they are not shared, the argument is less credible.

In discussing writing and argumentation in an electronic and web age, Carter (2003) claimed the structure of argumentation has changed because of hypertext not privileging a sequential structure. Carter posited that because of this change, “argument theory…is more focused on constructing, choosing, and using arguments” than the “right order” of arguments (p. 7). Coffin and Hewings (2005) found electronic conferences allow students greater reflexivity in the articulation, critique, and defense of ideas.
These studies indicate that argumentation theory and practices in English composition have evolved from a more prescriptive form of instruction to a more inquiry-based, multi-perspective, problem-solving form of instruction. We must next consider how these theories have been applied in English composition and other discipline classrooms.

Empirical Studies on Argumentation

After looking at theoretical models of argumentation, it is important to examine empirical studies on argumentation skill development, focusing on English composition, though not limiting the discussion to English composition as much of the research has been conducted in other disciplines. Before looking at these studies, we must consider what happens before students go to college.

NAEP’s somewhat quadrennial “Report Card” on secondary education included data on how often students were assigned an essay or letter to persuade others. On a scale which ranged from “never or hardly ever” to “once a week,” the 1998 study (figures for 2002 were not reported) indicated that 47% of twelfth graders reported “never or hardly ever” being assigned an essay or letter to persuade others, whereas 38% reported being given this assignment only “one to two times per month.” The 2007 “Report Card,” while reporting slight overall improvement in student writing from the 1998 study, did not report findings on the same question; however, it did note that 26% of twelfth graders scored “excellent” or “skillful” in persuasive writing, while another 34% scored
“sufficient.” Thus, these studies suggest many students enter college ill-prepared to craft an argument to persuade a reader.

However, students do begin to explore argumentation earlier than high school. Nussbaum (2002) studied the use of a scaffolding tool in a sixth-grade social studies class to help students provide more complete arguments. The use of the scaffolding tool, based on Toulmin’s model of argumentation, was to help students use evidence to elaborate the argument and make the related warrants more explicit. The study revealed that students who used the scaffolding tool to develop higher levels of reasoning significantly improved the number of “acceptable elaborations” in their argument. This type of tool might help students early in their academic lives develop skills to evaluate evidence in making an argument.

Focusing on first-year English composition, Lamm (1994) studied the relative effectiveness of three instructional methods for teaching argumentative writing to college freshmen and found some methods are more effective than others. Lamm used three instructional methods: models (focused on the study of models of argumentative writing), scales (models plus the additional activity of using criteria-based scales to judge the quality of prepared constructed passages of argumentative writing), and revision (scales plus writing revised versions of constructed passages). Studying two instructors, each teaching three classes of first-year composition, Lamm examined 102 students’ argumentation skill development in their second semester of university study. T-tests showed no improvement on argumentation skills when using the models method, while
skill development significantly improved with the application of the scales and revision instructional methods.

Implicit instruction may not be the answer, though. Dowdy (1998) evaluated the effectiveness of an intervention designed to teach college students how to write arguments that contained rebuttals which critically evaluate empirical bases of arguments. Examining 40 students’ argumentative writing, Dowdy found that participants who received instruction about rebuttal consistently responded to others’ arguments whereas those who did not receive instruction did so less frequently. Dowdy recommends students be given explicit guidance on responding in the context of writing when evaluating empirical issues in arguments and providing students with a structure for responding to specific criticism of evidence.

In considering a different angle to argumentative writing, Overbay (2003) studied reflective judgment and patterns of writing in English composition students finding that explicit instruction in argumentation may be a more complicated task for students at the first-year level. This mixed-method study focused on the following research question: In what way do first-year college students’ written arguments reflect the assumptions about knowledge and justifications described by their reflective, judgment rating? Overbay interviewed students (n=15) using the Reflective Judgment Interview (RJI), a psychometric, seven-stage, three-level ranking instrument to measure reflective ability. Students were ranked as pre-reflective (stages 1-3), quasi-reflective (stages 4-5), or reflective (stage 6-7). Overbay also conducted semi-structured interviews with the students and instructors and examined students’ portfolios and their self-recorded
reflections. The students were divided into two groups based on their RJI scores: 26.7% were classified as pre-reflective reasoners, and 73.3% were classified as quasi-reflective reasoners. For the pre-reflective reasoners, 88% of their papers included one-sided arguments and 12% had a balance of one-sided and multiple-sided arguments. For quasi-reflective reasoners, 56% of their papers included one-sided arguments, 24% had a balance of one-sided and multiple-sided arguments, and 20% were predominately multiple-perspective arguments. Overbay’s findings suggested that freshman composition students needed more practice with “comparing and synthesizing different views, locating and critiquing evidence, and anticipating objections” (p. 203) rather than focus solely on argumentation strategy.

These studies have focused on general studies in argumentation skill development in English composition, but it is also critical to examine studies in specialized areas of English composition and in other disciplines. Beaubien (1998) studied instruction in argumentative logic with 24 non-native speakers of English in an English language intensive program. Contrasting the Piagetian paradigm that logic is a universal concept with Kaplan’s logical reasoning evolving from culture, Beaubien claimed students who come from cultures with alternative standards of logic would use native language standards and strategies unless they receive formal training in standards and strategies of traditional standards of English as found in American universities. Beaubien found formal instruction in logic and syllogism construction had a statistically significant positive effect on writing scores.
In the field of psychology, Norton (1990) studied student strategies for writing an essay in an introduction to psychology class as well as tutors’ criteria for assessing essays, finding that students generally lacked an awareness of the importance of argumentative skills in their essay. In the study, students \((n=98)\) were given a questionnaire to learn how they went about preparing and writing the essay along with their underlying feelings about writing the essay. Tutors \((n=7)\) were interviewed to learn how they marked essays and the criteria on which they evaluated the essays. All student essays were analyzed for number of words and number of cited sources, and twenty essays were sampled for content analysis. From these twenty essays and the corresponding questionnaires, the researchers found that while 47% of the students thought argument was an assessment criterion, 80% of the tutors considered argument an essential criterion in evaluation, ranked second only to structure. This disconnect pointed to the need for students to understand the importance of argument in the overall crafting of their essays.

With a focus on the written argument in a newly developed statistics course, Derry, Levin, Osana, Jones and Peterson (2000) studied argumentation skill development, designed from the premise that statistics are created from a “useful argument from quantitative evidence” (p. 747). One of the six modules in the course was “The Development of Evidential Argument.” Their mixed methods study of the argumentation skills of students \((n=16)\) showed that after the course, students significantly improved their evidential argumentation skills (pre-test \(r = .13\), \(p < 0.05\), post-test \(r = .50\),
This sample size raises the issue of whether this improvement can be generalizable to a greater population.

These skills, though, are developed through maturation as Campbell, Smith and Brooker (1998) found in their study of critical evaluation in undergraduate essays. Their study focused on 1,500-word literature reviews written by 46 undergraduate students in the first and third years of a degree program in education. The literature reviews required integration of theory, research, and practice. After submission of the essay, but before its return, Campbell, Smith and Brooker interviewed the students about their planning and writing process. They determined three levels of structure within the essays: unistructural (simple serial listing of successive points with mostly no or idiosyncratic critical evaluation), multi-structural (sequential description of topics but elements of integration with some idiosyncratic or formal critical evaluation) and relational (comparing and synthesizing a variety of perspectives with more formal critical evaluation). They found that 80\% of the first-year students’ essays (n=25) had no or idiosyncratic critical evaluation whereas 28\% of the third-year students’ essays (n=21) had no or idiosyncratic critical evaluation. They also found 80\% of the first-year students’ essays focused on building information and 20\% focused on building argument, whereas 52.4\% of the third-year students’ essays focused on building information and 47.6\% focused on building argument.

This development of skills through a learning process was echoed by Takao, Prothero, and Kelly (2002) analysis of 24 students’ written arguments in an undergraduate introduction to oceanography course using an interactive CD-ROM, Our
Dynamic Planet, for course content. (This course also satisfied the university’s writing requirement.) Students in the treatment group were given an argumentation analysis model which was divided into six levels of claim and evidence to determine students’ strength of argumentation. They found that students needed to learn how to use data representations as evidence in writing theoretical arguments and to experience receiving critiques of their own writing and analyzing others’ scientific arguments.

Taking argumentation both within and beyond the classroom, Barton (1993) conducted a discourse analysis of university writing proficiency essays of student writers \((n=100)\) and essays written in The Chronicle of Higher Education by experienced academic writers \((n=100)\), finding the experienced writers understood their audiences whereas the student writers tended either to see the instructor as audience or to create artificial audiences. Barton found that the use of evidentials, warrants based on valid or attitudinal data, distinguishes experienced writers from student writers. The study found absolute consistencies within the work of experienced writers: all writers used the rhetorical strategy of problematization, all used source material, all had as much emphasis on counterargument as argument, and all used first-person references with credentialed evidence. Sixty percent of student writers problematized the issue on which they were writing, 68% referred to source material, 24% used counterargument, and student writers overwhelmingly used the uncredentialed “I” as a persona. Barton also found that while experienced writers had a definite audience in mind, the study supported Bartholemae’s claim that student writers, “without direct influence of an instructor…”

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must construct an anonymous academic audience” (p. 755), a non-defined, idealized audience which typically focuses on the instructor.

These studies indicate that the argumentation and persuasive skills of students in first-year English composition and other college courses continue to need direct and overt development in order for students to achieve a level of mastery. These studies also reveal that various interventions designed to help students develop argumentation skills sometimes have positive effects and sometimes do not. These studies also indicate that research on argumentation skill development in large-sample student populations is scant, and small-sample studies may not offer significant results for the use of traditional argumentation skill development intervention using scaffolding, models, or formal logic. Might some type of instructional technological intervention help students develop stronger skills?

Instructional Technology and English Composition/Argumentation Instruction

Instructional technology is playing an ever-increasing role in higher education and, specifically, English composition pedagogy. From the early days of word processing to today when we have synchronous chat, asynchronous discussions, web logs (blogs), interactive review programs, Course Management Systems (CMSs), and machine scoring via Latent Semantic Analysis (LSA), English composition instruction has faced challenges with the integration of instructional technology. In this section, we will examine some applications of instructional technology to composition and argumentation.
Selfe (1999) argued that English composition instructors can no longer afford to deny the carefully constructed link between literacy and technology. Because of this, Selfe extolled the need to adopt a critical perspective of instructional technologies influencing and shaping the learning environments English composition instruction creates. Because writing is such an integral part of this new technological world, Selfe suggests writing instructors be at the heart of the debate about if, how, and when to use instructional technologies in higher education.

In addition, online course offerings have increased; Allen and Seaman (2004) reported that 53.6% of all public degree-granting institutions say some form of online education is “critical” for their long-term strategy. Couple this with the “NetGen” (InterNET GENeration, [Oblinger & Oblinger, 2005]) propensity for being “constantly connected, engaged, social, and having a need for immediacy,” and instruction becomes something different from what has been traditional pedagogical practice. Oblinger and Oblinger (2005) claimed classrooms are more social, more wired, more learner-centered, and more communicative than ever before.

Most in the community can agree with Fullmer (2001) that computers have affected writing instruction more than typewriters have. Some elements of writing are easier and faster—accuracy in spelling and grammar, revising text, disseminating text. New elements exist—tracking changes and revisions, incorporating images (charts, tables, graphs) and other visual elements, and adding correctly formatted citations and reference lists through bibliography applications.
The skill, then, of writing will incorporate these mechanical and process elements of writing, made easier through computer technology, with interaction—interaction amongst instructor, technology, student, and text. D’Agostino (1996) maintained that these interactions—instruction, support, and composition—must be balanced in order for student texts to be understood in a meaningful and accurate way. However, all the elements of writing—diction, spelling, grammar, punctuation, mechanics, syntax, semantics, pragmatics—must be contextualized within instruction, support, and students’ composing process.

When we consider these three teaching and learning aims of English composition, instruction, support, and students’ composing process, we can begin to map how instructional technology can support those aims. Hermann (2005) theorized that when used appropriately, instructional technologies offer valid, efficient, and cost-effective methods of delivering writing instruction. Though many see instructional technology limited to delivery of course materials (syllabi, assignments, readings) and communication within a course (e-mail, discussion boards, white boards, collaborative work spaces) and not a part of assessment or direct pedagogy, several researchers have examined how instructional technology can enhance students’ skill development in English composition and argumentation.

Along with this ability to produce correct surface-level detail and pedagogical support, Rosinski (2002) claimed technological tools provide students with more opportunities to produce context-specific and audience-appropriate texts. From a research perspective, Rosinski is correct. Students have discipline-specific information available at
their fingertips through databases, e-journals, blogs, and other Internet sources, as opposed to scouring the library and periodicals stacks. With both asynchronous and synchronous communication along with the open publication platform on the World Wide Web, students can reach a variety of audiences and receive feedback more readily than in a small face-to-face peer group in a traditional classroom. In all cases, though, small group, traditional classroom, or some type of distributed learning environment, students must learn how to navigate the technological tools as they would the library or a peer response group.

In considering all mediums of instruction, McAndrew (1997) explored the digital writing classroom as many single entities “spontaneously organizing” (p. 39) into composition, a simplified complexity theory. McAndrew took a further step in applying fuzzy logic to composition instruction—there is never a correct answer in writing, but an interpretation by a reader that should be in alignment with the writer’s aim. Thus, we add writer’s intent and reader’s interpretation to the already-complex matrix of what students need to consider when creating text and researchers need to consider when creating instructional technology.

If we remove the interpretive component and focus on the discrete skills necessary for written communication to be created in a standard, acceptable, and readily understood format, we find the computer a reliable pedagogical tool for helping students develop these skills. McNabb (1996) noted that computers have helped students with their self-monitoring skills, acting as a tutor to the student for certain elements of writing instruction, namely noting error and lack of evidence so students can correct themselves.
However, McNabb’s ideas stopped some steps behind meaningful learning—the computer can provide correct explanations and examples of standard and acceptable entities of writing (diction, grammar, punctuation, etc.), as well as individualization, but some assessment is necessary to determine if students retain and can implement the knowledge gained from the “tutor.” Anderson (2002) began to address this by claiming the design of computer mediated collaboration should be recognition that technology actively shapes human interaction. If we consider the traditional model of tutor-tutee (one human instructing and assessing another on subject matter) is overlaid on a technological model, then it must follow that a computer-based tutorial must be crafted to have at the least the same instruction-assessment model as the traditional model and some value-added element to make the computer-based tutorial more efficient and effective in some way.

Such tools have been examined in the English composition classroom to determine if they effect change in student writing. Kern (1995) conducted an early study of technology-supported interventions with student writing. Using InterChange, a component of Daedalus Integrated Writing Environment, which allows students to engage in collaborative, written discussion, Kern studied forty students in a second-semester French class. One aim of the study was to examine the relationship between oral discussion and written discussion via InterChange. A qualitative analysis indicated a significant improvement in the strength and quality of students’ arguments because of the discussion element in InterChange.
Similarly, Irwin (1995) studied the use of Hermes, a computer-aided instruction program designed to incorporate aspects of reasoning into rhetoric and composition theory and enlarge the writer’s image of rhetorical problems. Irwin’s study of 24 undergraduate students’ writing from a variety of disciplines found those students who used Hermes to develop their text wrote significantly more dialectical and rhetorically effective essays than the control group. However, Irwin also found the instruction and scaffolding provided by Hermes benefitted those at higher educational levels (juniors and seniors) more than first- and second-year students.

These studies have focused on composition in general and implicitly address argumentation skill development. Many of the existing technologies to support argumentation skill development tools are outside of composition.

van Amelsvoort, Andreissen and Kanselaar (2007) studied 30 dyads of fifteen- to eighteen-year old Dutch students in a three-phase writing task on genetically modified organisms. Using Text Composer, Computer Supported and Collaborative (TC3), developed at the Department of Educational Sciences in Utrecht, students could use chat windows, windows to write text, and an information window (with tabs for assignments, manuals, criteria for assessment, and a diagram feature) to support collaborative argumentative writing in dyads. In the first phase, students constructed their representation (text or diagram) individually. In the second, they discussed the topic and wrote a text in a dyad. In the third, each student consolidated knowledge by revising the individual representation. van Amelsvoort, Andreissen and Kanselaar found students who
constructed a diagram (as opposed to a text) explored the topic in more depth than students who constructed merely text.

Martunnen and Laurinen (2001) studied the argumentation skill development of 46 Finnish university students in a debating course in Education. Eleven students used e-mail discussion as a complementary instruction to face-to-face instruction, sixteen students had solely face-to-face instruction on argumentation skill development, and the remaining nineteen students (the control group) had no instruction on argumentation skill development. The results indicated that using e-mail as an instructional tool significantly strengthened students’ ability to choose and identify relevant grounds in arguments, because of the distributed nature of e-mail and the resultant extra discussion time, while the face-to-face students showed significantly strengthened counterargumentation skills. Students in the control group did not strengthen in either area.

Cho and Jonassen (2002) studied 60 students’ creation of socially constructed arguments in an undergraduate introduction to economics course. Thirty students, in 10 groups of three students, focused on well-structured problems, and the other thirty, also in 10 groups of three students, focused on ill-structured problems. Five groups in each category used Belvedere, an online constraint-based scaffolding tool using bulletin board system technology developed at the University of Pittsburgh’s Learning Research and Development Center, to support students in creation of socially constructed arguments. Cho and Jonassen’s fourth research question focused on the effects of constraint-based scaffolds on individual argumentation performance. Their ANOVA statistics indicated
that students who used Belvedere had higher quality arguments than the control group for both well-structured and ill-structured problem-solving.

In fields beyond undergraduate education where argumentation skills are requisite, we find more complex instructional technology tools to support argumentation skill development, though the findings are mixed.

Lajoie and Lesgold’s (1992) application, SHERLOCK, was developed for military aviation training as a computer-based argumentation generation tool. Lajoie’s (1993) qualitative analysis of students’ argumentation skills using SHERLOCK showed the treatment group’s “quantity and quantity of troubleshooting steps became more expert-like” than those of the control group, averaging a gain score “equivalent to almost [four] years of experience” (p. 23). Tan, Turgeon and Jonassen (2001) developed Quest-Map, a constraint-based argumentation tool. Students who used Quest-Map for ill-structured problem solving in a turfgrass management course performed significantly better than students who did not use Quest-Map in stating grounds in argumentation. However, Carr (2000), using Quest-Map to support argumentation skills in a study of second-year law students, found Quest-Map supported the process of argumentation rather than a representation of it.

Jeong and Davidson-Shivers (2006) studied graduate education students using computer-mediated communication. They found that the number of discussions of shared or differing viewpoints was not significantly different between male and female participants. Buckingham Shum et al (2006) examined QOC (Questions, Options, Criteria) programs in software engineering, a constraint-based structure and notation
system which aids engineers in developing arguments in software applications. Their study found QOC provides support for ill-structured design problem solving, but can be distracting with well-structured problems.

Jeong and Lee (2007) examined studies on several computer-supported collaborative argumentation (CSCA) programs (CSILE, ACT, Hermes, FL32, AcademicTalk, Negotiation Tooli) and found that little conclusive evidence has shown CSCA improves student performance and learning. While the overall effects of these instructional technology tools developed both within and outside of English composition have been mixed, they certainly seem to indicate that instructional technology tools used in writing and argumentation instruction have some positive effect, and warrants further exploration within the field of English composition.

While instructional technology tools provide complementary or supplemental instruction, another area of instructional technology has created a vigorous debate within the English composition field (as well as other fields), that of machine scoring of student writing.

Landauer, Foltz and Laham (1998) introduced Latent Semantic Analysis (LSA) tools, computer programs using logarithmic calculations to analyze relationships between words to predict appropriate meaning, as a tool which could make comparisons among instructional sources and expository student writing, and use the results to assess quality of student composition, and guide and even tutor students to revise and improve their composition. Foltz, Gilliam, and Kendall (2000) showed LSA can score as accurately as a human. The LSA device is first trained on some relevant background material (textbooks
or articles). The training results in semantic representation of the knowledge of the topic and pieces of textual information can be compared against each other. A comparison provides a measure of the degree of semantic relatedness indicating the extent to which pieces of text are discussing that topic in the same way. LSAs can provide holistic scoring, which gives a single score for an essay based on overall impression, or analytical scoring, which scores for multiple components. Analytical scoring can provide students with specific feedback about what is incorrect or needs improvement. Foltz, Gilliam, and Kendall studied LSA grading of 41 essays in an undergraduate psycholinguistics course. These essays were also graded by an instructor and two graduate teaching assistants. The mean correlation among the three graders was 0.73. The study showed LSA scores of essays were as accurate as human graders (Pearson Correlation $r = 0.89$, $p < 0.05$).

Despite these finding, the composition and rhetoric community has not responded favorably to the idea of letting “machines” grade papers and teach writing since it deems writing as “a uniquely human (and therefore, social) endeavor” (Hermann, 2005, p. 3). Hermann discussed prevailing attitudes in the community: that only humans, not machines, can interpret meaning and nuance in “something as complex and elusive as human discourse”; and that machine-evaluated texts “reflects to an earlier, more mechanistic paradigm in which product held precedence over process” (p. 3).

Not mincing words about this issue, the Conference of College Composition and Communication (CCCC) issued a Position Statement on Teaching, Learning, and Assessing Writing in Digital Environments which included the following text: “Because all writing is social, all writing should have human readers, regardless of the purpose of
the writing….We oppose the use of machine-scored writing in the assessment of writing” (Conference of College Composition and Communication, 2004, n.p.). In response to the CCCC Position Statement, Haswell and Ericsson (2006) explored the issue of machine scoring of student essays. While the various authors in their edited anthology agree that machines cannot evaluate writing as meaningfully as humans can, some authors questioned the “blanket rejection” (Whithaus, 2006) of machine scoring by examining the usefulness of machine scoring as one means [italics added] of assessing student writing.

While these studies have shown a variety of instructional technology tools to support student writing and argumentation skill development, several other instructional technology tools exist that indirectly address argumentation skill development, both within and outside English composition. ComFit Online Learning Center is a for-profit instructional tool for writing and test taking, supported in part by McGraw-Hill Publishing Company. This subscription service provides users with writing instruction modules designed around guided practice with focused feedback. Visual Thesaurus allows writers to find synonyms and antonyms in an online visual format. Online writing guides at English-speaking universities offer simplistic instruction in writing skills and persuasive skills; however, these guides offer little, if any, interactive instruction with evaluative outcomes. This is another area of instructional technology that should be explored further within the field of English composition.

These studies and products show how argumentation pedagogy and instructional technology tools have some potential to be an effective combination for instruction and learning. Intelligent tutoring systems are still in their infancy, and the next few decades
will find more intuitive products available to support teaching and learning. We can hope that by that time, students might have stronger confidence levels in using technology to support their learning.

Technology and Student Confidence

Coupled with students’ development of skills using instructional technology, student confidence in learning skills via instructional technology is important for skill retention. Five recent studies show student confidence in using instructional technology tools to support their learning is growing, but other factors can limit student motivation.

Chang and Fisher (1998, 2003) created the Web-based Learning Environment Instrument (WEBLEI) to gather quantitative data to measure students’ perception of using instructional technology, specifically online technology, to support their learning in higher education environments. The instrument, using a five-point Likert-scale survey, measured students’ perceptions across four scales: Access, Interaction, Response, and Results. Chang and Fisher’s 1998 study showed a Cronbach-α reliability and discriminant validity between 0.65 and 0.88 over the four scales.

Expanding on Chang and Fisher’s work, Wong et al. (2006) studied computer-supported online instruction for students \((n=266)\) in Singaporean Secondary 2 classes (equivalent to Grade 8). They used WEBLEI to measure students’ perception and confidence in learning via instructional technology. They found that students’ perception and confidence in their learning process (levels of activity and inactivity) and learning attitudes (participation and enjoyment) increased significantly by using instructional
technology. They also tested the reliability and validity of WEBLEI, finding the Cronbach-α between 0.78 and 0.91 over the four scales of the WEBLEI, somewhat higher than Chang and Fisher’s (1998, 2003) findings.

Ames (2003) studied learning styles when combined with computer-based and computer-aided instruction. The study \((n=232)\) showed students who exhibited abstract sequential (intuitive, ordered thinking) learning styles were significantly and uniformly more confident (0.258) using computer-based and computer-aided instruction than those who exhibited abstract random (multi-tasking, non-linear thinking) learning styles (-0.150). Ames found that computer-based/computer-aided instruction may not be appropriate for all students.

Oliver (2008) studied the application of a web-supported, inquiry-based tool to promote learner engagement among first year students \((n=263)\) in an undergraduate communications class focusing on visual design using Internet communication technology-based productivity tools. The tool was designed to provide a high degree of scaffolding for problem-solving. Students received ten open-ended problems over a twelve-week period and were required to submit at least five 800-word responses as solutions to the problems. At the end of the course, students completed a questionnaire which sought to describe the levels and engagement of problem-solving activities. The results showed evidence that web-supported inquiry-based learning environment supported learner engagement, but also identified factors which could limit student motivation and intent. The results showed that problems need to be well-articulated, relevant, and sufficiently detailed.
Keefe, Rainbolt, and Wigley (2001) conducted a multi-semester study of students’ performance in traditional face-to-face environments and in hybrid environments with computer-aided instruction in introductory business courses. The students numbered between 45 and 70 per semester over the three years of the study. Students’ confidence in learning by using instructional technology courseware in the hybrid environments improved over the term of the semester significantly higher than those in the traditional face-to-face environments.

Despite Oblinger and Oblinger’s (2005) claim of college students’ facility with technology, students’ confidence in using instructional technology to support their learning has not yet reached a level at which human instruction can be replaced by instructional technology. This may not be such a bad thing, as composition and argumentation are social constructs, but as instructional technologists develop more robust intelligent tutoring systems, we may find the delineations between human and computer interaction even more blurry than they are already.

Summary

This theory and literature review explored past and current issues in argumentation theory as it applies to first year English composition and other disciplines in which argumentative writing is valued, as well as past and current technological interventions related to argumentation both within composition and other disciplinary areas. Research on developing argumentation skills in composition continues to evolve into a more audience-centric and contextual paradigm, away from the use of formal logic.
The literature does indicate that first-year college students need to develop stronger argumentation skills to succeed in their undergraduate degree programs, regardless of disciplinary major. These studies indicate that instructional technology for aiding students with basic English writing skills—interactive tutorials, chat, web logs, and LSAs—has been developing as supplementary English composition pedagogical tools with an aim to enhance students’ skills and confidence in their writing. While improvement of mechanical skills in writing has benefitted the most from these instructional technology tools, the more nuanced skills—style, critical thinking, argumentation—have been more difficult to incorporate into instructional technology. The development of LSA to assess the meaning and intent of writing offers an inroad for the development of instructional technology tools to aid students with developing argumentation skills in English composition, though the opposition to machine evaluation of student writing remains fairly solid within the English composition field. There is a compelling need to develop more robust computer-based tools to help students craft better arguments in their writing, and further research needs to be conducted to measure these tools’ effectiveness. One such computer-based tool being proposed for development is Disciple-TRW (Thinking for Reading and Writing) (Tecuci, 2008, unpublished proposal), an intelligent tutoring and cognitive assistant software program that would teach “the student how to select a topic for a paper, how to conduct a literature research, identify relevant references, and analyze them, how to select the references to include into the paper, how to synthesize his or her own point of view on the analyzed issues.” This project’s development is still in the proposal phase, but if, after development, studies
reveal Disciple-TRW to be an effective tool for critical thinking, reading, and writing, students’ argumentation skill development will certainly be enhanced by its use.

To further the discussion of the use of instructional technology tools to support argumentation skill development, this study will examine the efficacy of the inclusion of a technological tool designed solely to develop students’ argumentation skills in a first-year English composition curriculum.
3. Methodology

In this chapter, the methodology of the research study is described. The chapter reiterates the purpose of the research and the specific research questions examined in the study. It also describes the participants, measures, research design, procedures used to collect data, and the data analysis methods.

Purpose of Study

The main purpose of this study is to examine if first-year composition students’ mastery of argumentation in a 30-minute timed writing test is enhanced by using the computer-based *i-Claim: Visualizing Argument* tutorial. Mastery is defined in this study as a minimum score of 80%, equivalent to a letter grade of B-, as measured by ACCUPLACER™ Online WritePlacer Plus. A secondary purpose of this study is to investigate if students feel more confident about their argumentation skills as a result of using the tutorial, and if students feel more confident overall about using computer-based tools to facilitate their learning. Specifically, this study aims to answer the following three research questions:

1. Is a student’s mastery of argumentation skills in a timed writing test enhanced by using a computer-based tutorial (*i-Claim*) for argumentation skills?
2. Do students feel confident about their argumentation skills as a result of using i-Claim?

3. Do students feel more confident about using computer-based tutorials to facilitate their learning as a result of using i-Claim?

Setting

This study was conducted in the Composition course (English 101), a one-semester, three-credit course. This course, in a regular semester, typically meets weekly for either two 75-minute sessions or three 50-minute sessions. This is a required course for undergraduate students, though students have the option of waiving the requirement upon passing a three-hour proficiency exam.

The primary goals for this course are to help novice writers develop “their passions, fluency, confidence, critical thinking, flexibility, control of language, and sense of ownership,” to “negotiate with audiences inside and beyond the university walls,” and to “[construct] texts of varying genres and structures that help writers engage and move audiences” (“ENGL100/101 Goals,” 2006). A typical course will have four major assignments (narrative, analysis, researched argument, reflection) and various homework and participation assignments (See Appendix A for the Syllabus Policy Template for English 101).
Participants

Instructor Participants

Instructor participants in this research study included four English Composition instructors teaching six English 101 (Composition) courses. Two of the four instructors, Jacqui and Rose (pseudonyms), taught two sections of English 101, while the other two instructors, Frank and Vance (also pseudonyms), each taught one section of the course. The two instructors who taught the course section pairs were non-tenure track term instructors (on year-to-year or multi-year contracts); the other two instructors were adjunct instructors. All four instructors typically teach general education courses in composition or literature, though some may occasionally teach upper-level composition or literature courses.

Each instructor had been teaching in the university’s composition program for a minimum of two years. Both term instructors possess Master of Fine Arts degrees in creative writing; both adjunct instructors hold Doctor of Philosophy degrees in literature.

Student Participants

The total number of students enrolled in the six sections of English 101 examined in this research study was 112. Sixty-three students, or 56.3%, agreed to participate in the research study. Of these students, 55.6% were in their first semester of study (total completed semester hours under 15.0), 33.3% were in their second semester of study (total completed semester hours between 15.0 and 30.0), 9.5% were in their sophomore year of study (total completed semester hours between 30.0 and 60.0), and one student (1.6%) was in the junior year of study (total completed semester hours between 60.0 and 80.0).
Student age range was 18 to 25 with one student reporting an age between 26 and 30, and one student reporting being under 18 which disqualified him from the study. Seventeen students (27.0%) self-identified as being non-native speakers of English. Five students (7.9%) self-identified as transfer students. Almost half the students (49.2%) self-identified as working at some job while taking classes; 7.9% reported working under 10 hours per week, 28.6% between 10 and 20 hours per week, 9.5% between 20 and 40 hours per week, 3.2% more than 40 hours per week. Thirty-four students (54.0%) were male, and 29 students (46.0%) were female. The final number of students who completed the pre- and post-test timed argumentative writing tests was 42 (n=42).

Measures

Eight different measures or data collection instruments were used in this research study, six quantitative and two qualitative. Each of these measures is described below.

Survey of Student Demographics

The Survey of Student Demographics is a 10-item demographic inventory. Participants were asked to provide age, gender, number of undergraduate credits completed, whether or not a transfer student (and if so, a transfer student from where), whether or not English is the participant’s native language, the number of credit hours registered for the semester, the degree major, whether or not the participant is employed, and if so, how many hours per week the participant is employed. Participants were identified by a randomly assigned five-digit code. These data will be used to determine if
any correlations exists between mastery of skill(s) and age, gender, number of credit hours, current course load, major, and employment (See Appendix B for the Survey of Student Demographics instrument).

*Pre-Test Survey on Attitudes Towards Argumentation in Composition (ATAC)*

The Pre-Test ATAC is a ten-item inventory for participants to self-assess their attitudes about argumentation skills in their writing. This survey was designed for this study. The first four questions in which participants assess their argumentation skills were rated on a 6-point Likert scale. A rating score of 1 represents *marginal* self-rated skills, 2 represents *less than satisfactory*, 3 represents *satisfactory*, 4 represents *good*, 5 represents *excellent*, and 6 represents *not applicable*. The last six questions in which participants rate their agreement with particular statements about their trouble with particular writing and argumentation tasks were rated on a 5-point Likert scale. A rating score of 1 represents *strongly disagrees* with the statement, 2 represents *disagrees*, 3 represents *don’t know*, 4 represents *agrees*, and 5 represents *strongly agrees*. This survey, developed for this study, was evaluated by six students in the researcher’s classes prior to the study for clarity and understanding. Results of this evaluation led to rewording and rephrasing some questions so they could be understood by users of the instrument. The Cronbach-α reliability for the pre-test use of the ATAC survey was .747 for the first four questions and .725 for the six statements (See Appendix C-1 for the Pre-Test Survey of Attitudes Towards Argumentation in Composition).

*Post-Test Control Group Survey on Attitudes Towards Argumentation in Composition (ATAC)*
The Post-Test Control Group ATAC included two questions in addition to those asked in the Pre-Test ATAC. The first question asked participants to indicate if they are familiar with \emph{i-Claim}. If participants answered \emph{yes}, the second question asked for a short narrative explanation about what they knew about \emph{i-Claim}. (See Appendix C-2 for the Post-Test Control Group Survey of ATAC).

\textit{Post-Test Treatment Group Survey on Attitudes Towards Argumentation in Composition (ATAC)}

The Post-Test Treatment Group ATAC included one question in addition to those asked in the Pre-Test ATAC. The question asked participants to indicate on a 4-point Likert scale how often they used \emph{i-Claim} after the in-class treatment session. A rating score of 1 indicated the participant \emph{never} used \emph{i-Claim}, 2 indicated the participant used \emph{i-Claim less than 1 hour}, 3 represented \emph{1 hour to 2 hours}, and 4 represented \emph{more than 2 hours} (See Appendix C-3 for the Post-Test Treatment Group Survey of ATAC).

The Cronbach-\( \alpha \) reliability for the post-test use of the ATAC survey was .629 for the first four questions and .734 for the six statements.

\textit{Modified Web-Based Learning Environment Instrument (WEBLEI)}

The Modified WEBLEI is a 29-item inventory designed to measure participants’ confidence towards using instructional technology tools. Participants were asked whether or not they agreed with specific statements regarding the use of instructional technology tools. The responses were rated on a 5-point Likert scale. A rating score of 1 represented the participant \emph{strongly disagrees} with the statement, 2 represented \emph{disagrees}, 3 represented \emph{don’t know}, 4 represented \emph{agrees}, and 5 represented \emph{strongly agrees}. 
Participants were given the Modified WEBLEI at the beginning and at the end of the study. The original WEBLEI (Chang & Fisher, 1998) measured students’ perceptions on instructional technology across four scales – Access, Interaction, Response, and Results. Chang and Fisher’s 1998 study showed a Cronbach-α reliability and discriminant validity between 0.65 and 0.88 over the four scales.

The WEBLEI was later modified for students at universities in off-campus environments where the interaction between learners and educators via the Internet was essential (Chang & Fisher, 2003), and has been modified for this research study to focus on instructional technology in general. The Cronbach-α reliability for the Modified WEBLEI was between .819 and .856 for all questions in its pre-test and post-test use (See Appendix D for the Modified WEBLEI).

ACCUPLACER™’s Online WritePlacer Plus

ACCUPLACER™’s Online WritePlacer Plus is an online Latent Semantic Analysis (LSA) writing skill assessment instrument developed by The College Board in 2000 as part of its overall ACCUPLACER™ series of placement tools. ACCUPLACER™ Online WritePlacer Plus allows college faculty and administrators to score entering college students’ writing in a variety of ways (including argumentation skill) for placement. Students write an essay in response to a specific prompt, and the response is scored using an LSA application, IntelliMetric. While this is predominately an assessment and placement instrument, instructors have used ACCUPLACER™ Online WritePlacer Plus as a diagnostic instrument to help students focus on specific areas of writing which need improvement including, but not limited to, argumentation skills.
Kozinski’s (2001) pilot study of using ACCUPLACER™ Online WritePlacer Plus at Ramapo College of New Jersey revealed a high reliability for ACCUPLACER™ Online WritePlacer Plus scores. Students’ essays (n=65) were rated by ACCUPLACER™ Online WritePlacer Plus, human experts from the College Board, and Basic Studies faculty at Ramapo College. Kozinski’s study showed a high correlation coefficient (Pearson’s r) between the computer scores and the human experts from the College Board (r = .92, p < .01). The correlation coefficient between the computer scores and the Basic Studies faculty scores was positive as well (r = .64, p < .01). James’s (2006) follow-up study of students’ essays (n=60) being rated by ACCUPLACER™ Online WritePlacer Plus showed a positive correlation coefficient (yet lower than Kozinski’s study) between human scorers and computer scores (r ranging from .40 to .61, p < 01).

Participants in this study were asked to write a pre-test, 30-minute, online essay in which they were to develop and support an argument, and another post-test, 30-minute online essay with the same prompt (See Appendix E for the pre- and post-test prompt participant students received when using ACCUPLACER™’s WriterPlacer Plus instrument).

The test measured six factors: focus, development, organization, sentence structure, conventions (control of spelling, grammar, and mechanics), and a holistic, total score. In this study, the total (TOTAL), development (DEV), and organization (ORG) scores were used to determine students’ skills in argumentation. As the timed argumentative writing test was classified an “argument” by ACCUPLACER™, the
TOTAL score was used in this study as an overall, holistic score of the essay. The DEV score was used as it measures the inclusion of supporting evidence and the ORG score measures clear organization of details. These three factors (TOTAL, DEV, and ORG), of the six factors ACCUPLACER™ Online WritePlacer Plus measures, align themselves with argumentation skill assessment whereas the other three scores do not.

Each factor could have scores ranging from 0 and 2 through 12. Scores of zero “indicates that the response was off topic, in a language other than English, too short to be evaluated, or in some other way not able to be scored” (College Entrance Examination Board, 2004, p. 13). The Scoring Rubric for ACCUPLACER™ Online WritePlacer Plus for scores between 2 and 12 provided by the College Board and used in this study is listed in Table 1 (College Entrance Examination Board, 2004, pp. 13-14).

Table 1

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>This writing sample shows little evidence of mastery of organization, development, focus, sentence structure, usage and convention.</td>
</tr>
<tr>
<td>3</td>
<td>This writing sample is largely unsuccessful at communicating a main idea or point of view, and there is little evidence of an organizational structure. Ideas lack focus and development and there are errors in mechanical conventions of usage, sentence structure, grammar, spelling, and punctuation.</td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
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<tr>
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</tr>
<tr>
<td>4</td>
<td>This writing sample attempts to address the topic, with little success. There is often no clear statement of a main idea or point of view and there is confusion found in the writer’s efforts in presenting supporting detail. Any organization that is present fails to present an effective sequence of ideas. There are many errors in mechanical conventions of usage, sentence structure, grammar, spelling, and punctuation.</td>
</tr>
<tr>
<td>5</td>
<td>This writing sample addresses the topic with limited success. There is some evidence of a main idea or point of view, but there is difficulty in articulation. An attempt at organization is made, but meets with limited success. There are significant errors in mechanical conventions of usage, sentence structure, grammar, spelling, and punctuation.</td>
</tr>
<tr>
<td>6</td>
<td>A limited writing sample in which the characteristics of effective written communication are only partially formed. Statement of purpose is not totally clear and although a main idea or point of view may be stated, continued focus on the main idea is not evident. Development of ideas by the use of specific supporting detail and sequencing of ideas may be present, but is incomplete or unclear. The response may exhibit distracting errors or poor precision in the use of grammatical conventions including poor sentence structure, poor word choice, poor usage, poor spelling, and punctuation.</td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
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<tr>
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</tr>
<tr>
<td>7</td>
<td>A restricted writing sample that only partially communicates a message to the specified audience. The purpose may be evident but only partially formed. Focus on the main idea is only partially evident. The main idea is only partially developed with limited supporting details. While there is some evidence of control in the use of mechanical conventions such as sentence structure, usage, spelling, and punctuation, some distracting errors may be present.</td>
</tr>
<tr>
<td>8</td>
<td>An adequate writing sample that competently communicates a message to a specified audience. Though the purpose of the writing sample may be clear, the development of supporting details may not be fully realized. The writer’s organization of ideas is evident but may lack specificity, be incomplete, or not developed in effective sequence. There is evidence of control in the use of mechanical conventions such as sentence structure, usage, spelling, and punctuation, though minor errors in the use of conventions may be present.</td>
</tr>
<tr>
<td>9</td>
<td>A very good writing sample that substantially communicates a whole message to a specified audience. A purpose and focus is established, but only partially developed. An organizational pattern is evident, but is only partially fulfilled. The writer competently handles mechanical conventions such as sentence structure, usage, spelling, and punctuation, though very minor errors in the use of conventions may be present.</td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>10</td>
<td>A strong writing sample that effectively communicates a whole message to a specified audience. The writer establishes a purpose and maintains focus throughout the writing sample. The writer exhibits strong control in the development of ideas and clearly specifies the supporting detail. There is evidence of mastery of mechanical conventions such as sentence structure, usage, spelling, and punctuation.</td>
</tr>
<tr>
<td>11</td>
<td>An excellent writing sample that is very effective at communicating a whole message to a specified audience. The writer establishes a clear purpose and focus is effectively maintained throughout the writing sample. Ideas are well developed and well supported. The writer clearly demonstrates mastery of sentence structure, usage, spelling, and punctuation.</td>
</tr>
<tr>
<td>12</td>
<td>An outstanding writing sample that is very effective at communicating a whole message to a specified audience. The response is well organized and maintains a clear central focus with a clearly stated purpose. The writer exhibits superior control in the development and support of ideas. The writer demonstrates superior facility with mechanical conventions such as sentence structure, usage, spelling, and punctuation.</td>
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</table>

*Interview Respondent (Students) Questionnaire (IRSQ)*

This qualitative instrument or measure was designed by the researcher for this study to determine participant students’ *(n=3)* experiences with and attitudes towards
argumentation and the use of instructional technology tools for argumentation and writing. The pre-test IRSQ included seven open-ended interview questions designed to determine participant students’ previous experiences with argumentation and use of technology-based instructional materials in their previous high school or college coursework. The questions were as follows:

1. Tell me what you think arguing means?
2. What tools for argumentation skill development are you familiar with?
3. What tools have you used for argumentation skill development in the past?
   Why do you use these tools? How have they helped you in the past?
4. How do you see instructional technology tools helping you with argumentation?
5. What tools have you used for help with writing? Why do you use these tools?
   How have they helped you in the past?
6. What technological tools for writing are you familiar with?
7. How do you see technological tools helping you with writing and composition?

The post-test IRSQ included five open-ended interview questions designed to determine participant students’ use of argumentation tools in their current coursework and how these tools have helped or not helped develop the respondents’ argumentation skills. The questions were as follows:

1. Tell me what you think arguing means?
2. What argumentation development tools (computerized and/or other) did you use during the semester for your assignments?

3. How did these tools help you with developing arguments in your assignments?

4. Did the use of the tools provide you with any noticeable change in your argumentation abilities?

5. Will you use any of these tools again? If so, which ones?

The three students who responded to the IRSQ were all from control group classes, so their responses will not be used in the data analysis (See Appendix F for the IRSQ).

*Interview Respondent (Instructors) Questionnaire (IRIQ)*

This qualitative instrument or measure was designed by the researcher for this study to determine how participant instructors’ (n=4) teach argumentation in their courses, their experiences teaching argumentation within their curriculum, and their attitudes about students’ skills in argumentation. The pre-test IRIQ included one open-ended interview question designed to determine participant instructors’ method of teaching argumentation skills in first-year composition courses. The question was as follows:

1. How do you teach argumentation skills?

The post-test IRIQ included four open-ended interview questions designed to determine (a) how instructors taught argumentation skill development during the time
period of the study; (b) if, in the treatment groups, they encouraged use of \textit{i-Claim}; (c) and their perceptions of students’ argumentation skills. The questions were as follows:

1. Did you do anything different this semester when you taught argumentation skills?
2. Did you use \textit{i-Claim} in the treatment sections beyond the researcher’s session?
3. When \textit{i-Claim} was used in the treatment sections, what did you do in the control sections?
4. What are your perceptions of students’ argumentation skills?

(See Appendix G for the IRIQ).

This section detailed the measures that were used in determining results for this study. The next section details the intervention in the treatment groups, \textit{i-Claim}.

\textbf{Intervention}

\textit{i-Claim: Visualizing Argument} was developed by Clauss (2005) for the publishing house, Bedford St. Martin’s, as supplementary instruction to be included with a variety of college English textbooks for composition and literature courses. This CD-ROM is a computer-based multimedia tutorial for students to develop their argumentation skills. \textit{i-Claim} offers interactive tutorials for students to review and practice the elements of argument and writing arguments along with a glossary of terminology from argumentation theory.

In the \textit{i-Claim} tutorials, six elements of argumentation are reviewed: claims, context, goals, support, multiple viewpoints, and logic. In each tutorial, the user is given a

63
textual and visual example (e.g., a videoclip of a presidential campaign commercial, a comic strip panel) of an argument. An overview of the argument is provided, along with an analysis. Hyperlinks to key terminology related to argumentation theory are used throughout the tutorial are then given an interactive assignment. The user reads text, views visual elements, and completes assignments which can then be downloaded and printed or emailed to an instructor for feedback.

In Tutorials (see Figure 1), students are presented with a narrative overview of argumentation, with specific terms highlighted and hyperlinked to their definitions in the Glossary. Students are then shown a variety of claims (claims of value, claims of cause, and claims of policy) in order to distinguish different types of claims. The examples include some visual element (image, audio clip, or video clip) to help the students understand the concept of claims across mediums. Students are then given a visual element, a short reading, and three short assignments (see Figure 2) to analyze particular claims. The written short assignments can be downloaded and printed, or emailed to a specific address. Students are then provided with an assignment to select an image and create a persuasive title and description. This assignment can also be downloaded and printed and/or emailed.

In Arguments, students can click on one of 70 icons to open a visual argument for in-class or online discussion (see Figure 3). These visual arguments can be sorted based on specific type of appeal (ethos, logos, pathos), a specific type of argument (definition, evaluation, fallacy), or a specific medium (advertisement, comic, commercial, packaging, speech, video clip). In the Glossary, students can click on any of 52 terms related to
argument theory and classical rhetoric for their definitions (see Figure 4). Each term also has a contemporary visual example alongside the definition.

Figure 1. i-Claim Overview of Argument
Figure 2. i-Claim Assignment.

Figure 3. i-Claim Visual Argument
Participants in the treatment groups will have one 50-minute in which they will be instructed on using i-Claim. They will review the Tutorial material to ground themselves in the elements of argument then submit at least one interactive argumentation exercise via e-mail to the instructor and researcher. The students will be given time to explore and discuss i-Claim’s visual arguments and define terms of argumentation by using the interactive glossary.

In control sections, participants will not use i-Claim; they will receive regular, classroom instruction on argumentation skill development as created and delivered by the instructor.
Procedure

In this section, the procedure of the study, including Human Subjects Review Board (HSRB) approval from George Mason University, instructor and student recruitment, the timeline of the study, and the format and administration of the instruments are discussed.

This research study was approved by the George Mason University Human Subjects Review Board (HSRB) (Appendix H). Approval from HSRB was given on February 4, 2008.

Upon HSRB approval, the researcher sent a recruitment email to the four instructors who were teaching pairs of English 101 (Appendix I). The researcher successfully recruited two instructors who were teaching pairs of English 101. The goal was to have participant instructors who taught two sections of English 101 because of the experimental design nature of the study. However, no other instructors were assigned pairs of English 101. The researcher then sent the same recruitment email to seven instructors who were teaching single sections of English 101. Three instructors agreed to participate, and two of the three were selected based on the similarity of their course curriculum. For the two instructors who each taught two sections of English 101, the treatment section was randomly selected by a coin toss. For the two sections taught by different instructors, the treatment group was randomly selected by a coin toss.

The researcher visited each participating instructor to provide and review the instructors’ Informed Consent Document (Appendix J). The participant instructors
submitted their syllabi and argumentation assignments to the researcher for content analysis.

Participant instructors (n=4) then sent the email addresses of the students in their sections of English 101 so the researcher could send an email to the students inviting them to participate in the research study (Appendix K). HSRB stipulated that the invitation to participate not come from the instructor to avoid the perception of coercion for students to participate in the study.

The researcher then visited the classes to provide and review the students’ Informed Consent Document (Appendix L) and to answer questions students had regarding the research study. This resulted in the recruitment of 63 students out of 112 enrolled students (and 111 eligible students; one student self-identified as under age 18 and was thus disqualified from the study). Of these 63 students, 26 were in the control sections, and 37 were in the treatment sections.

Students who were interested in volunteering for the interviews were asked to include their email addresses on the signed Informed Consent Document so they could be contacted to schedule the interviews. Eight students volunteered to be interviewed.

Recruiting for five sections took place within the third and fourth weeks of the semester. Recruiting for the sixth section took place in the eighth week of the semester. The researcher worked with participant instructors in scheduling the computer classroom sessions for pre- and post-testing and in which the intervention (i-Claim) was introduced to the treatment groups.
After recruitment, and during the third to eighth weeks of the study, the researcher met all classes at their regularly scheduled class time in a computer classroom (one computer per student) to administer pre-test surveys and writing tests. The surveys were created as online surveys provided by Survey Monkey. Participant students in a given section were given a web address which was active only during that class’s timeframe; after the class session, the web address was then permanently disabled, and a new web address was given to subsequent test sections. The web page (see Figure 5) had hyperlinks to the Survey of Student Demographics, the Pre-Test ATAC, and the Pre-Test Modified WEBLEI. On the same page, participants were given the hyperlink to ACCUPLACER™ Online WritePlacer Plus writing test along with log-in and navigation instructions. Participants had 30 minutes to complete the writing test. They were given the following prompt:

Technological change can have a very big effect on our daily lives. Which technological change do you feel has had the largest effect on life in this country? Write an essay for a classroom instructor in which you identify which technological change has had the biggest impact and why you feel this way. Be sure to support your choice with logical arguments and appropriate examples.
Figure 5. Instruction Screen for Participant Students

Students were identified within the surveys and writing tests by a randomly assigned five-digit code (with the first three digits corresponding to the section number of their class for treatment/control classification).

During this period, the participant students who volunteered to be interviewed were contacted by email to schedule a mutually agreeable time for the pre-test interview session. Volunteer participants (n=3, all from control groups) were interviewed for approximately 30 minutes about their use of online tools and tutorials and experiences with argumentation in their writing processes. The participants’ responses to the interview questions were audio recorded and later transcribed for analysis. The researcher
also interviewed the participant instructors for approximately 30 minutes about how they taught argumentation.

The researcher met with the treatment sections at their regularly scheduled class time in a computer classroom for the intervention. Participant students were given the *i-Claim* CD-ROM which they loaded into the CD-drive of their computers. The researcher reviewed navigation and gave students instructions to go through one tutorial, complete the tutorial’s exercises, and email the completed exercises to the researcher. (*i-Claim* has an internal email application in which users enter To: and From: email addresses and automatically emails the exercise.) Non-participant students were given a comparable assignment to complete during class time (See Appendix M).

After the participant instructors returned the students’ argumentation assignments, during the seventh to fourteenth weeks of the study (depending on the instructors’ schedules), the researcher administered the post-test surveys and writing test. As with the pre-test, participant students in a given section were given a web address which was active only during that class’s timeframe; after the class session, the web address was then permanently disabled, and a new web address was given to subsequent test sections. The web page (see previous Figure 5) had hyperlinks to the Post-Test ATAC and Post-Test WEBLEI. On the same web page, participants were given the hyperlink to ACCUPLACER™ Online WritePlacer Plus writing test along with log-in and navigation instructions. Participants had 30 minutes to complete the writing test. Students were again identified within the surveys and writing tests by their originally randomly assigned five-digit code (with the first three digits corresponding to the section number of their class
for treatment/control classification). The researcher again interviewed the volunteer
participants at the end of the study (between weeks twelve and fourteen) for
approximately 30 minutes about their use of online tools and tutorials and experiences
with argumentation in their writing processes. The researcher also interviewed the
instructor participants (for approximately 20 minutes) about their additional use of
*i-Claim* in the treatment groups and their perceptions of students’ argumentation skills.
Responses to the interview questions were audio recorded and later transcribed for
analysis. Table 2 provides a visual representation of the original research study timeline.

### Table 2

*Original Study Timeline*

<table>
<thead>
<tr>
<th></th>
<th>Weeks 1-2</th>
<th>Week 3</th>
<th>Weeks 4-6</th>
<th>Weeks 7-9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control Groups</strong></td>
<td>General</td>
<td>Pre-test Timed</td>
<td>General</td>
<td>Post-test Timed</td>
</tr>
<tr>
<td>coursework</td>
<td>Essay, Completion of Demographic, Pre-Test ATAC, and Pre-Test</td>
<td>Coursework including argumentative writing</td>
<td>Essay, Completion of Post-Test ATAC and WEBLEI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modified WEBLEI surveys &amp; Preliminary Interview</td>
<td></td>
<td>Surveys &amp; Follow-Up Interview</td>
<td></td>
</tr>
</tbody>
</table>
### Original Study Timeline

<table>
<thead>
<tr>
<th>Treatment Groups</th>
<th>General</th>
<th>Pre-test Timed</th>
<th>General</th>
<th>Post-test Timed</th>
</tr>
</thead>
<tbody>
<tr>
<td>coursework</td>
<td>Essay, Completion</td>
<td>Coursework including</td>
<td>Essay, Completion of Post-Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-Test ATAC, argumentative</td>
<td>and Pre-Test writing</td>
<td>ATAC and WEBLEI Surveys</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modified WEBLEI assignment</td>
<td>&amp; Follow-Up Interview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preliminary Interview</td>
<td>of <em>i-Claim</em> to support argumentation</td>
<td>skill development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Research Design

In this quasi-experimental research design, six sections of the English 101 course were studied. Two pairs of sections (four sections) were taught by the same instructor to ensure internal construct validity during the study. One section per instructor was randomly selected as a treatment group by a coin toss. Two other sections were taught by
two instructors whose curriculum was similar in design and structure. One of these two sections was randomly selected as the treatment group by a coin toss.

In all sections, participant students completed three pre-test surveys (Survey of Student Demographics, Pre-Test ATAC, and Pre-Test Modified WEBLEI), a pre-test writing test with ACCUPLACER™ Online WritePlacer Plus, two post-test surveys (either the Post-Test Control Group ATAC or the Post-Test Treatment Group ATAC and the Post-Test Modified WEBLEI), and a post-test writing test with ACCUPLACER™ Online WritePlacer Plus. Volunteer participant students completed a pre-test and post-test interview.

In the randomly selected treatment sections, *i-Claim*, a CD-ROM interactive tutorial for argumentation skill development, was given to the participants in a computer classroom. Students in the Jacqui’s and Rose’s treatment sections spent part of the 75-minute class session (50 minutes), and students in Frank’s treatment spent the whole 50-minute class session interacting with *i-Claim*. All student interaction with *i-Claim* in the treatment groups was observed by the researcher. Students used the interactive segments of *i-Claim*: Tutorials, Arguments, and Glossary.

Participants in the treatment groups were given the *i-Claim* CD-ROM to keep. They had 50 minutes in one class session in which they were instructed on using *i-Claim*. They reviewed the Tutorial material to ground themselves in the elements of argument then submitted at least one interactive argumentation exercise via e-mail to the instructor and researcher. The students were given time to explore and discuss *i-Claim*’s visual arguments and define terms of argumentation by using the interactive glossary.
In control sections, participant students received regular, classroom instruction on argumentation skill development as created and delivered by the instructor.

Data Analysis

This section describes the data analysis used to answer Research Questions 1 through 3 of this study. Table 3 aligns these research questions with the measures and the type of analyses (quantitative versus qualitative) used to address the question or measure.

Table 3

Measures and Types of Statistical Analyses Used to Answer Research Questions

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Measures</th>
<th>Statistical Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Is a student’s mastery of argumentation skills in a timed writing test enhanced by using the <em>i-Claim</em> tutorial for argumentation skills?</td>
<td>- Pre-test ACCUPLACER™ Online WritePlacer Plus essay</td>
<td>- Quantitative: Descriptive analysis Post-test ACCUPLACER™ Online WritePlacer Plus essay</td>
</tr>
</tbody>
</table>
**Measures and Types of Statistical Analysis Used to Answer Research Questions**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Measures</th>
<th>Statistical Analysis</th>
</tr>
</thead>
</table>
| (2) Do students feel confident about their argumentation skills as a result of using the *i-Claim* tutorial? | ▪ Pre-Test ATAC  
▪ Post-Test ATAC  
▪ Pre-Test Interview questionnaire  
▪ Post-Test Interview questionnaire | ▪ Quantitative:  
▪ Qualitative: |
| (3) Do students feel more confident about using computer-based tutorials to facilitate their learning as a result of using *i-Claim* tutorial? | ▪ Pre-Test Modified WEBLEI  
▪ Post-Test Modified WEBLEI  
▪ Pre-Test Interview questionnaire  
▪ Post-Test Interview questionnaire | ▪ Quantitative:  
▪ Descriptive:  
▪ Qualitative:  
▪ Content analysis |

Research Question 1 was designed to determine if students improved their argumentation writing skills when using an instructional technology intervention tool. In order to answer the question, students took a 30-minute, online pre- and post-test writing test using ACCUPLACER™ Online WritePlacer Plus. The total holistic score (TOTAL), and the discrete “Development” (DEV) and “Organization” (ORG) scores on the
completed essay were used to measure change from pre-test to post-test. These two
discrete scores, DEV and ORG (of five discrete scores measured by ACCUPLACER™
Online WritePlacer Plus, the other three being Focus, Sentence Structure, and
Conventions), align themselves with the goals of argumentation in statement of a claim,
supporting evidence, counterargument, and conclusion. Paired t-tests were used to
measure if there were any statistically significant differences in gain scores between pre-
test and post-test scores within the control or treatment group independent sample t-tests
were used to measure if the test scores between the control and treatment groups.
Correlation coefficients (Pearson r) were also calculated to determine if there were other
effects on the post-test scores by using post-test gain scores as the dependent variable and
the questions and statements from the ATAC as independent variables.

Research Question 2 was designed to determine if students’ confidence in writing
arguments was enhanced by using the intervention tool. To answer this question, students
completed the Pre-Test ATAC and Post-Test ATAC surveys. T-tests were used to
determine if there were any statistically significant differences between pre-test and post-
test confidence scores from the ATAC surveys. Volunteer students were interviewed, and
their responses were evaluated using content analysis to determine their confidence in
writing arguments.

Research Question 3 was designed to determine if students’ confidence in using
instructional technology tools, specifically computer-based tutorials, was enhanced by
using the intervention tool. To answer this question, students completed the Pre-Test
Modified WEBLEI and Post-Test Modified WEBLEI surveys. T-tests were used to
measure differences and test for statistically significant differences between pre-test and post-test confidence scores from the Modified WEBLEI surveys. Volunteer students were interviewed pre- and post-test, and their responses were evaluated using content analysis to determine their confidence in using instructional technology tools, specifically tutorials.

Limitations of the Study

The limitations of this research study dealt primarily with the sample size and internal and construct validity issues.

The major limitation to this study was the small sample size in both treatment and control sections. In one pair of sections, 79.8% of the students in the treatment section participated, and 47.4% of the students in the control section participated. In the other pair of sections, 38.9% of the students in the treatment section participated, while 65% of the students in the control section participated. In the two sections which were taught by different instructors, 79.8% of the students in the treatment section participated, and 35.3% of the students in the control section participated. In this particular treatment section, the instructor told students during the session in which the Informed Consent Document was provided and reviewed that those who did not participate in the research study would be given a graded assignment in lieu of participation. The researcher reiterated to the students that participation was voluntary and in no way affected their course grade.
In addition, the students who volunteered to be interviewed with the IRSQ all came from control group classes, so there was no comparison with students who had access to the intervention to measure any significant difference between control and treatment groups.

The limited number of pairs of English 101 classes being taught by the same instructor during the semester during which this study was conducted fed another validity issue: the two classes taught by separate instructors (one control class and one treatment class) did not receive exactly the same instruction, thus potentially compromising the results.

A history threat occurred when students were not motivated to participate and some who participated in the pre-test did not participate in the post-test. A maturation threat naturally happened since students were already receiving instruction on argumentation in their course. A selection-maturation threat occurred when students in the treatment group scored worse on the pre-test than those in the control group, then scores for both groups dropped on the post-test. As there was no specific measure for “argument” in ACCUPLACER™ Online WritePlacer Plus, the online essay evaluator used as a measurement tool, multiple measures not specifically labeled as “argumentation” were used, this posed a threat to construct validity. The drop in scores from pre-test to post-test for both the control and treatment groups also threatened construct validity.

Other limitations included some participants who had access to i-Claim did not use it beyond the designated 50-minute classroom time, while some used it more than the
designated classroom time. Participants in both the treatment and control sections found alternative tools (online or otherwise) which might have affected or not affected their skill change.

No threats to external validity existed.

Summary

This chapter described the research design and methodology of this study. The chapter discussed the participant sample, measures, research design, procedures, and data analysis methods employed in this research study. Specifically, this study applied a quasi-experimental research design approach and a mixed-methods analysis. Data in this study were primarily collected through the administration of four surveys and a pre- and post-test writing test, as well as interviews with instructors and volunteer students. All of the quantitative surveys used in this study were distributed online and data were gathered, assembled, and analyzed using Microsoft Excel and Statistical Package for Social Sciences (SPSS) software. The quantitative data analysis included descriptive analyses and Pearson’s correlations.

Responses to interviews were categorized by theme and used to triangulate the results of the quantitative analysis of students’ scores on the ACCUPLACER™ Online WritePlacer Plus writing tests.

The intended outcome of the research study was to see if students’ skills in argumentation writing were enhanced by using an instructional technology tool developed specifically for argumentation skill development, and to see if students’
confidence in developing written arguments and using instructional technology tools for argumentation and writing increases because of using the intervention tool. The results of the data analysis will be discussed in Chapter IV.
4. Results

The purpose of this study was to examine if first-year composition students’ mastery of argumentation in a timed writing test is enhanced by using *i-Claim*, a computer-based tutorial designed to aid students in developing their argumentation skills. Using ACCUPLACER™ Online WritePlacer Plus, the participating students (*n*=42) wrote pre- and post-test argumentative essays, and using a series of scores on the tests, the researcher determined, using gain scores and t-tests, if students’ mastery was enhanced. Another purpose of this study was to investigate if students felt more confident about their argumentation skills as a result of using the tutorial, and if students felt more confident overall about using computer-based tools to facilitate their learning. Using the ATAC and WEBLEI instruments, and in one-on-one interviews, participating students reported their confidence levels with argumentation skills and computer-based tools, and the researcher determined participating students’ confidence levels. This chapter presents the findings of this study in the following sections delineated by each of the three research questions examined.
Research Question 1

Is a student’s mastery of argumentation skills in a timed writing test enhanced by using a computer-based tutorial (i-Claim) for argumentation skills?

The timed, argumentative writing test in ACCUPLACER™ Online WritePlacer Plus measures six factors: focus, development, organization, sentence structure, conventions (control of spelling, grammar, and mechanics), and a holistic, total score. For each of the six factors, the maximum score is 12. A “mastery” score (80%) would be 9.60 or higher in any category. In this study, only three scores, total (TOTAL), development (DEV), and organization (ORG), will be discussed as these are the holistic score and two key factors in argumentation (DEV measuring the inclusion of supporting evidence and ORG measuring clear organization of details) which ACCUPLACER™ Online WritePlacer Plus measure. ACCUPLACER™ Online WritePlacer Plus was used as a measure of change in students’ scores from pre-test to post-test.

The pre-test scores for all participant students who wrote the pre-test essay (n=63) showed an overall mastery (based on TOTAL) for the timed writing argument test mean score of 9.65 or 80.4%) while mean scores for DEV (8.44 or 70.3%) and ORG (8.35 or 69.6%), the two components of argumentation, showed skill levels below mastery. Table 4 displays the statistics for the pre-test mean scores and standard deviation for all participants who took the ACCUPLACER™ Online WritePlacer Plus pre-test.
Table 4

*Mean ACCUPLACER™ Online WritePlacer Plus Scores for All Participants (n=63)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-Test Means</th>
<th>Pre-Test SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>9.65</td>
<td>(1.461)</td>
</tr>
<tr>
<td>DEV</td>
<td>8.44</td>
<td>(1.365)</td>
</tr>
<tr>
<td>ORG</td>
<td>8.35</td>
<td>(1.285)</td>
</tr>
</tbody>
</table>

*ACCUPLACER™ Online WritePlacer Plus: Pre- and Post-Test Statistics*

Further statistics will be based on the students who participated in both the pre-test and post-test measures (n=42).

In the control groups (n=16), the pre-test scores indicated mastery of the overall timed writing argument test (TOTAL), with a mean total score of 10.12 (SD = 1.360). In the treatment groups (n=26), the pre-test scores fell slightly below “mastery” level on the overall timed writing argument test (TOTAL), with a mean total score of 9.58 (SD = 1.528).

In the control groups, the post-test scores on TOTAL dropped slightly below “mastery” level for the overall timed writing argument test, with a pre-post difference of -0.56 and mean score of 9.56 (SD = 1.896). In the treatment groups, the post-test scores on TOTAL fell sharply below “mastery” level for overall timed writing argument test, with a pre-post difference of -1.23 and a mean score of 8.35 (SD = 1.413). No statistically significant result (p < .05) was found for TOTAL in the control group.
(t = -1.861, df = 15, p = .083). However, a statistically significant result (p < .05) was found for TOTAL in the treatment group (t = -4.500, df = 25, p = .000).

For DEV, the pre-test scores indicated skills below “mastery” level in both the control group with a mean score of 8.94 (SD = 1.482) and the treatment group with a mean score of 8.31 (SD = 1.350). The post-test scores continued to indicate skills below “mastery” level for DEV in the control group with a mean score of 8.31 (SD = 1.922) and a pre-post difference score of -0.63. Similar results were revealed in the treatment group with a mean score of 7.19 (SD = 1.096) and a pre-post difference score of -1.12. A statistically significant result (p < .05) was found for DEV in both the control group (t = -2.825, df = 15, p = .013) as well as in the treatment group (t = -4.460, df = 25, p = .000).

For ORG, the pre-test scores indicated skills below “mastery” level in both the control group with a mean score of 8.81 (SD = 1.276) and the treatment group with a mean score of 8.15 (SD = 1.287). The post-test scores continued to indicate skills below “mastery” level for DEV in both the control group with a mean score of 8.44 (SD = 1.788) and a pre-post difference score of -0.37, and the treatment group with a mean score of 7.19 (SD = 1.059) and a pre-post difference score of -0.96. No statistically significant result (p < .05) was found for DEV in the control group (t = -1.567, df = 16, p = .138). However, a statistically significant result (p < .05) was found for DEV in the treatment group (t = -3.927, df = 25, p = .001). Table 5 displays the statistics for TOTAL, DEV, and ORG.
Table 5

**ACCUPLACER™ Online WritePlacer Plus Statistics for TOTAL, DEV, and ORG:**

**Overall Sample**

<table>
<thead>
<tr>
<th>WritePlacer Plus Measure</th>
<th>Pre-test Means (SD)</th>
<th>Post-test Means (SD)</th>
<th>Mean Gain Score</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTROL (n=16)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>10.12 (1.360)</td>
<td>9.56 (1.896)</td>
<td>-.56</td>
<td>-1.861</td>
<td>15</td>
<td>.083</td>
</tr>
<tr>
<td>DEV</td>
<td>8.94 (1.482)</td>
<td>8.31 (1.922)</td>
<td>-.63</td>
<td>-2.825</td>
<td>15</td>
<td>.013*</td>
</tr>
<tr>
<td>ORG</td>
<td>8.81 (1.276)</td>
<td>8.44 (1.788)</td>
<td>-.37</td>
<td>-1.567</td>
<td>15</td>
<td>.138</td>
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<td><strong>TREATMENT (n=26)</strong></td>
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</tr>
<tr>
<td>TOTAL</td>
<td>9.58 (1.528)</td>
<td>8.35 (1.413)</td>
<td>-1.23</td>
<td>-4.500</td>
<td>25</td>
<td>.000*</td>
</tr>
<tr>
<td>DEV</td>
<td>8.31 (1.350)</td>
<td>7.19 (1.096)</td>
<td>-1.12</td>
<td>-4.460</td>
<td>25</td>
<td>.000*</td>
</tr>
<tr>
<td>ORG</td>
<td>8.15 (1.287)</td>
<td>7.19 (1.059)</td>
<td>-.96</td>
<td>-3.927</td>
<td>25</td>
<td>.001*</td>
</tr>
</tbody>
</table>

To refine the data, they were limited to the pair of classes that were taught by the same instructor, and the same statistics were computed. The findings were consistent with the overall sample with no statistically significant results \((p < .05)\) for TOTAL and ORG in the control group, and statistically significant results \((p < .05)\) for DEV in the control group and all three measures in the treatment group. Table 6 displays the statistics for TOTAL, DEV, and ORG for the limited sample.
Table 6

**ACCUPLACER™ Online WritePlacer Plus Statistics for TOTAL, DEV, and ORG:**

**Limited Sample**

<table>
<thead>
<tr>
<th>WritePlacer Plus Measure</th>
<th>Pre-test Means (SD)</th>
<th>Post-test Means (SD)</th>
<th>Mean Gain Score</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTROL (n=13)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>10.54 (1.127)</td>
<td>10.00 (1.732)</td>
<td>-.54</td>
<td>-1.620</td>
<td>12</td>
<td>.131</td>
</tr>
<tr>
<td>DEV</td>
<td>9.31 (1.377)</td>
<td>8.77 (1.787)</td>
<td>-.54</td>
<td>-2.214</td>
<td>12</td>
<td>.047*</td>
</tr>
<tr>
<td>ORG</td>
<td>9.15 (1.144)</td>
<td>8.85 (1.625)</td>
<td>-.30</td>
<td>-1.298</td>
<td>12</td>
<td>.219</td>
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<tr>
<td><strong>TREATMENT (n=13)</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>9.85 (1.463)</td>
<td>8.77 (1.363)</td>
<td>-1.08</td>
<td>-2.941</td>
<td>12</td>
<td>.012*</td>
</tr>
<tr>
<td>DEV</td>
<td>8.46 (1.198)</td>
<td>7.54 (1.050)</td>
<td>-.92</td>
<td>-2.984</td>
<td>12</td>
<td>.011*</td>
</tr>
<tr>
<td>ORG</td>
<td>8.31 (1.251)</td>
<td>7.54 (.967)</td>
<td>-.77</td>
<td>-2.739</td>
<td>12</td>
<td>.018*</td>
</tr>
</tbody>
</table>

To compare the between group means, independent sample t-tests were run for TOTAL, DEV, and ORG comparing the pre-test and post-test scores between the control and treatment groups. No statistically significant results ($p < .05$) were found in the pre-test scores; however, statistically significant results ($p < .05$) were found in the post-test scores (with equal variances not assumed) for TOTAL ($t = -2.215, df = 25.229, p = .036$), DEV ($t = -2.218, df = 21.096, p = .045$), and ORG ($t = -2.527, df = 21.575, p = .019$). This significant difference between the control and treatment, however, was in favor of
the control group as the scores in the treatment group all were lower than those of the control group. Table 7 displays the statistics for TOTAL, DEV, and ORG for the between group pre-test and post-test scores for the overall sample.

Table 7

**ACCUPLACER™ Online WritePlacer Plus Statistics for TOTAL, DEV, and ORG:**

**Between Group Pre- and Post-Test Scores for Overall Sample**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>Control</td>
<td>10.12 (1.360)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>9.58 (1.528)</td>
</tr>
<tr>
<td></td>
<td>t-test values</td>
<td>-1.176, df = 40, p = .247</td>
</tr>
<tr>
<td>DEV</td>
<td>Control</td>
<td>8.94 (1.482)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>8.31 (1.350)</td>
</tr>
<tr>
<td></td>
<td>t-test values</td>
<td>-1.415, df = 40, p = .165</td>
</tr>
<tr>
<td>ORG</td>
<td>Control</td>
<td>8.81 (1.276)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>8.15 (1.287)</td>
</tr>
<tr>
<td></td>
<td>t-test values</td>
<td>-1.616, df = 40, p = .114</td>
</tr>
</tbody>
</table>

The data revealed that students’ argumentation skills in a timed writing test were *not* enhanced by introducing *i-Claim* into the curriculum in both the overall sample and the limited sample. However, the results also revealed the phenomenon of all scores
(total, development, and organization) dropping from pre-test to post-test in both the overall and limited samples for both the control and treatment groups. These unusual findings will be discussed in Chapter V.

Research Question 2

*Do students feel confident about their argumentation skills as a result of using i-Claim?*

The Attitudes Toward Argumentation in Composition (ATAC) instrument was developed for this research project and used to measure student confidence about their argumentation skills. In the pre-test survey, student participants answered four questions and responded to six statements.

The first four questions asked student participants to rate their argumentation skills using a five-point Likert scale: 1 = Marginal, 2 = Less than Satisfactory, 3 = Satisfactory, 4 = Good, 5 = Excellent. The four questions were as follows:

Q1. How do you rate your skills in crafting an arguable thesis statement or topic sentence?
Q2. How do you rate your skills in supporting an argument with research?
Q3. How do you rate your skills in crafting supporting sentences for an argument?
Q4. How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?

Overall, in the pre-test sample (n=63), student participants ranked themselves greater than “Satisfactory” but less than “Good” for all four questions. Responses to Q2
showed supporting an argument with research to be student participants’ perceived strongest skills (mean 3.45, $SD = .811$) while responses to Q4 showed writing a short argument essay in a timed writing situation still perceived satisfactory, but slightly weaker (mean 3.10, $SD = .845$).

For the final six statements, in the overall pre-test sample, student participants indicated their attitudes towards argumentation in their writing on a five-point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Don’t Know, 4 = Agree, and 5 = Strongly Agree. The six statements were as follows:

S5. I have trouble developing topic sentences.
S6. I have trouble developing thesis statements.
S7. I have trouble finding support for arguments.
S8. I have trouble developing supporting sentences for arguments.
S9. I have trouble developing counterarguments.
S10. I have trouble writing an argument in a timed test environment.

Overall, in the pre-test sample, student participants ranked their attitudes between “Disagree” and “Don’t Know” for S5 through S9. The only mean score outside this range was for S10, in which students participants responded “Don’t Know” to whether they had trouble writing an argument in a timed test environment (mean 3.03, $SD = 1.095$). Students’ attitudes about having trouble finding support for arguments ranked lowest of all six statement (mean 2.33, $SD = .961$).

Table 8 displays the statistics for the ATAC pre-test.
Table 8  

*Mean ATAC Scores for All Participants (n=63)*

<table>
<thead>
<tr>
<th>ATAC Measure</th>
<th>Pre-Test Means</th>
<th>Pre-Test SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>3.31</td>
<td>.786</td>
</tr>
<tr>
<td>Q2</td>
<td>3.45</td>
<td>.811</td>
</tr>
<tr>
<td>Q3</td>
<td>3.40</td>
<td>.942</td>
</tr>
<tr>
<td>Q4</td>
<td>3.10</td>
<td>.845</td>
</tr>
<tr>
<td>S5</td>
<td>2.56</td>
<td>.958</td>
</tr>
<tr>
<td>S6</td>
<td>2.77</td>
<td>.973</td>
</tr>
<tr>
<td>S7</td>
<td>2.33</td>
<td>.961</td>
</tr>
<tr>
<td>S8</td>
<td>2.52</td>
<td>.942</td>
</tr>
<tr>
<td>S9</td>
<td>2.52</td>
<td>.976</td>
</tr>
<tr>
<td>S10</td>
<td>3.03</td>
<td>1.095</td>
</tr>
</tbody>
</table>

Further statistics will be based on the students who participated in both the pre-test and post-test measures (n=42). It should be noted that during the administration of the post-test writing test and surveys, six students in the control groups and nine students in the treatment groups who wrote the ACCUPLACER™ Online WritePlacer Plus test did not complete the ATAC and Modified WEBLEI surveys. While it cannot be determined exactly why these fifteen students did not complete the post-test surveys, there are two possible explanations: (1) Students missed the links to the surveys at the top of the web page with the instructions, or (2) Students were rushing through the test to
leave since the two instructors told students they could leave once they completed the post-test. The second possibility will be discussed in Chapter V.

For the ATAC and Modified WEBLEI surveys, only those results from students who completed all three instruments in the control group \((n=10)\) and the treatment group \((n=17)\) have been used in calculating statistics.

**ATAC: Pre- and Post-Test Statistics**

For Q1 (How do you rate your skills in crafting an arguable thesis statement or topic sentence?), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “satisfactory” and “good” (with the mean score exactly between “satisfactory” and “good” for the control group and closer to “satisfactory” for the treatment group). The post-test scores showed an increase in participant students’ perceived skills in both the control and treatment groups, again between “satisfactory” and “good,” but this time with means closer to “good” than “satisfactory.” It should be noted that one student in the treatment group did not respond to this question. No statistically significant result \((p < .05)\) was found for Q1 in either the control group \((t = 1.406, df = 9, p = .193)\). However, there were statistically significant results \((p < .05)\) for the treatment group \((t = 2.314, df = 16, p = .034)\).

For Q2 (How do you rate your skills in supporting an argument with research?), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “satisfactory” and “good” (with means closer to “good” than “satisfactory” for both groups). The post-test scores showed an increase in participant students’ perceived skills in both the control and treatment groups, again between
“satisfactory” and “good,” but this time with means closer to “good. No statistically significant result ($p < .05$) was found for Q2 in either the control group ($t = .802, df = 9, p = .443$) or the treatment group ($t = .293, df = 16, p = .773$).

For Q3 (How do you rate your skills in crafting supporting sentences for an argument?), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “satisfactory” and “good” (with means near the middle for both groups). The post-test scores showed an increase in participant students’ perceived skills in the control groups, between “satisfactory” and “good,” but with means near “good.” The post-test scores showed a significant increase in participant students’ perceived skills in the treatment group, moving between “good” and “excellent.” It should be noted that one student in the treatment group did not respond to this question. No statistically significant result ($p < .05$) was found for Q3 in the control group ($t = 1.861, df = 9, p = .096$). However, there were statistically significant results for the treatment group ($t = 2.864, df = 16, p = .011$).

For Q4 (How do you rate your skills in writing a short argument essay in a timed writing situation [similar to the SAT Writing Test]?), the pre-test scores indicated participant students’ perceived skills in the control groups between “satisfactory” and “good” (with means closer to “satisfactory”), and in the treatment groups between “less than satisfactory” and “satisfactory” (with means closer to “satisfactory”). The post-test scores showed an increase in participant students’ perceived skills in both the control and treatment groups, with means almost equidistant between “satisfactory” and “good.” It should be noted that three students in the treatment group did not respond to this
question. No statistically significant result \((p < .05)\) was found for Q4 in the control group \((t = 1.152, df = 9, p = .279)\). However, there were statistically significant results for the treatment group \((t = 2.864, df = 16, p = .011)\).

For S5 (I have trouble developing topic sentences), the pre-test scores for the control group indicated participant students’ perceived skills at “disagree” and for the treatment group between “disagree” and “don’t know” (with means closer to “don’t know”). The post-test scores showed no change in confidence in the control group and an increased confidence in the treatment group, with means just above “disagree.” No statistically significant result \((p < .05)\) was found for S5 in the control group \((t = .000, df = 9, p = 1.000)\). However, there were statistically significant results for the treatment group \((t = -2.582, df = 16, p = .020)\).

For S6 (I have trouble developing thesis statements), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “disagree” and “don’t know” (with means closer to “don’t know” than “disagree”). The post-test scores showed slightly increased confidence in participant students’ perceived skills in both the control and treatment groups, with means still between “disagree” and “don’t know” but with means closer to “disagree.” No statistically significant result \((p < .05)\) was found for S6 in either the control group \((t = -.688, df = 9, p = .509)\) or the treatment group \((t = -1.852, df = 16, p = .083)\).

For S7 (I have trouble finding support for arguments), the pre-test scores indicated participant students’ perceived skills in the control groups exactly at “disagree” and in the treatment group between “disagree” and “don’t know” (with means closer to
“disagree” than “don’t know”). The post-test scores showed increased confidence in participant students’ perceived skills in the control group, with means between “strongly disagree” and “disagree.” The post-test scores for the treatment group revealed slightly decreased confidence in participant students’ perceived skills in the treatment group with means still between “disagree” and “don’t know” but closer to “don’t know” than in the pre-test. No statistically significant result ($p < .05$) was found for S7 in either the control group ($t = -1.809, df = 9, p = .104$) or the treatment group ($t = .416, df = 16, p = .683$).

For S8 (I have trouble developing supporting sentences for arguments), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “disagree” and “don’t know” (with means in the mid-range). The post-test scores showed increased confidence in participant students’ perceived skills in the control group, with means at “disagree.” The post-test scores showed slightly increased confidence in participant students’ perceived skills in the treatment group with means still between “disagree” and “don’t know” but with means closer to “disagree.” No statistically significant result ($p < .05$) was found for S8 in either the control group ($t = -1.464, df = 9, p = .177$) or the control group ($t = -1.000 df = 16, p = .332$).

For S9 (I have trouble developing counterarguments), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “disagree” and “don’t know” (with means in the mid-range). The post-test scores showed no change in confidence for the control group, and a slightly increased confidence in the treatment group, with means still between “disagree” and “don’t know,” but closer to “disagree.” No statistically significant result ($p < .05$) was found for S9 in either the
control group ($t = .000, df = 9, p = 1.000$) or the treatment group ($t = -1.000, df = 16, p = .332$).

For S10 (I have trouble writing an argument in a timed test environment), the pre-test scores indicated participant students’ perceived skills in both the control and treatment groups between “disagree” and “don’t know” (with means closer to “don’t know”). The post-test scores showed increased confidence in participant students’ perceived skills in the control group with means between “disagree” and “don’t know,” but closer to “disagree.” For the treatment group, the post-test scores showed slight increased confidence in participant students’ perceived skills with means just below “don’t know.” No statistically significant result ($p < .05$) was found for S10 in either the control group ($t = -1.177, df = 9, p = .269$) or the treatment group ($t = -.203, df = 16, p = .842$).

Table 9 displays the statistics for the ATAC Control Group, and Table 10 displays the statistics for the ATAC Treatment Group.
### ATAC Statistics for Control Group

<table>
<thead>
<tr>
<th>ATAC Question/Statement</th>
<th>Pre-test means (SD)</th>
<th>Post-test means (SD)</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTROL (n=10)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>3.50 (.850)</td>
<td>3.80 (.919)</td>
<td>1.406</td>
<td>9</td>
<td>.193</td>
</tr>
<tr>
<td>Q2. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>3.70 (.675)</td>
<td>3.90 (.738)</td>
<td>.802</td>
<td>9</td>
<td>.443</td>
</tr>
<tr>
<td>Q3. How do you rate your skills in crafting supporting sentences for an argument?</td>
<td>3.40 (.843)</td>
<td>3.90 (.738)</td>
<td>1.861</td>
<td>9</td>
<td>.096</td>
</tr>
<tr>
<td>Q4. How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td>3.20 (.919)</td>
<td>3.50 (1.179)</td>
<td>1.152</td>
<td>9</td>
<td>.279</td>
</tr>
<tr>
<td>ATAC Question/Statement</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------</td>
<td>----------------------</td>
<td>-----</td>
<td>----</td>
<td>----------------</td>
</tr>
<tr>
<td>S5. I have trouble developing topic sentences.</td>
<td>2.00 (.816)</td>
<td>2.00 (.667)</td>
<td>.000</td>
<td>9</td>
<td>1.000</td>
</tr>
<tr>
<td>S6. I have trouble developing thesis statements.</td>
<td>2.40 (.966)</td>
<td>2.20 (1.033)</td>
<td>-.688</td>
<td>9</td>
<td>.509</td>
</tr>
<tr>
<td>S7. I have trouble finding support for arguments.</td>
<td>2.00 (.816)</td>
<td>1.60 (.516)</td>
<td>-1.809</td>
<td>9</td>
<td>.104</td>
</tr>
<tr>
<td>S8. I have trouble developing supporting sentences for arguments.</td>
<td>2.50 (1.179)</td>
<td>2.00 (.471)</td>
<td>-1.464</td>
<td>9</td>
<td>.177</td>
</tr>
<tr>
<td>S9. I have trouble developing counterarguments.</td>
<td>2.30 (.949)</td>
<td>2.30 (1.059)</td>
<td>.000</td>
<td>9</td>
<td>1.000</td>
</tr>
<tr>
<td>S10. I have trouble writing an argument in a timed test environment.</td>
<td>2.70 (.949)</td>
<td>2.30 (1.059)</td>
<td>-1.177</td>
<td>9</td>
<td>.269</td>
</tr>
</tbody>
</table>
### Table 10

**ATAC Statistics for Treatment Group**

<table>
<thead>
<tr>
<th>ATAC Question/Statement</th>
<th>Pre-test means (SD)</th>
<th>Post-test means (SD)</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TREATMENT (n=17)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>3.29 (.772)</td>
<td>3.82 (.636)</td>
<td>2.314</td>
<td>16</td>
<td>.034*</td>
</tr>
<tr>
<td>Q2. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>3.65 (.862)</td>
<td>3.71 (.849)</td>
<td>.293</td>
<td>16</td>
<td>.773</td>
</tr>
<tr>
<td>Q3. How do you rate your skills in crafting supporting sentences for an argument?</td>
<td>3.53 (.874)</td>
<td>4.18 (.809)</td>
<td>2.864</td>
<td>16</td>
<td>.011*</td>
</tr>
<tr>
<td>Q4. How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td>2.82 (.728)</td>
<td>3.44 (.964)</td>
<td>2.298</td>
<td>15</td>
<td>.036*</td>
</tr>
<tr>
<td>ATAC Question/Statement</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>----</td>
<td>----</td>
<td>-----------------</td>
</tr>
<tr>
<td>S5. I have trouble developing topic sentences.</td>
<td>2.65 (.931)</td>
<td>2.06 (.556)</td>
<td>-2.582</td>
<td>16</td>
<td>.020*</td>
</tr>
<tr>
<td>S6. I have trouble developing thesis statements.</td>
<td>2.82 (.951)</td>
<td>2.47 (1.007)</td>
<td>-1.852</td>
<td>16</td>
<td>.083</td>
</tr>
<tr>
<td>S7. I have trouble finding support for arguments.</td>
<td>2.12 (.857)</td>
<td>2.24 (1.033)</td>
<td>.416</td>
<td>16</td>
<td>.683</td>
</tr>
<tr>
<td>S8. I have trouble developing supporting sentences for arguments.</td>
<td>2.71 (.985)</td>
<td>2.41 (1.064)</td>
<td>-1.000</td>
<td>16</td>
<td>.332</td>
</tr>
<tr>
<td>S9. I have trouble developing counterarguments.</td>
<td>2.47 (.874)</td>
<td>2.24 (.903)</td>
<td>-1.000</td>
<td>16</td>
<td>.332</td>
</tr>
<tr>
<td>S10. I have trouble writing an argument in a timed test environment.</td>
<td>2.94 (.966)</td>
<td>2.88 (1.219)</td>
<td>-.203</td>
<td>16</td>
<td>.842</td>
</tr>
</tbody>
</table>

The data from the ATAC survey revealed that students’ overall confidence in argumentation increased from pre-test to post-test in both the control and treatment groups. In the treatment group, there was some statistical significance to indicate that the increase for two questions (“How do you rate your skills in crafting supporting sentences
for an argument?” and “How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?”) and one statement (“I have trouble developing topic sentences.”) was caused by introducing i-Claim into the curriculum.

To compare the between group means, independent sample t-tests were run for the four questions and six statements comparing the pre-test and post-test scores between the control and treatment groups. No statistically significant results ($p < .05$) were found in either the pre-test or post-test scores. For S8 (“I have trouble developing supporting sentences for arguments”), the post-test statistics were calculated with equal variances not assumed since the Levene Test for Equality of Variances for was $F = 11.607$, $Sig. = .002$. Table 11 displays the ATAC statistics for the between group pre-test and post-test scores.

Table 11

*ATAC Statistics for the Between group Pre-Test and Post-Test Scores*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>Control</td>
<td>3.50 (.850)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.29 (.772)</td>
</tr>
<tr>
<td>t-test value ($df = 25$)</td>
<td>-.645, $p = .525$</td>
<td>.079, $p = .938$</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Q2. How do you rate your skills in supporting an argument with research?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.70 (.675)</td>
<td>3.90 (.738)</td>
</tr>
<tr>
<td>Treatment</td>
<td>3.65 (.862)</td>
<td>3.71 (.849)</td>
</tr>
<tr>
<td>t-test value ($df = 25$)</td>
<td>-.166, $p = .869$</td>
<td>-.601, $p = .553$</td>
</tr>
<tr>
<td>Q3. How do you rate your skills in crafting supporting sentences for an argument?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.40 (.843)</td>
<td>3.90 (.738)</td>
</tr>
<tr>
<td>Treatment</td>
<td>3.53 (.874)</td>
<td>4.18 (.809)</td>
</tr>
<tr>
<td>t-test value ($df = 25$)</td>
<td>.376, $p = .710$</td>
<td>.885, $p = .385$</td>
</tr>
<tr>
<td>Q4. How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.20 (.919)</td>
<td>3.50 (1.179)</td>
</tr>
<tr>
<td>Treatment</td>
<td>2.82 (.728)</td>
<td>3.44 (.964)</td>
</tr>
<tr>
<td>t-test value ($df = 25$)</td>
<td>-1.178, $p = .250$</td>
<td>-.148, $p = .884$</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>S5. I have trouble developing topic</td>
<td>Control 2.00 (.816)</td>
<td>Treatment 2.65 (.931)</td>
</tr>
<tr>
<td>sentences.</td>
<td>t-test value $(df = 25)$ 1.821, $p = .081$</td>
<td>2.06 (.556)</td>
</tr>
<tr>
<td>S6. I have trouble developing thesis</td>
<td>Control 2.40 (.966)</td>
<td>Treatment 2.82 (.951)</td>
</tr>
<tr>
<td>statements.</td>
<td>t-test value $(df = 25)$ 1.111, $p = .277$</td>
<td>2.47 (1.007)</td>
</tr>
<tr>
<td>S7. I have trouble finding support for arguments</td>
<td>Control 2.00 (.816)</td>
<td>Treatment 2.12 (.857)</td>
</tr>
<tr>
<td>t-test value $(df = 25)$ .350, $p = .729$</td>
<td>2.24 (1.033)</td>
<td>1.807, $p = .083$</td>
</tr>
<tr>
<td>S8. I have trouble developing supporting sentences for arguments</td>
<td>Control 2.50 (1.179)</td>
<td>Treatment 2.71 (.985)</td>
</tr>
<tr>
<td>t-test value $(df = 25)$ .488, $df = 25$, 1.152, $df = 23.756$, $p = .630$</td>
<td>2.41 (1.064)</td>
<td>$p = .180$</td>
</tr>
<tr>
<td>S9. I have trouble developing counterarguments</td>
<td>Control 2.30 (.949)</td>
<td>Treatment 2.47 (.874)</td>
</tr>
<tr>
<td>t-test value $(df = 25)$ .475, $p = .639$</td>
<td>2.24 (.903)</td>
<td>-.169, $p = .867$</td>
</tr>
</tbody>
</table>
S10. I have trouble writing an argument in a timed test environment.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2.70 (.949)</td>
<td>2.30 (1.059)</td>
</tr>
<tr>
<td>Treatment</td>
<td>2.94 (.966)</td>
<td>2.88 (1.219)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>.630, p = .534</td>
<td>1.256, p = .221</td>
</tr>
</tbody>
</table>

In addition to the ten questions/statements on confidence, participant students in the control groups were asked in the ATAC survey if they had any knowledge of *i-Claim*. All respondents (*n=10*) replied “no.” This validates the control group post-test scores.

Table 12 displays the statistics for knowledge of *i-Claim* in the control group.

### Table 12

*ATAC – Post-test Responses of Knowledge of i-Claim (in Control Groups)*

<table>
<thead>
<tr>
<th>ATAC Measure</th>
<th>Control Group (<em>n=10</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you heard of <em>i-Claim?</em></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>0</td>
</tr>
<tr>
<td>NO</td>
<td>10</td>
</tr>
</tbody>
</table>

Participant students in the treatment groups were asked how often they used *i-Claim* after their instruction session. The majority of participant students (70.6%) did not use *i-Claim* again after instruction, while 29.4% used it less than one hour. No participant students used *i-Claim* more than two hours. These results support the finding...
that *i-Claim* had no significant effect on students’ argumentation skills in the treatment group. Table 13 displays the statistics for use of *i-Claim* after instruction in the treatment group.

Table 13

**ATAC – Post-test Responses of Use of i-Claim after Instruction (in Treatment Groups)**

<table>
<thead>
<tr>
<th>ATAC Measure</th>
<th>Treatment Group (n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much time did you use <em>i-Claim</em> after instruction?</td>
<td></td>
</tr>
<tr>
<td>NEVER</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>70.6%</td>
</tr>
<tr>
<td>LESS THAN 1 HOUR</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>29.4%</td>
</tr>
<tr>
<td>1 HOUR TO 2 HOURS</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
</tr>
<tr>
<td>MORE THAN 2 HOURS</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Research Question 3

*Do students feel more confident about using computer-based tutorials to facilitate their learning as a result of using i-Claim?*

The Modified Web-Based Learning Environment Instrument (Modified WEBLEI) was used to measure student confidence about using computer-based tutorials to facilitate their learning. Participant students responded to 29 statements about confidence towards using computer-based tutorials to facilitate their learning on a five-
point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Don’t Know, 4 = Agree, and 5 = Strongly Agree.

As with the ATAC survey, it should be noted that during the administration of the post-test writing test and surveys, six students in the control groups and nine students in the treatment groups who wrote the ACCUPLACER™ Online WritePlacer Plus test did not complete the Modified WEBLEI surveys. For the Modified WEBLEI surveys, only those results from students who completed all three instruments in the control group (n=10) and the treatment group (n=17) have been used in calculating statistics.

In the pre-test, students in the control group perceived their confidence positively (mean score greater than 3.00) for all statements (S) except S13 (“I regularly participate in self-evaluation” with a mean score of 2.60) and S22 (“I felt a sense of boredom towards the end of my course of study” with a mean score of 2.50). Participants in the treatment group perceived their confidence positively for all statements except S3 (“I am allowed to work at my own pace to achieve my learning objectives” with a mean score of 2.94) and S13 (“I regularly participate in self-evaluations” with a mean score of 2.56). Tables 10 and 11 display the statistics for the Modified WEBLEI.

In the post-test, students in the control groups perceived their confidence positively for all statements. In the treatment group, students perceived their confidence positively for all statements except S13 (“I am allowed to work at my own pace to achieve my learning objectives” with a mean score falling slightly from 2.56 to 2.50) and S22 (“I felt a sense of boredom towards the end of my course of study” with the mean score dropping from 3.12 to 2.75).
Only one statement, S28 (“The subject content is appropriate”), in the control group had a statistically significant result between pre-test and post-test \( (t = -2.689, df = 9, p = .025) \) and in the treatment group as well \( (t = 2.384, df = 16, p = .030) \). No statistically significant result \( (p < .05) \) was found between the pre-test and post-test for the other 28 statements in the control group or the treatment group. The results revealed \textit{i-Claim} had no effect on students’ confidence about using computer-based tutorials.

Table 14 displays the statistics for the 29 Modified WEBLEI statements for the Control Group, and Table 15 displays the statistics for the Treatment Group.

Table 14

\textit{Modified WEBLEI Statistics for Control Group}

<table>
<thead>
<tr>
<th>Modified WEBLEI Statements</th>
<th>Pre-test means (SD)</th>
<th>Post-test means (SD)</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTROL (( n=10 ))</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I can access instructional technology learning activities at times convenient to me.</td>
<td>4.00 (.943)</td>
<td>4.30 (.675)</td>
<td>.896</td>
<td>9</td>
<td>.394</td>
</tr>
<tr>
<td>2. The instructional technology materials are available at locations suitable for me.</td>
<td>4.10 (.738)</td>
<td>4.30 (.823)</td>
<td>.688</td>
<td>9</td>
<td>.509</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------</td>
<td>---------------------</td>
<td>----</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td>3. I am allowed to work at my own pace to achieve my learning objectives.</td>
<td>4.20 (.919)</td>
<td>3.70 (1.252)</td>
<td>-1.861</td>
<td>9</td>
<td>.096</td>
</tr>
<tr>
<td>4. I decide how much I want to learn in a given period.</td>
<td>3.90 (1.370)</td>
<td>3.80 (1.033)</td>
<td>-.287</td>
<td>9</td>
<td>.780</td>
</tr>
<tr>
<td>5. I decide when I want to learn.</td>
<td>3.60 (1.506)</td>
<td>3.70 (1.418)</td>
<td>.190</td>
<td>9</td>
<td>.853</td>
</tr>
<tr>
<td>6. The flexibility allows me to meet my learning goals.</td>
<td>3.90 (1.197)</td>
<td>3.70 (1.059)</td>
<td>-.514</td>
<td>9</td>
<td>.619</td>
</tr>
<tr>
<td>7. The flexibility allows me to explore my own areas of interest.</td>
<td>3.80 (1.135)</td>
<td>3.80 (.789)</td>
<td>.000</td>
<td>9</td>
<td>1.000</td>
</tr>
<tr>
<td>8. I communicate with other students electronically (email, bulletin boards, chat).</td>
<td>3.90 (1.370)</td>
<td>3.80 (1.135)</td>
<td>-.318</td>
<td>9</td>
<td>.758</td>
</tr>
<tr>
<td>9. When using instructional technology, I have to be self-disciplined in order to learn.</td>
<td>3.10 (1.370)</td>
<td>3.40 (.966)</td>
<td>.487</td>
<td>9</td>
<td>.638</td>
</tr>
<tr>
<td>10. I have the autonomy to ask my instructor what I do not understand.</td>
<td>4.40 (.699)</td>
<td>4.00 (1.054)</td>
<td>-1.000</td>
<td>9</td>
<td>.343</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>-----</td>
<td>----</td>
<td>----------------</td>
</tr>
<tr>
<td>11. I have the autonomy to ask other students what I do not understand.</td>
<td>3.60 (1.506)</td>
<td>3.80 (1.229)</td>
<td>.429</td>
<td>9</td>
<td>.678</td>
</tr>
<tr>
<td>12. Other students respond promptly to my questions.</td>
<td>3.60 (.843)</td>
<td>3.80 (.789)</td>
<td>.612</td>
<td>9</td>
<td>.555</td>
</tr>
<tr>
<td>13. I regularly participate in self-evaluations.</td>
<td>2.60 (1.265)</td>
<td>3.20 (1.135)</td>
<td>1.327</td>
<td>9</td>
<td>.217</td>
</tr>
<tr>
<td>14. I was supported by positive attitude from my peers.</td>
<td>3.80 (1.033)</td>
<td>4.30 (.675)</td>
<td>1.342</td>
<td>9</td>
<td>.213</td>
</tr>
<tr>
<td>15. This mode of learning enables me to interact with other students and the instructor.</td>
<td>3.90 (.738)</td>
<td>3.80 (.789)</td>
<td>-.429</td>
<td>9</td>
<td>.678</td>
</tr>
<tr>
<td>16. I felt a sense of satisfaction and achievement about this learning environment.</td>
<td>4.10 (.738)</td>
<td>3.90 (.738)</td>
<td>-.802</td>
<td>9</td>
<td>.443</td>
</tr>
<tr>
<td>17. I enjoy learning in this environment.</td>
<td>4.10 (.738)</td>
<td>3.90 (.738)</td>
<td>-.802</td>
<td>9</td>
<td>.443</td>
</tr>
<tr>
<td>18. I could learn more in this environment.</td>
<td>4.00 (.667)</td>
<td>4.10 (.738)</td>
<td>.361</td>
<td>9</td>
<td>.726</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>------</td>
<td>----</td>
<td>----------------</td>
</tr>
<tr>
<td>19. It is easy to organize a group for a project.</td>
<td>3.60 (1.075)</td>
<td>3.20 (1.229)</td>
<td>-.885</td>
<td>9</td>
<td>.399</td>
</tr>
<tr>
<td>20. It is easy to work collaboratively with other students involved in a group project.</td>
<td>3.60 (1.265)</td>
<td>3.30 (1.252)</td>
<td>-.758</td>
<td>9</td>
<td>.468</td>
</tr>
<tr>
<td>21. The instructional technology learning environment held my interest throughout my course of study.</td>
<td>3.80 (1.033)</td>
<td>3.60 (1.075)</td>
<td>-.688</td>
<td>9</td>
<td>.509</td>
</tr>
<tr>
<td>22. I felt a sense of boredom towards the end of my course of study.</td>
<td>2.50 (1.080)</td>
<td>3.20 (1.135)</td>
<td>1.561</td>
<td>9</td>
<td>.153</td>
</tr>
<tr>
<td>23. The scope or learning objectives are clearly stated in each lesson.</td>
<td>3.60 (.699)</td>
<td>3.70 (.675)</td>
<td>.557</td>
<td>9</td>
<td>.591</td>
</tr>
<tr>
<td>24. The organization of each lesson is easy to follow.</td>
<td>3.80 (.632)</td>
<td>3.70 (.823)</td>
<td>-.557</td>
<td>9</td>
<td>.591</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>------</td>
<td>----</td>
<td>----------------</td>
</tr>
<tr>
<td>25. The structure keeps me focused on what is to be learned.</td>
<td>3.60 (.966)</td>
<td>3.80 (.919)</td>
<td>.688</td>
<td>9</td>
<td>.509</td>
</tr>
<tr>
<td>26. Expectations of assignments are clearly stated in the tutorials.</td>
<td>4.00 (.667)</td>
<td>3.80 (.632)</td>
<td>-1.50</td>
<td>9</td>
<td>.168</td>
</tr>
<tr>
<td>27. Activities are carefully planned.</td>
<td>3.80 (.632)</td>
<td>3.50 (.707)</td>
<td>-.896</td>
<td>9</td>
<td>.394</td>
</tr>
<tr>
<td>28. The subject content is appropriate.</td>
<td>4.20 (.632)</td>
<td>3.50 (.707)</td>
<td>-2.689</td>
<td>9</td>
<td>.025*</td>
</tr>
<tr>
<td>29. The presentation of the subject content is clear.</td>
<td>4.10 (.568)</td>
<td>3.80 (.632)</td>
<td>-1.152</td>
<td>9</td>
<td>.279</td>
</tr>
</tbody>
</table>
Table 15

*Modified WEBLEI Statistics for Treatment Group*

<table>
<thead>
<tr>
<th>Modified WEBLEI Statements</th>
<th>Pre-test means (SD)</th>
<th>Post-test means (SD)</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TREATMENT (n=17)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I can access instructional technology learning activities at times convenient to me.</td>
<td>4.06 (.899)</td>
<td>4.12 (.781)</td>
<td>.194</td>
<td>16</td>
<td>.848</td>
</tr>
<tr>
<td>2. The instructional technology materials are available at locations suitable for me.</td>
<td>3.94 (.827)</td>
<td>4.06 (.659)</td>
<td>.566</td>
<td>16</td>
<td>.579</td>
</tr>
<tr>
<td>3. I am allowed to work at my own pace to achieve my learning objectives.</td>
<td>3.00 (1.061)</td>
<td>3.53 (.874)</td>
<td>1.852</td>
<td>16</td>
<td>.083</td>
</tr>
<tr>
<td>4. I decide how much I want to learn in a given period.</td>
<td>3.00 (1.225)</td>
<td>3.71 (.985)</td>
<td>1.765</td>
<td>16</td>
<td>.097</td>
</tr>
<tr>
<td>5. I decide when I want to learn.</td>
<td>3.47 (1.328)</td>
<td>3.53 (1.231)</td>
<td>.136</td>
<td>16</td>
<td>.894</td>
</tr>
<tr>
<td>6. The flexibility allows me to meet my learning goals.</td>
<td>3.53 (.943)</td>
<td>3.65 (.996)</td>
<td>.436</td>
<td>16</td>
<td>.668</td>
</tr>
<tr>
<td>7. The flexibility allows me to explore my own areas of interest.</td>
<td>3.71 (.920)</td>
<td>3.65 (.996)</td>
<td>-.236</td>
<td>16</td>
<td>.817</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------</td>
<td>---------------------</td>
<td>-----</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td>8. I communicate with other students electronically (email, bulletin boards, chat).</td>
<td>4.12 (.600)</td>
<td>4.06 (1.029)</td>
<td>-.236</td>
<td>16</td>
<td>.817</td>
</tr>
<tr>
<td>9. When using instructional technology, I have to be self-disciplined in order to learn.</td>
<td>3.53 (1.231)</td>
<td>3.29 (1.312)</td>
<td>-.416</td>
<td>16</td>
<td>.683</td>
</tr>
<tr>
<td>10. I have the autonomy to ask my instructor what I do not understand.</td>
<td>3.88 (1.111)</td>
<td>3.88 (.781)</td>
<td>.000</td>
<td>16</td>
<td>1.000</td>
</tr>
<tr>
<td>11. I have the autonomy to ask other students what I do not understand.</td>
<td>3.88 (1.111)</td>
<td>3.65 (.996)</td>
<td>-1.074</td>
<td>16</td>
<td>.299</td>
</tr>
<tr>
<td>12. Other students respond promptly to my questions.</td>
<td>3.59 (.712)</td>
<td>3.59 (.795)</td>
<td>.000</td>
<td>16</td>
<td>1.000</td>
</tr>
<tr>
<td>13. I regularly participate in self-evaluations.</td>
<td>2.53 (1.068)</td>
<td>2.53 (.800)</td>
<td>.000</td>
<td>16</td>
<td>1.000</td>
</tr>
<tr>
<td>14. I was supported by positive attitude from my peers.</td>
<td>3.76 (.664)</td>
<td>3.41 (.870)</td>
<td>-1.305</td>
<td>16</td>
<td>.210</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>----</td>
<td>----</td>
<td>----------------</td>
</tr>
<tr>
<td>15. This mode of learning enables me to interact with other students and the instructor.</td>
<td>3.75 (.577)</td>
<td>3.94 (.556)</td>
<td>.824</td>
<td>15</td>
<td>.423</td>
</tr>
<tr>
<td>16. I felt a sense of satisfaction and achievement about this learning environment.</td>
<td>3.59 (.795)</td>
<td>3.94 (.556)</td>
<td>1.461</td>
<td>16</td>
<td>.163</td>
</tr>
<tr>
<td>17. I enjoy learning in this environment.</td>
<td>3.88 (.781)</td>
<td>3.94 (.556)</td>
<td>.677</td>
<td>16</td>
<td>.508</td>
</tr>
<tr>
<td>18. I could learn more in this environment.</td>
<td>3.76 (.831)</td>
<td>4.06 (.659)</td>
<td>1.159</td>
<td>16</td>
<td>.264</td>
</tr>
<tr>
<td>19. It is easy to organize a group for a project.</td>
<td>3.12 (1.054)</td>
<td>3.35 (.996)</td>
<td>.637</td>
<td>16</td>
<td>.533</td>
</tr>
<tr>
<td>20. It is easy to work collaboratively with other students involved in a group project.</td>
<td>3.53 (1.068)</td>
<td>3.53 (.874)</td>
<td>.000</td>
<td>16</td>
<td>1.000</td>
</tr>
</tbody>
</table>

115
<table>
<thead>
<tr>
<th>Modified WEBLEI Statements</th>
<th>Pre-test means ($SD$)</th>
<th>Post-test means ($SD$)</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. The instructional technology learning environment held my interest throughout my course of study.</td>
<td>3.06 (.899)</td>
<td>3.35 (.862)</td>
<td>1.159</td>
<td>16</td>
<td>.264</td>
</tr>
<tr>
<td>22. I felt a sense of boredom towards the end of my course of study.</td>
<td>3.06 (.966)</td>
<td>2.71 (.920)</td>
<td>-1.144</td>
<td>16</td>
<td>.269</td>
</tr>
<tr>
<td>23. The scope or learning objectives are clearly stated in each lesson.</td>
<td>3.82 (.529)</td>
<td>3.82 (.529)</td>
<td>.000</td>
<td>16</td>
<td>1.000</td>
</tr>
<tr>
<td>24. The organization of each lesson is easy to follow.</td>
<td>3.53 (.800)</td>
<td>3.76 (.752)</td>
<td>.889</td>
<td>16</td>
<td>.387</td>
</tr>
<tr>
<td>25. The structure keeps me focused on what is to be learned.</td>
<td>3.53 (.717)</td>
<td>3.94 (.556)</td>
<td>1.807</td>
<td>16</td>
<td>.090</td>
</tr>
<tr>
<td>26. Expectations of assignments are clearly stated in the tutorials.</td>
<td>3.65 (.786)</td>
<td>4.00 (.612)</td>
<td>1.689</td>
<td>16</td>
<td>.111</td>
</tr>
<tr>
<td>27. Activities are carefully planned.</td>
<td>3.71 (.588)</td>
<td>4.00 (.612)</td>
<td>1.429</td>
<td>16</td>
<td>.172</td>
</tr>
<tr>
<td>Modified WEBLEI Statements</td>
<td>Pre-test means (SD)</td>
<td>Post-test means (SD)</td>
<td>t</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>-----</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td>28. The subject content is</td>
<td>3.71 (.588)</td>
<td>4.12 (.485)</td>
<td>2.384</td>
<td>16</td>
<td>.030*</td>
</tr>
<tr>
<td>appropriate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. The presentation of the</td>
<td>3.88 (.697)</td>
<td>4.12 (.485)</td>
<td>1.167</td>
<td>16</td>
<td>.260</td>
</tr>
<tr>
<td>subject content is clear.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To compare the between group means, independent sample t-tests were run for the 29 statements comparing the pre-test and post-test scores between the control and treatment groups. Statistically significant results ($p < .05$) were found for Statement 3 (I am allowed to work at my own page to achieve my learning objectives) in the pre-test ($t = -2.976$, $df = 25$, $p = .006$). No other statistically significant results were found for the other pre-test scores; however, Levene’s Test for Equality of Variance for pre-test Statement 8 (“I can communicate with other students electronically”) indicated equal variances not assumed ($F = 12.272$, Sig. = .002). Statistically significant results ($p < .05$) were found for two statements in the post-test: Statement 14 (equal variances assumed), “I was supported by positive attitude from my peers” ($t = -2.767$, $df = 25$, $p = .010$) and Statement 28 (equal variances not assumed based on Levene’s Test for Equality of Variance, $F = 4.345$, Sig. .047), “The subject content is appropriate” ($t = 2.445$, $df = 14.066$, $p = .028$). No other statistically significant results were found for the other post-
test scores. Table 16 displays the Modified WEBLEI statistics for the between group pre-
test and post-test scores.

Table 16

*Modified WEBLEI Statistics for the Between group Pre-Test and Post-Test Scores*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can access instructional technology learning</td>
<td>Control</td>
<td>4.00 (.943)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>4.06 (.899)</td>
</tr>
<tr>
<td>t-test value <em>(df = 25)</em></td>
<td>-.161, <em>p</em> = .873</td>
<td>-.614, <em>p</em> = .544</td>
</tr>
<tr>
<td>2. The instructional technology materials are available at locations suitable for me.</td>
<td>Control</td>
<td>4.10 (.738)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.94 (.827)</td>
</tr>
<tr>
<td>t-test value <em>(df = 25)</em></td>
<td>-.501, <em>p</em> = .621</td>
<td>-.838, <em>p</em> = .410</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>3. I am allowed to work at my own pace to achieve my learning objectives.</td>
<td>Control 4.20 (0.919)</td>
<td>3.70 (1.252)</td>
</tr>
<tr>
<td></td>
<td>Treatment 3.00 (1.061)</td>
<td>3.53 (0.874)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$ -2.976, $p = .006^*$</td>
<td>-.417, $p = .680$</td>
</tr>
<tr>
<td>4. I decide how much I want to learn in a given period.</td>
<td>Control 3.90 (1.370)</td>
<td>3.80 (1.033)</td>
</tr>
<tr>
<td></td>
<td>Treatment 3.00 (1.225)</td>
<td>3.71 (0.985)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$ -1.766, $p = .090$</td>
<td>-.236, $p = .816$</td>
</tr>
<tr>
<td>5. I decide when I want to learn.</td>
<td>Control 3.60 (1.506)</td>
<td>3.70 (1.418)</td>
</tr>
<tr>
<td></td>
<td>Treatment 3.47 (1.328)</td>
<td>3.53 (1.231)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$ -.233, $p = .818$</td>
<td>-.329, $p = .819$</td>
</tr>
<tr>
<td>6. The flexibility allows me to meet my learning goals.</td>
<td>Control 3.90 (1.197)</td>
<td>3.70 (1.059)</td>
</tr>
<tr>
<td></td>
<td>Treatment 3.53 (.943)</td>
<td>3.65 (.996)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$ -.893, $p = .381$</td>
<td>-.130, $p = .897$</td>
</tr>
<tr>
<td>7. The flexibility allows me to explore my own areas of interest.</td>
<td>Control 3.80 (1.135)</td>
<td>3.80 (.789)</td>
</tr>
<tr>
<td></td>
<td>Treatment 3.71 (.920)</td>
<td>3.65 (.996)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$ -.236, $p = .816$</td>
<td>-.414, $p = .682$</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>8. I communicate with other students electronically</td>
<td>3.90 (1.370)</td>
<td>3.80 (1.135)</td>
</tr>
<tr>
<td>Control</td>
<td>3.80 (1.135)</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>4.12 (.600)</td>
<td>4.06 (1.029)</td>
</tr>
<tr>
<td>t-test value</td>
<td>.476, df = 11.067,</td>
<td>.608, df = 25,</td>
</tr>
<tr>
<td>p = .571</td>
<td></td>
<td>p = .549</td>
</tr>
<tr>
<td>9. When using instructional technology, I have to be self-disciplined</td>
<td>3.10 (1.370)</td>
<td>3.40 (.966)</td>
</tr>
<tr>
<td>to learn.</td>
<td>3.40 (.966)</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.29 (1.312)</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>3.53 (1.231)</td>
<td></td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>.840, p = .409</td>
<td>-.222, p = .826</td>
</tr>
<tr>
<td>10. I have the autonomy to ask my instructor what I do not understand.</td>
<td>4.40 (.699)</td>
<td>4.00 (1.054)</td>
</tr>
<tr>
<td>Control</td>
<td>4.00 (1.054)</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>3.88 (1.111)</td>
<td>3.88 (.781)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-1.321, p = .198</td>
<td>-.332, p = .743</td>
</tr>
<tr>
<td>11. I have the autonomy to ask other students what I do not understand.</td>
<td>3.60 (1.506)</td>
<td>3.80 (1.229)</td>
</tr>
<tr>
<td>Control</td>
<td>3.60 (1.229)</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>3.88 (1.111)</td>
<td>3.85 (.996)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>.559, p = .581</td>
<td>-.353, p = .727</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>12. Other students respond promptly to my questions.</td>
<td>Control: 3.60 (.843)</td>
<td>Treatment: 3.59 (.712)</td>
</tr>
<tr>
<td>14. I was supported by positive attitude from my peers.</td>
<td>Control: 3.80 (1.033)</td>
<td>Treatment: 3.76 (.664)</td>
</tr>
<tr>
<td>15. This mode of learning enables me to interact with other students and the instructor.</td>
<td>Control: 3.90 (.738)</td>
<td>Treatment: 3.75 (.577)</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>---------------</td>
</tr>
<tr>
<td>17. I enjoy learning in this environment.</td>
<td>Control</td>
<td>4.10 (.738)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.88 (.781)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-.713, p = .482</td>
<td>.635, p = .531</td>
</tr>
<tr>
<td>18. I could learn more in this environment.</td>
<td>Control</td>
<td>4.00 (.667)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.76 (.831)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-.761, p = .454</td>
<td>-.150, p = .882</td>
</tr>
<tr>
<td>19. It is easy to organize a group for a project.</td>
<td>Control</td>
<td>3.60 (1.075)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.12 (1.054)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-1.140, p = .265</td>
<td>.353, p = .727</td>
</tr>
<tr>
<td>20. It is easy to work collaboratively with other students involved in a group project.</td>
<td>Control</td>
<td>3.60 (1.265)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.53 (1.068)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-.155, p = .878</td>
<td>.561, p = .580</td>
</tr>
<tr>
<td>21. The instructional technology learning environment held my interest throughout my course of study.</td>
<td>Control</td>
<td>3.80 (1.033)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.06 (.899)</td>
</tr>
<tr>
<td>t-test value (df = 25)</td>
<td>-1.959, p = .061</td>
<td>-.657, p = .517</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>22. I felt a sense of boredom towards the end of my course of study.</td>
<td>Control 2.50 (1.080)</td>
<td>Treatment 3.06 (.966)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.71 (.920)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$</td>
<td>1.390, $p = .177$</td>
</tr>
<tr>
<td>23. The scope or learning objectives are clearly stated in each lesson.</td>
<td>Control 3.60 (.699)</td>
<td>Treatment 3.82 (.529)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.82 (.529)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$</td>
<td>.942, $p = .355$</td>
</tr>
<tr>
<td>24. The organization of each lesson is easy to follow.</td>
<td>Control 3.80 (.632)</td>
<td>Treatment 3.53 (.800)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.76 (.752)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$</td>
<td>-.913, $p = .370$</td>
</tr>
<tr>
<td>25. The structure keeps me focused on what is to be learned.</td>
<td>Control 3.60 (.966)</td>
<td>Treatment 3.53 (.717)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.94 (.556)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$</td>
<td>-.217, $p = .830$</td>
</tr>
<tr>
<td>26. Expectations of assignments are clearly stated in the tutorials.</td>
<td>Control 4.00 (.667)</td>
<td>Treatment 3.65 (.786)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.00 (.612)</td>
</tr>
<tr>
<td></td>
<td>t-test value $(df = 25)$</td>
<td>-1.188, $p = .246$</td>
</tr>
<tr>
<td>Measure</td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>27. Activities are carefully planned</td>
<td>Control</td>
<td>3.80 (.632)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.71 (.588)</td>
</tr>
<tr>
<td></td>
<td>t-test value (df = 25)</td>
<td>-.391, p = .699</td>
</tr>
<tr>
<td>28. The subject content is</td>
<td>Control</td>
<td>4.20 (.632)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.71 (.588)</td>
</tr>
<tr>
<td></td>
<td>t-test value</td>
<td>-2.052, df = 25, 2.445, df = 14.066,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p = .051</td>
</tr>
<tr>
<td>29. The presentation of the subject content is clear.</td>
<td>Control</td>
<td>4.10 (.568)</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.88 (.697)</td>
</tr>
<tr>
<td></td>
<td>t-test value (df = 25)</td>
<td>-.836, p = .411</td>
</tr>
</tbody>
</table>

Further Data Analysis

Considering the phenomenon that students’ scores on the ACCUPLACER™ Online WritePlacer Plus essay fell from pre-test to post-test in both the control and treatment groups, further data analyses were conducted.

The amount of time students took to write the essay in ACCUPLACER™ Online WritePlacer Plus was recorded. Students spent significantly more time writing the pre-test essay (27 minutes 48.6 seconds in the control group and 27 minutes 40.2 seconds in the treatment group) than they did writing the post-test essay (21 minutes 21.6 seconds in
the control group and 17 minutes 43.2 seconds in the treatment group). Table 17 shows the average amount of time to write the essay per section.

Table 17

Average Amount of Time to Write Essay in ACCUPLACER™ Online WritePlacer Plus

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test average time</th>
<th>Post-test average time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control1</td>
<td>30:15.6</td>
<td>19:43.8</td>
</tr>
<tr>
<td>Control2</td>
<td>27:24.6</td>
<td>22:08.4</td>
</tr>
<tr>
<td>Control3</td>
<td>27:02.4</td>
<td>21:28.8</td>
</tr>
<tr>
<td>All Control</td>
<td>27:48.6</td>
<td>21:21.6</td>
</tr>
<tr>
<td>Treatment1</td>
<td>24:45.0</td>
<td>16:34.8</td>
</tr>
<tr>
<td>Treatment2</td>
<td>30:40.8</td>
<td>16:03.6</td>
</tr>
<tr>
<td>Treatment3</td>
<td>27:29.4</td>
<td>22:06.6</td>
</tr>
<tr>
<td>All Treatment</td>
<td>27:40.2</td>
<td>17:43.2</td>
</tr>
</tbody>
</table>

To further determine if there was any correlation between student confidence (as measured in the post-test ATAC Surveys) and the difference in pre-post ACCUPLACER™ Online WritePlacer Plus test scores in the treatment group, Pearson Correlations were calculated using each ACCUPLACER™ Online WritePlacer Plus measure’s (TOTAL, DEV, ORG) pre-post difference as a dependent variable, and the ATAC Questions (Q1 through Q4) and Statements (S5 through S10) as independent
variables. The statistics revealed no correlation between any of the pre-post differences and the independent variables. Table 18 displays Pearson Correlations for each ATAC Question or Statement for the treatment group.

Table 18

Pearson Correlations of ACCUPLACER™ Online WritePlacer Plus Pre-Post

Differences in Scores with ATAC Questions and Statements for Treatment Group

<table>
<thead>
<tr>
<th>ATAC Questions/Statements</th>
<th>ρ CHG TOTAL</th>
<th>Sig.</th>
<th>ρ CHG DEV</th>
<th>Sig.</th>
<th>ρ CHG ORG</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>.043</td>
<td>.876</td>
<td>.121</td>
<td>.655</td>
<td>.316</td>
<td>.234</td>
</tr>
<tr>
<td>Q2. How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td>-.041</td>
<td>.876</td>
<td>-.054</td>
<td>.838</td>
<td>-.008</td>
<td>.976</td>
</tr>
<tr>
<td>Q3. How do you rate your skills in crafting supporting sentences for an argument?</td>
<td>.246</td>
<td>.342</td>
<td>.306</td>
<td>.233</td>
<td>.178</td>
<td>.495</td>
</tr>
<tr>
<td>ATAC Questions/Statements</td>
<td>ρ CHG TOTAL</td>
<td>Sig.</td>
<td>ρ CHG DEV</td>
<td>Sig.</td>
<td>ρ CHG ORG</td>
<td>Sig.</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------</td>
<td>------</td>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>Q4. How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td>-0.272</td>
<td>0.347</td>
<td>-0.294</td>
<td>0.308</td>
<td>-0.337</td>
<td>0.239</td>
</tr>
<tr>
<td>S5. I have trouble developing topic sentences.</td>
<td>0.013</td>
<td>0.962</td>
<td>0.342</td>
<td>0.179</td>
<td>-0.123</td>
<td>0.638</td>
</tr>
<tr>
<td>S6. I have trouble developing thesis statements.</td>
<td>-0.180</td>
<td>0.489</td>
<td>0.162</td>
<td>0.533</td>
<td>-0.370</td>
<td>0.143</td>
</tr>
<tr>
<td>S7. I have trouble finding support for arguments.</td>
<td>0.027</td>
<td>0.918</td>
<td>0.111</td>
<td>0.673</td>
<td>0.017</td>
<td>0.950</td>
</tr>
<tr>
<td>S8. I have trouble developing supporting sentences for arguments.</td>
<td>-0.121</td>
<td>0.643</td>
<td>0.036</td>
<td>0.892</td>
<td>-0.013</td>
<td>0.961</td>
</tr>
<tr>
<td>S9. I have trouble developing counterarguments.</td>
<td>-0.232</td>
<td>0.371</td>
<td>-0.017</td>
<td>0.949</td>
<td>-0.303</td>
<td>0.237</td>
</tr>
<tr>
<td>S10. I have trouble writing an argument in a timed test environment.</td>
<td>0.086</td>
<td>0.743</td>
<td>0.325</td>
<td>0.204</td>
<td>0.303</td>
<td>0.237</td>
</tr>
</tbody>
</table>
Instructors’ Curricula and Assessments of Students’ Argumentation Skills

Before the pre-test surveys and writing assignment were administered, the syllabi and argumentation assignment of all four instructors were examined, and all four instructors were interviewed and asked the following question before the pre-test: “How do you teach argumentation skills?” (See Appendix N for instructors’ syllabi and assignments).

Jacqui and Rose taught pairs of classes, and each class within a pair served as a control group and a treatment group. For the pair of classes that were not taught by the same instructor, Vance taught the class which served as a control group, and Frank taught the class which served as a treatment group.

All four instructors, for all six classes, address argumentation skills in some way in their syllabi. Jacqui is the only instructor of the four to use the explicit language of the English Composition Program’s goal in her syllabus: “Students are expected to develop college-level abilities for handling a range of texts, including abilities to create texts that respond to varied rhetorical situations in a range of written genres, to include (but not be limited to) US academic argument and research-supported texts.” Rose lists the following as a goal in her syllabus: “Develop a meaningful thesis and argue to support it, evaluating and using research as needed.” One of Vance’s course goals is stated as such: “Read non-fiction with a critical eye for point of view and logical argument.” Though this does not address argumentative writing, this goal carries to his research assignment which will be discussed later. Frank’s syllabus addresses elements of argumentation in the scheduled activities: one class is devoted to the appeals (“rational, emotional, ethical”) in
argumentation, and students are directed to compose “Writing #7 [which] will be a persuasive essay [in which students] advance a narrowly-defined proposition about any pre-approved topic, include documented information, necessary background information, a refutation, and a works cited page.”

All four instructors began their argument assignment after the pre-test surveys and writing test: Frank, Rose, and Jacqui all began their argument assignments in Week 7 of the term, just prior to Spring Break, while Vance began his assignment in Week 12.

Frank approached his argumentation assignment as a persuasive essay, asking students in Week 7 to explore meaningful topics then narrowing the proposition of the topic to one which is arguable. Building from earlier class discussions of *logos*, *ethos*, and *pathos*, Frank based his lectures on Corbett’s (1998) *Classical Rhetoric for the Modern Student*, 4th Edition, walking his students through six steps of argumentation: “introduction, statement of fact, defining terms, refutation, affirmation/confirmation, and conclusion.” Frank spent two weeks covering the information and gave students the freedom to write on whatever content they wished. Students wrote a draft of this paper which Frank commented on and which was peer reviewed by two classmates before Frank reviewed and evaluated the final draft.

Vance took a similar approach with his students, starting later in the semester than his peers. His assignment, “Researched Argument Project,” focused on a variety of class activities to inculcate students into argumentation skills. Prior to starting the assignment, Vance provided lessons on research skills, paraphrase and summary, quotation integration, logical fallacies, and organization and logic. The students also read and
analyzed arguments to learn techniques to apply to their writing. Starting in Week 12, the first activity, on which Vance spent a whole class session, discussed the question “Why learn argument skills?” using common situations first-year college students might encounter (why a student should receive a scholarship, why a roommate should do more around the dorm room), explored the importance and usefulness of writing arguments in other class and professional situations, and reviewed the assignment. The second activity, on which Vance also spent a whole class session, introduced the classical mode of argument (formal logic). The third activity, also taking a whole class session, focused on counterargument as students debated “a thesis that [the class came] up with from a course text or discussion topic.” Once students began the assignment, they had individual conferences with Vance and had peer reviews.

Jacqui structured her assignment, the Investigative Process Draft (IPD), somewhat differently. Using Tomasino’s (2006) Discovering Popular Culture, which is marketed as a text “to understand what Americans are seeing, thinking, and doing in the 21st century” (cover notes), Jacqui’s classes examined cultural texts from the beginning of the semester to determine what they argue. Once students discovered topics they wanted to research, Jacqui provided the following larger frame of reference: “I am studying ________ in order to discover whether/which/ what/why ________ because I want to find out ________.” The focus of the IPD was “to have a real sense of [a student’s] sources and to allow those sources ‘voice’ in [the] paper” by “searching for the author’s argument and rationale.” In her assignment, Jacqui stated: “Good research essays, professional ones, make claims based on the writer’s (your) critical viewpoint and analysis of expert
thinking and data.” The IPD was introduced in Week 7, and students conferenced with Jacqui in Week 9 before they submitted drafts for instructor and peer review in Week 11.

Rose started discussing classical Aristotelian argument structure in Week 3 by defining the five structural stages: introduction/statement of thesis, narration, proof/confirmation, opposition/counterargument, summation. She explicitly used the Toulmin model to examine arguments in course readings and handouts (from a variety of sources). In Week 7, the formal assignment was given to students. Rose held conferences with students during Week 9, and they submitted drafts for instructor and peer review in Week 11.

The data the instructors provided for the question “How do you teach argumentation skills?” reveal all instructors had significant argumentative assignments in their courses which met or exceeded the English Composition Program’s goal for argumentative writing for English 101.

After the post-test surveys and writing tests were administered, the instructors were interviewed and asked the following four questions:

1. Did you do anything differently this semester when you taught argumentation skills?
2. Did you use i-Claim in the treatment sections beyond the researcher’s session?
3. When i-Claim was used in the treatment sections, what did you do in the control sections?
4. What are your perceptions of students’ argumentation skills?
When asked if they did anything differently during the semester when they taught argumentation skills, Vance, Frank, and Jacqui all responded they did not do anything differently during the semester of the study when they taught argumentation skills. Rose, who taught a pair of classes, responded that she started to use the Toulmin model directly with the first-year English composition students, but “they’re very confused by it.”

When asked if they used i-Claim in the treatment sections beyond the researcher’s session, Frank and Jacqui responded they did not use i-Claim beyond the treatment instruction. Rose responded she referred students in the treatment group to i-Claim’s discussion of underlying claims and evidence once in the week following the intervention.

When asked what they did in the control sections, Vance, Jacqui, and Rose all responded they taught argumentation as they always have.

When asked about their perception of students’ argumentation skills, three of the four instructors responded that students’ skills ranged from “less than satisfactory” to “satisfactory.” Rose stated: “They’re okay. They [the students] have started to look at things from a variety of experiences. A lot still struggle with counterargument. Some do a good job laying out [the argument’s] positions but don’t really know how to handle them. They [the students] struggle with the nuances of argument.” Frank compared students’ argumentation skills over the course of his teaching career: “Relative to twenty years ago, [students’ argumentation skills are] weaker now. The nature of public discourse has devolved. Kids don’t have the stamina to watch an argument or listen through a real debate, lapsing into ad hominem debates.” Jacqui stated that while students begin to “get
better” at argumentation in first-year English composition, “they have a hard time owning their own topics.”

The descriptive and content analyses of the instructors’ comments and documents show all four address argumentation in their first-year English composition courses within the programmatic goals. Though they vary in their approach to teaching argumentation skills, students in their classes received instruction consistent with the English Composition Program’s goals. However, all four think argumentation skill development takes more time to master than the time spent on it in first-year English composition. Both Frank and Jacqui commented that students in their third-year advanced English composition courses were “more adept” at argumentation skills, yet still had to be instructed to “master” argumentation.

Summary of Findings

Findings for the three research questions revealed that students’ use of *i-Claim* had no effect on their argumentation skills, their confidence in writing arguments, or their confidence in using technological tools to facilitate learning. (Qualitative data from students did not support any of the hypotheses since all three respondents came from control groups.) While confidence in writing arguments and confidence in using technological tools to facilitate learning improved overall from pre-test to post-test, student performance on the writing test digressed in both the control and treatment groups. Students spent significantly less time writing the essay in the post-test than in the pre-test. Pearson Correlation Coefficients revealed no statistically significant correlations.
between student confidence and the pre-post difference in score in the ACCUPLACER™ Online WritePlacer Plus test. Interviews with instructors indicated that while students should receive instruction and have experience writing arguments in a first-year English composition class, mastery of argumentation skill takes much longer than a semester. A discussion of these findings and recommendations for future research will be presented in Chapter V.
5. Discussion of Findings

This final chapter presents a summary of the study and a discussion of its major findings, general conclusions, and implications. In this chapter, the researcher will also revisit interview data to examine further instructors’ perceptions of students’ argumentation skills and how argumentation might be better taught in first-year English composition courses in order for students’ to achieve mastery more quickly. Concluding recommendations will highlight further research which needs to be conducted.

Summary of Study

The overall purpose of this study was to examine if first-year composition students’ mastery of argumentation in a timed writing test is enhanced by using the computer-based technology tutorial *i-Claim*. A secondary purpose was to investigate if students felt more confident about their argumentation skills as a result of using the tutorial, and if students felt more confident overall about using computer-based tools to facilitate their learning. This study focused on first-year English composition courses because this is often when students have their first exposure to writing college-level persuasive paper.

The results of this research study are inconclusive since the scores on the timed argumentative essay for all students in both the control and treatment groups fell from
pre-test to post-test. The most important finding is that one guided classroom session with i-Claim as supplemental instruction is clearly not enough supplemental instruction for students to develop stronger argumentation skills beyond their regular classroom instruction. The advantage of using i-Claim in any English composition course is to provide an “exploration into the functions of arguments” (Purdy, 2006) with visual and audio examples of argumentation in addition to textual examples, for, as Clauss (2005) states in i-Claim, “arguments use more than words, and exist beyond the printed page” (opening screen). Students today are bombarded with visual, multimedia, audio, and print arguments, often not realizing they are arguments, and instructors can help students understand argumentation by using a variety of examples in a variety of media, and the tutorial information provides step-by-step examination of the elements of argumentation.

The second significant finding of this study was that using i-Claim might have affected students’ confidence in some discrete argumentation skills, namely crafting supporting sentences, writing a short argument essay in a timed writing situation, and developing topic sentences. While student confidence in their argumentation skills increased in both the control and treatment groups, the increase in confidence with other argumentation skills besides those three just mentioned was not due to exposure to i-Claim. Classroom instruction and practice writing arguments in assignments were the likely interventions in increasing student confidence in their argumentation skills since the students argumentation skills were not affected by the introduction of i-Claim into their curriculum.
The third significant finding of this study was that while students overall feel confident about using computer-based tools to facilitate their learning, using *i-Claim* did not affect students’ confidence in using such tools. Today’s students are already fairly confident using computer-based tools to facilitate their learning, as indicated by the responses to 28 of 29 Modified WEBLEI statement rated greater than 3 (on a five-point Likert-scale survey, between “don’t know” and “agree”) in the pre-test sample for both the control and treatment groups. Post-test findings indicated levels relatively consistent with pre-test findings (difference of means in the control group ranging from -.46 to +.31 and difference of means in the treatment group ranging from -.13 to +.18).

Though the findings of this study did not support the original hypotheses, it is important to examine some of the rationales which *might* have affected the findings. These rationales can be further divided into several issues as seen below:

1. **Statistical rationales**
   a. Small sample size
   b. Poor scores on treatment group pre-tests
   c. Time spent on writing essay

2. **Theoretical rationales**
   a. Lack of motivation
   b. Limited exposure time
   c. Breakdown of basic skills with new content

3. **Anecdotal rationales**

*Statistical Rationales*
The small sample size for the ACCUPLACER™ Online WritePlacer Plus timed argumentative essay \((n=42)\) and the ATAC and Modified WEBLEI surveys \((n=27)\) certainly had some effect on the findings. A post hoc test for statistical power indicated an observed power score of .3408, and the minimum sample size for this study should have been 91. Harris and Quade (1992) discussed the “minimally important difference” in sample sizes, noting that distributions can be “skewed” for small sample sizes which then results in no statistically significant findings (p. 41). Smith (1978) was even more pessimistic when examining several small sample studies, finding the studies “contain sizable error” and “little or nothing will be learned from small sample generalizability studies” (p. 342).

Despite the small sample size, students in the treatment group performed considerably poorer in toto on the both the pre-test and post-test ACCUPLACER™ Online WritePlacer Plus timed argumentative essay than those in the control group, yet the ATAC and Modified WEBLEI scores were more consistent between the control and treatment groups. This disparity in the ACCUPLACER™ Online WritePlacer Plus scores provided poor comparisons between groups to determine any statistical significance.

The more revealing statistical rationale is the amount of time spent writing the post-test essay by students in both the control and treatment groups. Students in the control group spent an average of 21 minutes 21.6 seconds writing the post-test essays, a 23.2% drop in the average time spent writing the pre-test essays. Students in the treatment group spent even less time writing the post-test essay, an average of 17 minutes 43.2 seconds, a 36.0% drop in the average time spent writing the pre-test essays. This
disparity in time spent writing the pre-test to writing the post-test essay supports the lower scores on the post-test essays and may be itself a reason for the poorer performance. This might be explained by the first theoretical rationale, lack of motivation.

*Theoretical Rationales*

Students in this research study were neither compensated nor received extra credit for participating in the study. As participation in the research study was not a graded assignment, even though daily participation of some sort factored into the course grades for students taught by all four instructors, students may have felt their absence would affect their course grade negligibly, if at all. This lack of extrinsic reward might have affected the participation, supporting Lyons (1990) who indicated some college students rely on such rewards whenever participation (or lack of participation) has no effect on their grade.

Students in the treatment groups were exposed to the *i-Claim* tutorial for 50 minutes of a class session. (Students in 75-minute class sessions were stopped at 50 minutes to allow for equal treatment of all participants.) Participant students in the treatment groups were given the CD-ROM to keep and urged to use it and refer to it as they wrote their argumentation assignment. Only one instructor, Rose, referred to *i-Claim* subsequent to the treatment session, urging participant students to review the part of *i-Claim* which dealt with underlying claims and evidence. This lack of usage may have significantly impacted the data as other studies (Koran, 1975; Kidder, 1975; Baron & Abramai, 1992; Reynolds & Vogel, 2007) have indicated that longer exposure time to
new material is critical to skill development. Britton et al (1986) also found that limited exposure time to new material did not produce significant progress in student performance.

Yet another crucial element is what Onore (1983) considers the “gains and losses as writers reformulate” (p. 22). Onore posited that when students are faced with more complex content or tasks, some element of their composing process falters as a result, and only upon revision are some of the less complex skills corrected. Onore’s position, along with Kennedy’s (1986) position to “suspend evaluation” (p. 24) of counterargument when teaching Rogerian argument to novice writers, support several participant instructors’ comments about students’ argumentation skills both being weak at this level and needing more time than just a semester to master argumentation. This break-down and lack of break-out of skill may have been the case with students in this study, as they were novices in writing argumentative essays in their first-year English composition class.

Anecdotal Rationales

In planning this research study, it was hoped to have three instructors teaching pairs of English 101. In the month before the semester began, enrollment figures university-wide, and specifically for freshman and transfer students, declined, resulting in moving students in low-enrolled sections into sections with few open spaces. This resulted in several instructors who had pairs of English 101 to lose one section of English 101 to be replaced with another English course which needed staffing, or to lose the section altogether. Two other instructors, one graduate teaching assistant and one adjunct
instructor, were teaching pairs of English 101, but they were unable to participate in the research study.

This resulted in having two pairs of sections of the English 101 course, each pair of sections taught by the same instructor, and two single sections taught by different instructors. This raised the possibility for validity issues with the data from the third pair of classes, sections taught by separate instructors, as students in the treatment group were not receiving exactly the same instruction as those in the control group. Data analysis for the two pairs of sections taught by the same instructors (the limited sample) was conducted in addition to the data analysis for the overall sample (all six sections) to determine if there were any validity issues. Data analysis showed there were no significant differences in the findings between the limited sample and the overall sample, so this validity issue was not compromised.

In the treatment sections, 94.6% of the participants who completed the pre-test surveys and writing test participated in the treatment session. However, when the post-test surveys and writing tests were conducted, significantly fewer students (68.75%) participated. All four instructors announced in the class previous to the post-test procedures that the research study would continue in the next class. This may have caused some students to skip class as there was no intrinsic or extrinsic motivation for them to participate in the study.

The post-test surveys and writing tests were conducted during the period April 14 to 30. One post-test section, in one of the sections in the pair of sections taught by different instructors, was conducted at 8:30am on a Monday morning. In this section,
80% of the students who completed the pre-test procedures completed the post-test procedures. The post-test sections from the pairs taught by the same instructors were conducted on successive Tuesdays, both days being sunny, spring-like days when some students would be inclined to skip class unless there was a major assignment due or a test scheduled. On the first Tuesday, 62.5% of the students who completed the pre-test procedures completed the post-test procedures, and on the second Tuesday, 70.0% completed the post-test procedures. In the last section, conducted on the Wednesday of the last week of classes, 60.0% completed the post-test procedures. This drop in the number of participants certainly had some effect on the data, but may not have significantly impacted the data.

An interesting phenomenon, though, occurred with the three measured ACCUPLACER™ Online WritePlacer Plus scores (total score, development score, and organization score). Pre-test scores for both the control and treatment groups were higher than post-test scores for all three ACCUPLACER™ Online WritePlacer Plus measures. An examination of two sample essays (one from a control group and one from a treatment group) may shed some light on this phenomenon.

As a reminder to the reader, the essay prompt is repeated below:

Technological change can have a very big effect on our daily lives. Which technological change do you feel has had the largest effect on life in this country? Write an essay for a classroom instructor in which you identify which technological change has had the biggest impact and why you feel this way. Be sure to support your choice with logical arguments and appropriate examples.
One of the control group participant students, Mark, wrote a four paragraph essay for the pre-test. The text of his essay is transcribed below exactly as it was written:

The ability to chat with people across the world is the biggest technology that has change our daily lives. The ability to “surf” the web is something majority of this world does half of their day. The ability to live a life with the access to almost any information and the tip of our fingers. The great invention of the computer/internet has changed this world where it had never been. What do you think this world would be like if we had no computers/internet? Do you think powful countires like ourselves would have such a such an environment as we do now? If our world never encountered the computer/internet, then our lives and the things we do would be as primative as the cavemen themselves.

Without computers/internet this world would be where it left off with the cavemen making the wheel. So many things that we use in our lives have some sort of computer device within it. Like our cars, they run off the expensive gas and engine but it has a computer that manages the functions of the car and tells us if something is wrong. Even in the PSP or Nintendo DS, handheld games kids and adults own, have chips and Bluetooth where people can connect with other people and play games together. This world surrounds the Age of Computers/internet. Our phones have functions where it would need chips, like the ones in computer.
and internet ability is basically the same as the satellite for phones. This world started little by little, but with one idea, say computer, they use that and made other ideas using the same parts or functions. What would this world be doing without this amazing yet dangerous invention.

At one point we all love the idea of computer/internet but i at the same time we should fear this invention. Whenever there is something good, there always is a bad waiting to be found. Without computer and internet our world would be confused with what's going on in other countries and we would probably still be in wooden boats, Columbus style. Even though the computer/internet gives us this luxurious live Washington would of dreamed to live in, it puts us in danger as well. Now that computers/internet is getting big and convenient everything is becoming computerized. So the question is why change the world into computers when it is so easy to send a virus and mess it all up, putting a business or even the stock market into great depression. We are all happy with this great invention but at the same time we should watch out for those who want to find the bads and make this great invention into something we will regret we invented.

We would be living in a life of Washington if the computer/internet wasn’t invented. On one side we have all this great things that came from computers/internet but on the other side we put ourselves in a world of computers/internet making us vulnerable to destruction easily. While we have the ability to “surf” the
web on the tip of our fingers we have the ability to send viruses that could mess, say, a business into mayhem. I feel that computer/internet is the biggest impact because he has modernized us to a point the 12 deciples didn’t even imagine it would happen. From the idea of computers/internet it has led us to the invention of many other things. But even as we enjoy and come up with new ideas and inventions we should know that when there is something great there will always be a fall.

ACCUPLACER™ Online WritePlacer Plus scored Mark’s essay 11 out of 12 for a holistic TOTAL score, 9 out of 12 for the development score, and 9 out of 12 for the organization score. Despite the surface spelling, grammatical, and mechanical errors, and the naïveté of the argument, Mark’s essay showed the development of a claim (the computer/internet has been the technological change that has had the greatest effect on this country) which was supported by evidence (how computers enhance cars, games, telecommunications). Mark even provided a counterargument (computer viruses can cause corporate and financial havoc). Mark spent 28 minutes 13 seconds writing this essay.

Mark’s post-test essay, based on the same prompt, is transcribed below exactly as it was written:

Technological change has had a very big effect on our daily lives. From the invention of the lightbulb to the automobile, technology has had a large effect on
this country. One of the biggest technological contribution is the computer/internet. In the past our knowledge was taught to us by people and the televison, but now it comes from sitting down and typing on a keyboard. The internet has made life conviente in many ways.

Internet has given us the ability to search information easier then reading it from the book. Our communication has increased extensively through the internet. We have the ability to talk to people across the globe, without a calling card. The news is at the tip of our fingers. We don’t need to sit down and watch T.V any more. We can just sit down on our computer, watch our news, and chat and search the web all at the same time. Internet has given us the chance to explore areas we never thought we would encounter. Everything has a type of computer within its component. Life is much easier with the invention of the computer. We have the cellphone which is a key item for people all over the world. It gives us the wireless ability to communicate with people at anytime. Within the pieces of the cellphone is a computer. The computer runs the cellphones programs and gives us the ability to do what we do with our cellphones; from chatting to searching the web. Importantly our stock exchange is ran by computers. Without that we wouldn’t know which stock has increased and which has decreased. The cares that we drive in daily have computers in them as well. It handles how much gas is being used and the electronic components in our car. He computer has done so much for us to make our lives easier.
Without the computer our lives would be harder. We would need to find other ways to find information and find harder ways to transport stuff. Computers have made it far and is going even farther as I write this paper.

Mark’s post-test essay, written in 12 minutes 46 seconds, less than half the amount of time he spent writing the pre-test essay, was scored by ACCUPLACER™ Online WritePlacer Plus as 8 out of 12 for the holistic TOTAL score, and 7 out of 12 for both the development score and organization score. While Mark made a similar claim in the post-test essay (the computer/internet is “one of the biggest technological contribution”), it was considerably weaker than his pre-test claim which more directly addressed the prompt. In addition, Mark provided implicit evidence for the claim in the post-test, discussing the effects of computer/internet technology on human’s lives. No counterargument existed in the post-test essay.

For a sample set of essays from the treatment group, Eric’s essays show remarkable similarities to Mark’s essays. Eric’s pre-test essay is transcribed below exactly as it was written:

The world has changed. New machines, new technolical resources, a whole new in world to help us in every daily activity from our lifes. One technological change that has been affecting this country, and also the world, for the last two decades is the internet. I can’t imagine myself without internet nowadays and I believe most
of the people feel the same. The internet is a network that connects you to different informations, different people and computers. It allows you to search for information, communicate with people around the world and also make the distances shorter.

The internet was created in the 80’s, but just became popular in the 90’s. Now, with the new generation of laptops, wireless connection, the internet has no limit. It is accessible in the most unusual place to the most popular place. You can go to Starbucks to get a coffee and access the internet from your computer. Airports, schools, coffee shops, malls. Everybody is connected. The entire world is connected, just waiting for you to get in touch with them. With a click, you can buy a new car, win a new i-Pod, talk to a chinese girl, plan your trip to Hawai, and several other things.

The impact of the internet in our routine is amazing; it will help you to save time and energy. Last night for an exemple, the internet saved me at least 3 blocks of stairs and half a hour. I was doing laundry, and they have a website that provides you with the information about the status of the machines; how many minutes are missing for your washer or if the machine is available. I checked the website before I go downstairs, and I saw that the washers were available. If I didn’t have the internet, I would have to go downstairs, check if the washers are available and wait for them or not. The internet made my life easier, and help me to not waste
time going downstairs to check something that I could see in my room. That’s a simple exemple, but it can illustrate how the internet is important in our lifes.

Without a doubt, the internet is the most important technological change that the humanity faced in the past decades. The internet allows you to communicate effectively, makes the distances short, makes you save time and opens a whole new world of information just in a click. Don’t waste time; stay connected and enjoy the magic that the internet can do for you.

ACCUPLACER™ Online WritePlacer Plus scored Eric’s pre-test essay 9 out of 12 for a holistic TOTAL score, and 8 out of 12 for both the development and organization scores. Again, despite the surface spelling, grammatical, and mechanical errors, and the naïveté of the argument, Eric’s essay showed the development of a claim (the internet has been a technological change affecting the country and the world for the last two decades) which was supported by evidence (buy and win merchandise, chat with people all over the world, and monitor laundry). Eric did not have a counterargument in his essay. He spent 26 minutes 10 seconds writing the pre-test essay.

Eric’s post-test essay, based on the same prompt, is transcribed below exactly as it was written:

Without a doubt, the creation of laptops were the biggest technological impact in our daily lives. Until the creation of laptops, internet users and computer users
were attached to a place, without mobility. They weren’t able to access their on information, and the use of computer was something unpersonal. With the creation of laptops, the computers became more personal and accessible for the user.

The communication is now more dynamic, once user can reach their personal information easily. College students can save time, when they take notes on their laptops: they don’t need to reorganize or type their notes, they are already ready for them to print and study. Also, laptops are perfect for the student lifestyle, where they are always travelling or moving, and they need their computer to work on projects, paper and researches. A laptop is necessary for a student in order to help him to keep up his study and college activities, that most part of his time.

Laptops became so popular and useful that could be considered one huge step for the technology. The mobility that offer to the users is incredible and cannot be compared to any other kind of technological change from the past 20 years.

Eric’s post-test essay, written in 13 minutes 57 seconds, just over half the time spent writing the pre-test essay, was scored by ACCUPLACER™ Online WritePlacer Plus as 7 out of 12 for the holistic total score, and 6 out of 12 for both the development score and organization score. While Eric made a different claim in the post-test essay (the laptop “without a doubt” has the biggest technological impact), it was considerably
weaker than his pre-test claim which more directly addressed the prompt. As in Mark’s post-test essay, Eric provided implicit evidence for the claim, discussing the benefits of having a laptop. No counterargument existed in the post-test essay.

These two examples show that in the post-test, argumentation skills were weaker than in the pre-test, presumably because of the lack of time spent in writing the essay, and thus supporting the statistical results of the ACCUPLACER™ Online WritePlacer Plus measures.

Students’ Perceptions of Argument and Use of Instructional Technology Tools

Eight participant students volunteered to be interviewed for the study; however, only three participant students met with the researcher both pre- and post-test to discuss their perceptions of argumentation and the use of instructional technology tools for their argumentation and writing assignments. All three students, Jared, Steve, and Maria, were in control groups, so their responses have no effect on the results of the study. However, their responses may be typical of students in first-year English composition courses.

All three participants were asked the following questions:

1. Tell me what you think arguing means?
2. What tools for argumentation skill development are you familiar with?
3. What tools have you used for argumentation skill development in the past? Why do you use these tools? How have they helped you in the past?
4. How do you see instructional technology tools helping you with argumentation?
5. What tools have you used for help with writing? Why do you use these tools? How have they helped you in the past?

6. What technological tools for writing are you familiar with?

7. How do you see technological tools helping you with writing and composition?

For Question 1, “Tell me what you think arguing means?” all three students responded similarly. Maria simply stated: “For and against. Arguing the facts on both sides.” Jared defined argumentation as “explaining a point of view to another person and persuading them of the side you’re defending.” Steve elaborated more than Jared: “Well, you have something you believe and [you] get someone to believe that. It can also be a more aggressive sort of thing, the aggressive form of persuasion. It can be constructive seeking conflicting points of view to understand something as completely as possible. [It] can be destructive as well, the proverbial ‘beating your head against a wall,’ people yelling and not listening.”

For Question 2, “What tools for argumentation skill development are you familiar with?” Maria again simply stated that “research and all the basic skills for writing” were the tools she used. Steve responded that he was “not even familiar with the term” (“argumentation skill development”), and Jared replied he did not “know of any,” then asking what was meant by “tools.” When given examples, Jared responded that “nothing came to mind.” He did tie research to argument: “I guess research is how you’d develop argument.”
For Question 3, “What tools have you used for argumentation skill development in the past? Why do you use these tools? How have they helped you in the past?” Jared and Maria reiterated their responses to question 2. Steve explained he used databases, the library and other people “to bounce conflicting ideas off of to see what they think of [them].” He found these tools to be “useful, credible, [though] sometimes people aren’t credible.”

For Question 4, “How do you see instructional technology tools helping you with argumentation?” Jared responded he did not know of any tools. Maria focused on online resources: “The Internet is a good tool to use, and online libraries to find documents.” Steve stated that “computers bring all the information and source material straight to my screen” noting he “does not have to look for it [information and source material].”

For Question 5, “What tools have you used for help with writing? Why do you use these tools? How have they helped you in the past?” only Jared discussed instructional technology tools, noting the grammar function in Microsoft Word helped him: “Any time [a sentence] has a green underline, I look at the suggestion.” Jared also mentioned having a Portuguese girlfriend and helping her with her writing “has helped me more than any specific tool or teacher to putting thought [in]to English.” Steve and Maria both discussed classroom interaction as tools that helped them with writing. Steve called peer review “imminently helpful” and Maria talked about classroom instruction.

For Question 6, “What technological tools for writing are you familiar with?” Maria mentioned the Internet, but did not elaborate on any specific tools on the Internet.
Both Jared and Steve reported Microsoft Office as the only technological tool they were familiar with.

For Question 7, “How do you see technological tools helping you with writing and composition?” Maria responded that they help her with research, “to give [me] ideas on what to write about and how to develop topics.” Both Jared and Steve mentioned how Microsoft Word allows them to edit text; Jared commented that “Word and I are a type of team.” Steve added he uses Easybib (http://www.easybib.com), an automatic bibliography composer, to help him format his reference lists, adding, “although some teachers don’t like it.”

The descriptive analysis of these interview responses have shown that while these students understood the concept of argument, they had little awareness of strategies or tools to help them write arguments beyond searching for evidence during research.

After the post-test surveys and writing tests, the participant students were contacted for follow-up interviews. They were asked the following five questions:

1. Tell me what you think arguing means?

2. What argumentation development tools (computerized and/or other) did you use during the semester for your assignments?

3. How did these tools help you with developing arguments in your assignments?

4. Did the use of the tools provide you with any noticeable change in your argumentation abilities?

5. Will you use any of these tools again? If so, which ones?
For Question 1, “Tell me what you think arguing means?” all three had developed more complex answers. Maria stated: “Arguing means using support on a particular topic and proving that your stance is the right one by incorporating research and facts to prove your point. When arguing, you have to look at both points of view and be able to prove both with facts. Once this is done, you are able to see what stance is in fact the right one.” Jared and Steve both included the need for “evidence” to support an argument. Jared responded: “You use facts and evidence to explain your point of view and persuade someone of your standpoint.” Steve took his definition one step further, stating “I have evidence to prove a point, and evidence for the other side, and make a judgment from all the evidence.”

For Question 2, “How do you see technological tools helping you with writing and composition?” and Question 3, “What argumentation development tools (computerized and/or other) did you use during the semester for your assignments?” all three respondents pointed to using Internet databases and other online tools. Steve responded that “J-STOR and I are friends now.” Jared reported using Lexis-Nexis and ProQuest, and Maria mentioned her use of “online dictionaries and thesauruses [sic] to better my vocabulary” as well as “online databases to find information and facts that would back up the stance I took in my argument.”

For Question 4, “How did these tools help you with developing arguments in your assignments?” Maria discussed how she could “include information to support my thesis and argument.” Jared responded: “I can use sources from the database to support my
argument with evidence from the articles.” Steve similarly responded: “I had more facts to back up my opinion.”

For Question 5, “Did the use of the tools provide you with any noticeable change in your argumentation abilities?” all three spoke of the use of source material from online databases to provide more support for their arguments. Steve replied: “My arguments are more credible because of the database sources.” Jared explained he “hadn’t known of any tools before [the start of the course], but now I zoom through the databases and know what I’m looking for. Maria considered her arguments “appealing and informative” because of the research she would not have had if she had not used online databases.

For Question 6, when asked “Will you use any of these tools again? If so, which ones?” all three replied they would use online databases regularly for research. Maria added that articles in online databases were helped her “thesis with facts from scholarly journals.” Steve said he would continue to explore online databases and would “always use Easybib” for all his documentation. Jared stated he used the thesaurus function in Microsoft Word more during the semester than he had before, and that helped increase his vocabulary.

The descriptive analyses of students’ interview have shown that these three students’ perception of argumentation and use of technology matured from the pre-test interview to the post-test interview. Their use of the language of argumentation, “evidence” and “support” and “the other side” or “both points of view” indicated greater awareness of the function and process of argumentation. While these students discussed some strategies that would help them write arguments, none of them discussed
technological tools to help them specifically with argumentation development. The data did indicate, however, that these students had a greater awareness of the use of online databases to help them find resources to support arguments.

Implications

**Exposure Time for Technological Interventions.** This study has shown that when students are given new technological tools to use for instruction, exposure time to the tool, with follow-up instruction and text generation, with instructor feedback, is essential to students’ skill development and retention.

**Research Methodology.** This study has shown the importance of extrinsic reward for student participation in research studies. The small sample size did not generate enough data to support the hypothesis, and the lack of motivation for students to participate had some direct effect on the decrease in sample size from pre- to post-test.

Recommendations for Future Research

If *i-Claim* were to be studied again in a first-year English composition course (or any other English composition course), it would be necessary to have *i-Claim* an integral, graded part of the argumentation skill development curriculum, with instructors in treatment groups actively promoting its use by students to develop their argumentation skills. Students would benefit from examining all six tutorials in *i-Claim*, doing the related exercises, and having the exercises evaluated by the instructor.
Two different studies using *i-Claim* might provide significant findings: (1) a study with larger sample size and more exposure time, or (2) a longitudinal study of students’ use of *i-Claim* and the development of their argumentation skills during the first-year English composition course and beyond, possibly into an advanced composition or writing-intensive course within the discipline, as supported by one of the instructor’s comments that students have more “mature” skills in their third-year courses than they do in their first-year courses. Both these studies might provide more data to support the tutorial’s effectiveness.

It would also be interesting to measure *i-Claim*’s effectiveness beyond English composition studies, in a variety of disciplines in which argumentative writing is both required and valued.

To ensure greater participation in the research study, some extrinsic reward (extra credit, a chance to win an iPod, coupons for free pizza) should be offered to recruit and retain students.

**Conclusions**

As indicated by the results of this study, the one-time use of *i-Claim* in a first-year English composition class to help students improve their argumentative writing skills and their confidence in argumentative writing is inconclusive, and more research needs to be conducted to determine if an instructional technology tool such as *i-Claim* can help students master argumentation skills. As 21st century students are somewhat facile with the use of technology in an educational setting, the findings are inconclusive as to
whether the use of *i-Claim* had any effect on their confidence in using technological tools to support learning. While the data analysis did not support the original hypotheses, some valuable lessons have been learned about how often technological tools to support learning should be used in instruction, how to encourage students to use technological tools to support their learning, and the design of experimental studies to produce significant results.
Appendix A

Syllabus Policy Template for English 101
(from http://composition.gmu.edu/faculty/index.php)

English 101.XXX — Composition
Your Name
Term, Day(s), Time, Room

Office:
Office Hours:
Office Phone:
Email:

Course Goals
This course is designed to help you improve your abilities to read, write, and think at a college level. In English 101, you will develop strategies to help you use writing as a tool for exploring and reflecting on your own ideas, as well as for informing and persuading your readers. You will need to develop critical reading and research techniques to support your writing, and learn appropriate technologies to assist your writing. English 101 emphasizes writing as a rhetorical process: you will explore beneficial ways to break a writing task into smaller steps such as generating and organizing ideas, investigating your topic, creating early drafts, seeking feedback, and revising. You will also improve your ability to adapt your writing to the needs of an audience or a situation, and your ability to revise and edit your own writing.

English 101 students are expected to develop as writers who

- can use writing as a tool for exploration, discovery, and/or reflection as well as more transactional goals such as exposition and persuasion
- can successfully employ strategies for writing as a recursive process of inventing, investigating, shaping, drafting, revising, and editing
- understand the basic principles of and can employ strategies for conducting college-level research, for evaluating sources and for incorporating other voices into their writing
- can use a range of available technologies to support their reading, writing, and thinking, including but not limited to email, word-processing, and database searching

English 101 students are also expected to develop an understanding of the role of audiences in writing, so that they
become familiar with and develop strategies for meeting common expectations of US academic audiences
are able to analyze a range of rhetorical situations—note the purposes, audiences, and contexts of a piece of writing—within and beyond university classrooms
can anticipate and use audience feedback—from peers as well as instructors—to help them revise their writing by seeing the gaps between the audience(s) implied by their writing and the real audience(s) who will read it

Finally, English 101 students are expected to develop college-level abilities for handling a range of texts, including

increased abilities to closely and critically read a variety of nonfiction texts, including (but not limited to) argumentative texts, their own writing, and their peers' writing, in order to identify rhetorical strategies that they can apply to their writing
abilities to create texts that respond to varied rhetorical situations in a range of written genres, to include (but not be limited to) US academic argument and research-supported texts
their ability to edit their own writing when necessary so that it meets the common expectations of US academic audiences for Standard Edited American English

Textbooks and Materials:
Textbooks are available at the Campus Bookstore.

Methods of Instruction
Most class meetings of English 101 will be interactive and will involve a significant amount of student discussion and writing. Students may be asked to work individually as well as collaboratively as they investigate issues, practice writing strategies and techniques, learn research and critical reading approaches, and review their own and their peers' writing. Students who attend regularly and stay engaged in class activities, who keep up with all of the assignments, and who block off sufficient time each week for thoughtful drafting and revising usually succeed in this class.

Course Requirements and Grading Percentages

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Assignment</th>
<th>Due</th>
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<tbody>
<tr>
<td>15%</td>
<td>Essay 1: Narrative, 750-1000 words</td>
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<tr>
<td>20%</td>
<td>Essay 2: Analysis, 1000-1500 words</td>
<td></td>
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<tr>
<td>30%</td>
<td>Essay 3: Researched Argument, 1500+</td>
<td></td>
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<tr>
<td>10%</td>
<td>Essay 4: Reflection, 500-750 words</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>Homework and Short Assignments</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>Class Participation (incl. peer review)</td>
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</table>
Completion Policy:
All final essays must be accompanied by one or more earlier drafts. You must complete all main essay assignments to earn a "C" or higher.

English 101 Grading Policy:
Students in ENGL101 receive a final grade of A+ (4.0), A (4.0), A- (3.67), B+ (3.33), B (3.0), B- (2.67), C+ (2.33), C (2.0), or NC (no credit). Students must earn a grade of C or higher to complete the 101 requirement; students whose grades are lower than a C will earn an NC.

A grade of NC reflects the philosophy that learning to write in an academic setting is a developmental process and that some students may require more time in this development. Since this grade does not appear on students' final transcripts or affect students' Grade Point Averages, students are not penalized for requiring additional time to meet the course requirements in ENGL101. Because of this policy, grades of Incomplete are not given in ENGL101.

Midterm Grades
In English 101, students receive a midterm letter grade based on the work of the first seven weeks of the course. The purpose of this grade is to help students find out how well they are doing in the first half of the course in order to make any adjustments necessary for success in the course as a whole. Instructors calculate letter grades based on the completed course assignments as weighted on the syllabus through the seventh week. The work in the second half of the semester may be weighted more heavily, and so the midterm grade is not meant to predict the final course grade. Students may view their grade online as soon as it is recorded.

Course Grading Policy:
In grading essays, I use the following general criteria:

A "C" level grade (70-79%) denotes average college-level writing and achievement. The essay is a competent response to the assignment: it meets, to some degree, all the assignment requirements, and demonstrates that the author has put significant time and effort into communicating his/her ideas to his/her targeted audience. It has a thesis, presents some support, and moves from point to point in an orderly fashion; sentence-level errors do not significantly prevent comprehension. Essays that do not meet these criteria will not earn a "C."

A "B" level grade (80-90%) highlights a strong example of college writing and thinking. In addition to meeting the "C" level requirements, such an essay goes further in some way(s): it demonstrates some insight into the "gray areas" of the topic, provides original or very thorough support that is tightly woven into the overall argument, reads smoothly
at both the sentence and paragraph levels, and/or exhibits a personal "voice" or style. It has few sentence-level errors.

An "A" level grade (90-100%) marks an essay that is a delight for the reader. Even more than in a "B" essay, its author anticipates and responds to possible reader questions, uses a wide range of supporting evidence, engages the reader in a provocative conversation, provides unexpected insights, and/or uses language with care and facility.

"D" and "F" level essays do not meet the basic expectations of the assignment.

**Submitting Class Work**
Assignments are due at the beginning of class on the due date. Unless otherwise noted, all formal assignments should be typed using a standard font and size (Times New Roman 12 or 14 point is commonly acceptable), and double-spaced. Assignments should be stapled. Put your name, the instructor's name, the class session, and the date at the top of the first page. I accept emailed assignments only as "place-holders" to avoid a late penalty; unless otherwise stated, all assignments must be turned in as hard-copy. You should keep all of your assignments as they are handed back to you.

**Late Work Policy**
Late assignments are those arriving any time after the beginning of class on the due date. If you need to, you can email me an assignment to avoid a grade penalty, but you must still turn in a hard copy as soon as possible. You may place an assignment in my mailbox in Robinson A487; do not ask the office staff to validate that you have turned it in; do not put work on or under my office door or on my desk if I am not there.

Late assignments will lose 5% of their points for each calendar day that they are late. Late-work penalties cannot be changed through revision.

**Class Participation**
Activities in each class meeting will be recorded and valued at 1-2 points per class, up to 50 points TOTAL (100%). (Note: Some "slack" is built into this calculation, so you can miss up to one week of classes and still be eligible to earn 100% for this grade.) More-interactive classes such as peer workshop days may be valued more highly; students who are regular, energetic, thoughtful participants may earn additional credit. Students who miss a class are responsible for turning in any required work, but will not be able to "make up" the missed participation in order to earn that day's point(s).

If you are frequently late, you may lose class-participation points. However, in an emergency I would rather have you come late than not at all; if you get stuck in traffic but you can get here 20 minutes late, please try to come.
You should also be actively present. This implies brain awareness as well as the basic courtesies of formal social gatherings. Students who are sleeping, reading the newspaper, carrying on private conversations, answering or texting on cell phones, or working on assignments for other classes (etc.) are not wholly, actively present and thus may lose class participation points for that day. If you are seriously unprepared for class or group work—having absolutely no draft for a draft workshop, for example—you may lose class participation points for that day. Any serious breach of good classroom conduct may cause you to lose all participation points.

Revision Policy
Essays #1, #2, & #3 may be revised for a new grade. Revisions must demonstrate substantial change to the focus, support, approach, and/or organization of the essay in addition to comprehensive error correction, or they will be returned with no grade change. Revisions must be submitted with all previous drafts, and completed within two weeks of the essay’s return to you.

English Department Statement on Plagiarism
Plagiarism means using the exact words, opinions, or factual information from another source without giving that source credit. Writers give credit through the use of accepted documentation styles, such as parenthetical citation, footnotes, or end notes; a simple listing of books, articles, and websites is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in an academic setting.

Student writers are often confused as to what should be cited. Some think that only direct quotations need to be credited. While direct quotations do need citations, so do paraphrases and summaries of opinions or factual information formerly unknown to the writers or which the writers did not discover themselves. Exceptions to this include factual information which can be obtained from a variety of sources, the writers’ own insights or findings from their own field research—what has been called common knowledge. What constitutes common knowledge can sometimes be precarious; what is common knowledge for one audience may be so for another. In such situations, it is helpful to keep the reader in mind and to think of citations as being "reader friendly."

In other words, writers provide a citation for any piece of information that they think their readers might want to investigate further. Not only is this attitude considerate of readers, it will almost certainly ensure that writers will not be guilty of plagiarism. Consult the University’s Honor Code for more information.

Students with disabilities
Students with documented disabilities are legally entitled to certain accommodations in the classroom. If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at
All academic accommodations must be arranged through the DRC. I will be happy to work with students and the DRC to arrange fair access and support.

The University Writing Center:
Since you will be writing several papers in this course, you may want to visit the University Writing Center (http://writingcenter.xxx.edu), located in Building A, for assistance. The Writing Center is one of the best resources you will find on campus. They have an outstanding website that offers a wealth of online resources for student writers. You can schedule a 45-minute appointment with a trained tutor to help with any phase of the writing process. You can even obtain assistance with papers by visiting the online writing center at http://writingcenter.gmu.edu/owl/index.html, but please plan ahead and allow yourself at least 2-3 days to receive a response. Make an appointment on their website, or by calling xxx-xxxx, or stop by and schedule a session.

Essay Assignments
Major essay assignments should TOTAL at least 3500-4000 words of finished prose per student.

Essay One: 750-1000 words
Choose an important, memorable event (or a couple of events) in your education: describe in detail what happened so that you can analyze how that event has affected you or reveals something crucial about you as a student or a person. Since you're in a writing class, you might choose a "literacy moment": a time when you were learning to read or to write, or learning a new kind of reading or writing. You might choose a school-related achievement (or challenge); you might prefer to write about something you learned outside of school.

Your goal is to write an essay that helps readers like your classroom peers understand something important about you, and perhaps helps them to see something interesting about the larger issues of education and learning. You should thus integrate your evidence (very specific details about what happened) and your analysis (explanations about what was important and why, and how past events affect you now) throughout the essay. Your essay should have an introduction and a conclusion to help your reader see its overall point and structure, and should be organized so that a reader easily follows your thinking.

Essay Two: 1000-1500 words
1. Choose an advertisement (essay, article, op-ed, poster, speech) and analyze how that text uses various persuasive strategies—including appeals to ethos, pathos, and logos, as well as tone, word-choice, and/or visual effects—to reach and persuade its audience. You will need to identify who the target audience of this text is and what the goal of the text is (how do you know this?). Your goal is to demonstrate for an educated audience which strategies in this text are most/least effective at persuading its target audience, and why.
Your essay should have both an overall judgment of the text and specific analyses of the effectiveness of different elements.

2. Select a product, service, activity, place, person, group, or work of art/film/literature that you are familiar with and that a classmate or friend might choose to buy, use, participate in, visit, vote for, or join (or that they might not choose to buy, etc.). Decide what criteria are most important, from your point of view, in making that choice. If you think your readers might disagree or have other criteria, you'll need to explain the reasons why you chose the criteria you did, instead of the ones a reader might have chosen. Then provide evidence to show how this product (service, etc.) meets or fails to meet each criterion you have set up. On the basis of these examinations (and not on your "general experience"), give your overall judgment of the product (etc.) and make a direct recommendation to your skeptical reader about how s/he should act in the future. [This can also be a comparative evaluation: which product/essay/performance is better, and why?]

3. Choose a topic or issue that you feel strongly about and that your audience—your classmates—will be interested in but may not know as much about as you do. Identify a controversial question related to that topic, and write a position paper in which you aim to persuade your audience that one side, viewpoint, approach, or solution is better than the other(s). You need to choose a topic that is genuinely debatable in a university-level discussion: choosing a topic that most people are either firm believers in or firmly against will make your task difficult if not impossible. Consider choosing a small or local issue rather than a national or international issue, so that you can make specific points thoroughly without writing a whole book. You will need to use the argument strategies we have been discussing, including addressing and responding to possible counterarguments, in order to produce a persuasive essay that moves your readers closer to your point of view. [This can be an essay that requires reference to outside reading material.]

**Essay Three: 1500-1750 words**

1. Plan, draft, and revise an essay that draws from 4-5 separate sources to present a recommendation or judgment about independence and interdependence, rules vs. expression, group identity or personal identity, or some other conflict related to our course theme: the needs of an individual vs. the needs of a larger community. Do not include your own personal experience as a central source for this essay. You should, however, make your own judgment clear. At least one source must be a substantial piece from our textbook. At least one other source should be an article from a scholarly journal. Your goal is to recommend to your reader what he or she should understand and/or do about this issue; be sure to address alternate ideas or counterarguments as needed.

This is not a "research essay" where you are reporting just what everyone else says. Here, you become the expert and teach your readers what you think they need to know. This is not an "all about" essay ("all about Plato/WWII/Spam"): do not spend
excessive time summarizing everything your sources say. Instead, narrow your focus to help you choose an angle that reveals a particular tension or problem, and draw from your sources to help you make the argument you feel is most useful.

2. Draft an essay arguing for specific change(s) to a local or familiar situation, person, organization, procedure, attitude, or statute. Try to choose a topic that has special interest to you, to people in your intended profession, to people in your hometown or family, or to friends in your community or an organization you belong to. Choose a target audience who can help make this change happen. Generalized topics for generalized audiences—particularly topics about which people hold unshakable opinions, such as the death penalty, abortion, gun control, environmental protection, violence, freedom of speech, whether Martians have rights, etc.—may not be appropriate for this essay unless you can conclusively demonstrate that you have a new, local angle and a very local audience that could indeed be changed by reading what you write. Find at least 7 reliable sources related to this topic, including at least one source that focuses on alternatives or arguments different from the one you plan to make, to complete your annotated bibliography; integrate references to at least 4 of those sources into your final essay. Your outside research should help you understand why change hasn't happened yet and help you persuade your audience to move with you toward change.

Essay Four: 500-750 words
1. Choose three aspects of your writing this semester, in this class and in other classes: something you have done pretty well on from the start, something you have learned to do better, and something you are still struggling with as a writer. In an organized essay, supported by specific examples and quotations from your own writing, describe how each of these elements is visible in your writing, and draw conclusions about how you will proceed as a writer from this point forward.

2. Write a letter to a student who has just signed up for this course for next term. Drawing on your own experiences, make 3-4 specific recommendations to that student about how to succeed in this course specifically, and as a college-level writer more generally. Provide specific examples and/or quotations from your writing this semester: what worked for you? what do you wish you had known earlier?

3. Write an introductory essay to your portfolio of collected writings for this semester. Your portfolio should include final drafts of your major essays, at least one early draft of an essay, and three other pieces of writing from this class. (You may include 1-2 other pieces of writing from outside this class if you wish.) The introductory essay should explain (a) how the elements of your portfolio connect to one another, and (b) what all this writing "goes to show" about you as a person, a writing-learner, and/or a writer. You should quote from your own writings to help show what you mean.
Homework assignments
English 101 instructors sometimes assign in-class and at-home journal writing: freewriting, answers to discussion questions, double-entry reading-logs. Short summary-response papers concerning assigned reading are also common; some instructors give reading quizzes. Often instructors assign audience analyses, process logs, prewriting, revision plans, or post-mortem reflections related to essays students are writing. Frequently students are asked to bring some version of writing related to their current essay assignment: thesis sentence, outline, intro or body paragraph, summary of outside source, partial draft, revised draft. In many sections, students are producing writing in or for nearly every class meeting, though not all that writing is read/evaluated by the instructor.

Possible Outline: Weekly Schedule

<table>
<thead>
<tr>
<th>Possible in-class topics</th>
<th>Major assignments due</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong>  Introductions; in-class writing; showing vs. telling; audiences and purposes</td>
<td>Essay 1 draft for in-class peer review</td>
</tr>
<tr>
<td><strong>Week 2</strong>  How to peer review; implicit and explicit thesis; organizational strategies; titles and introductions; revision vs. editing; building complex descriptive sentences</td>
<td>Essay 1 Final Draft</td>
</tr>
<tr>
<td><strong>Week 3</strong>  Critical reading strategies &amp; annotating a text; ethos, pathos, &amp; logos; logical fallacies; main and sub-arguments; review of prewriting strategies; handling commas: Introduce Essay 2</td>
<td>Essay 1 Final Draft</td>
</tr>
<tr>
<td><strong>Week 4</strong>  Summary vs. analysis; analyzing arguments and structures; handling counterarguments and gray areas; anticipating and responding to audience questions; denotation &amp; connotation; colons &amp; semi-colons</td>
<td>Draft of Essay 2 for Peer Review</td>
</tr>
<tr>
<td><strong>Week 5</strong>  Peer review day; paragraph structures and transition strategies; writing conclusions; nuances and alternatives; shifting tone and register; editing for tangled sentences or wordiness; Introduce Essay 3</td>
<td>Draft of Essay 2 for Peer Review</td>
</tr>
<tr>
<td><strong>Week 6</strong>  Developing research questions; expanding/narrowing a topic;</td>
<td>Topic list for Essay 3</td>
</tr>
<tr>
<td>Week</td>
<td>Activities</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>Week 7</td>
<td>Reading scholarly journal texts; writing summaries and abstracts; making an argument supported (not drowned) by outside material; Annotated Bibliography assignment</td>
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<tr>
<td>Week 8</td>
<td>Quoting and paraphrasing; avoiding plagiarism; MLA citation (in-text and works-cited); extended theses and organizational structures; strategies for integrating quotations into sentences</td>
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<tr>
<td>Week 9</td>
<td>Peer-review of theses/outlines; analyzing audiences and developing evidence; more about paragraphs and quotation-use</td>
</tr>
<tr>
<td>Week 10</td>
<td>Peer-review day; second-round research strategies; revision strategies; editing for key sentences and individual &quot;known grammar issues&quot;</td>
</tr>
<tr>
<td>Week 11</td>
<td>Classes canceled; individual conferences</td>
</tr>
<tr>
<td>Week 12</td>
<td>5-minute research presentations</td>
</tr>
<tr>
<td>Week 13</td>
<td>Introduce Essay 4; review writing strategies; compare/analyze assignment prompts in other classes; consider timed-writing strategies</td>
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<tr>
<td>Week 14</td>
<td>Peer review day; course conclusions</td>
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Appendix B: Survey of Student Demographics

Survey of Student Demographics

1.

Dear Participants,

Thank you for taking this short survey. The results will provide me with demographic information for my dissertation study.

I appreciate your time and thank you.

David Beach

∗ Please enter the five-digit ID number given you on the index card.
Survey of Student Demographics

2. General and Demographic Information

What is your age?
- [ ] under 18
- [ ] 18-20
- [ ] 21-25
- [ ] 26-30
- [ ] 31 and over

What is your gender?
- [ ] female
- [ ] male

How many undergraduate credits have you COMPLETED so far?
- [ ] 0-15
- [ ] 16-30
- [ ] 31-60
- [ ] >60

Are you a transfer student?
- [ ] no
- [ ] yes

If you answered YES above, from which school did you transfer?

Is English your native language?
- [ ] Yes
- [ ] No

If you answered NO above, what is your native language?

How many credit hours are you taking this semester?
- [ ] fewer than 6
- [ ] 6-9
- [ ] 10-12
- [ ] 13-15
- [ ] 16 or more

* What is your degree major? (If you are undecided, type "Undecided.")

Are you currently employed?
- [ ] No
- [ ] Yes, under 10 hours per week
- [ ] Yes, between 10 and 20 hours per week
- [ ] Yes, between 20 and 40 hours per week
- [ ] Yes, over 40 hours per week
Appendix C-1:
Pre-Test Survey on Attitudes Towards Argumentation in Composition (ATAC)

Survey of Student Attitudes Towards Argumentation in Composition

1.

Dear Participants,

Thank you for taking this short survey on attitudes towards argumentation in composition. The results will provide me with demographic information for my dissertation study.

I appreciate your time and thank you.

David Beach

* Please enter the five-digit ID number given you on the index card.
**Survey of Student Attitudes Towards Argumentation in Composition**

**2. Survey on Attitudes Towards Argumentation in Composition**

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible.

For these questions, please rate your skills according to this scale:

- Marginal
- Less than satisfactory
- Satisfactory
- Good
- Excellent
- N/A (Does not apply to me)

<table>
<thead>
<tr>
<th>How do you rate your skills in crafting an arguable thesis statement or topic sentence?</th>
<th>Marginal</th>
<th>Less than Satisfactory</th>
<th>Satisfactory</th>
<th>Good</th>
<th>Excellent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you rate your skills in supporting an argument with research?</td>
<td></td>
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<tr>
<td>How do you rate your skills in crafting supporting sentences for an argument?</td>
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</tr>
<tr>
<td>How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
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</tr>
</tbody>
</table>
**Survey of Student Attitudes Towards Argumentation in Composition**

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible. For these questions, please indicate the degree to which you agree with the question:

- Strongly Disagree
- Disagree
- Don't Know
- Agree
- Strongly Agree

<table>
<thead>
<tr>
<th>I have trouble developing topic sentences.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Don't Know</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have trouble developing thesis statements.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I have trouble finding support for arguments.</td>
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<tr>
<td>I have trouble developing supporting sentences for arguments.</td>
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<tr>
<td>I have trouble developing counterarguments.</td>
<td></td>
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</tr>
<tr>
<td>I have trouble writing an argument in a timed test environment.</td>
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</tbody>
</table>
Appendix C-2: Post-Test Control Group Survey on Attitudes Towards Argumentation in Composition (ATAC)

Post-Test Survey of Student Attitudes Towards Argumentation in

1.

Dear Participants,

Thank you for taking this short survey on attitudes towards argumentation in composition. The results will provide me with demographic information for my dissertation study.

I appreciate your time and thank you.

David Beach

* Please enter the five-digit ID number given you on the index card.
Post-Test Survey of Student Attitudes Towards Argumentation in Composition

2. Survey on Attitudes Towards Argumentation in Composition

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible.

For these questions, please rate your skills according to this scale:
Marginal
Less than satisfactory
Satisfactory
Good
Excellent
N/A (Does not apply to me)

<table>
<thead>
<tr>
<th></th>
<th>Marginal</th>
<th>Less than Satisfactory</th>
<th>Satisfactory</th>
<th>Good</th>
<th>Excellent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you rate your skills in crafting an arguable thesis statement or topic sentence?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>How do you rate your skills in supporting an argument with research?</td>
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<tr>
<td>How do you rate your skills in crafting supporting sentences for an argument?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td></td>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Post-Test Survey of Student Attitudes Towards Argumentation in

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible. For these questions, please indicate the degree to which you agree with the question:

- Strongly Disagree
- Disagree
- Don't Know
- Agree
- Strongly Agree

<table>
<thead>
<tr>
<th>I have trouble developing topic sentences.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Don't Know</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have trouble developing thesis statements.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble finding support for arguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble developing supporting sentences for arguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble developing counterarguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble writing an argument in a timed test environment.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

* Are you familiar with i-Claim?

- No
- Yes

If you answered yes, please explain what you know about i-Claim.
Appendix C-3: Post-Test Treatment Group Survey on Attitudes Towards Argumentation in Composition

Post-Test Survey of Student Attitudes Towards Argumentation in Composition

1. Dear Participants,

Thank you for taking this short survey on attitudes towards argumentation in composition. The results will provide me with demographic information for my dissertation study.

I appreciate your time and thank you.

David Beach

* Please enter the five-digit ID number given you on the index card.
# Post-Test Survey of Student Attitudes Towards Argumentation in Composition

2. Survey on Attitudes Towards Argumentation in Composition

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible.

For these questions, please rate your skills according to this scale:
- Marginal
- Less than satisfactory
- Satisfactory
- Good
- Excellent
- N/A (Does not apply to me)

<table>
<thead>
<tr>
<th>How do you rate your skills in crafting an arguable thesis statement or topic sentence?</th>
<th>Marginal</th>
<th>Less than Satisfactory</th>
<th>Satisfactory</th>
<th>Good</th>
<th>Excellent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you rate your skills in supporting an argument with research?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do you rate your skills in crafting supporting sentences for an argument?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do you rate your skills in writing a short argument essay in a timed writing situation (similar to the SAT Writing Test)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Post-Test Survey of Student Attitudes Towards Argumentation in

* The following questions ask about your attitudes about argumentation skills in your writing. There are no right or wrong answers. Just answer as accurately as possible. For these questions, please indicate the degree to which you agree with the question:

**Strongly Disagree**
**Disagree**
**Don't Know**
**Agree**
**Strongly Agree**

<table>
<thead>
<tr>
<th>I have trouble developing topic sentences.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Don't Know</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have trouble developing thesis statements.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble finding support for arguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble developing supporting sentences for arguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble developing counterarguments.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>I have trouble writing an argument in a timed test environment.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

* How much time over the course of the semester, but after the class session with i-Claim, did you use i-Claim?

<table>
<thead>
<tr>
<th>Never</th>
<th>Less than 1 hour</th>
<th>1 hour to 2 hours</th>
<th>More than 2 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
</tr>
<tr>
<td>Less than 1 hour</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
</tr>
<tr>
<td>1 hour to 2 hours</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
</tr>
<tr>
<td>More than 2 hours</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Don't Know</td>
</tr>
</tbody>
</table>
Appendix D: Modified Web-Based Learning Environment Instrument (WEBLEI)

Modified Web-Based Learning Environment Instrument (for

1.

Dear Participants,

Thank you for taking this short survey on attitudes towards using instructional technology tools. The results will provide me with important information for my dissertation study.

I appreciate your time and thank you.

David Beach

* Please enter the five-digit ID number given you on the index card.
## 2. Survey on Attitudes Towards Using Instructional Technology

* The following questions ask about your attitudes towards using instructional technology tools. There are no right or wrong answers. Just answer as accurately as possible.

For these questions, please rate your skills according to this scale:
- Strongly Disagree
- Disagree
- Don't Know
- Agree
- Strongly Agree

<table>
<thead>
<tr>
<th>I can access instructional technology learning activities at times convenient to me.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Don’t Know</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructional technology materials are available at locations suitable for me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am allowed to work at my own pace to achieve my learning objectives.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I decide how much I want to learn in a given period.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I decide when I want to learn.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The flexibility allows me to meet my learning goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The flexibility allows me to explore my own areas of interest.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I communicate with other students electronically (email, bulletin boards, chat).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When using instructional technology, I have to be self-disciplined in order to learn.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the autonomy to ask my instructor what I do not understand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I have the autonomy to ask other students what I do not understand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other students respond promptly to my questions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I regularly participate in self-evaluations.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td>I was supported by positive attitude from my peers.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>This mode of learning enables me to interact with other students and the instructor.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I felt a sense of satisfaction and achievement about this learning environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I enjoy learning in this environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I could learn more in this environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>It is easy to organize a group for a project.</td>
<td></td>
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</tr>
<tr>
<td>It is easy to work collaboratively with other students involved in a group project.</td>
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</tr>
<tr>
<td>The instructional technology learning environment held my interest throughout my course of study.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt a sense of boredom towards the end of my course of study.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The scope or learning objectives are clearly stated in each lesson.</td>
<td></td>
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</tr>
<tr>
<td>The organization of each lesson is easy to follow.</td>
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<tr>
<td>The structure keeps me focused on what is to be learned.</td>
<td></td>
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<tr>
<td>Expectations of assignments are clearly stated in the tutorials.</td>
<td></td>
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<tr>
<td>Activities are carefully planned.</td>
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</tr>
<tr>
<td>The subject content is appropriate.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The presentation of the subject content is clear.</td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>
Appendix E

Pre- and Post-Test Writing Test

Students will write pre- and post-test timed (30 minutes) argumentative essays using AccuplacerOnline ACCUPLACER™ Online WritePlacer Plus, a Latent-Semantic Analysis instrument to measure student writing and place students in appropriate classes.

Students will write both the pre- and post-test timed essays on the following prompt:

Technological change can have a very big effect on our daily lives. Which technological change do you feel has had the largest effect on life in this country?

Write an essay for a classroom instructor in which you identify which technological change has had the biggest impact and why you feel this way. Be sure to support your choice with logical arguments and appropriate examples.
Appendix F

IRSQ: Interview Respondent (Students) Questionnaire

Pre-test interview

1. Tell me what you think arguing means?
2. What tools for argumentation skill development are you familiar with?
3. What tools have you used for argumentation skill development in the past? Why do you use these tools? How have they helped you in the past?
4. How do you see instructional technology tools helping you with argumentation?
5. What tools have you used for help with writing? Why do you use these tools? How have they helped you in the past?
6. What technological tools for writing are you familiar with?
7. How do you see technological tools helping you with writing and composition?

Post-test interview

1. Tell me what you think arguing means?
2. What argumentation development tools (computerized and/or other) did you use during the semester for your assignments?
3. How did these tools help you with developing arguments in your assignments?
4. Did the use of the tools provide you with any noticeable change in your argumentation abilities?
5. Will you use any of these tools again? If so, which ones?
Appendix G

IRIQ: Interview Respondent (Instructors) Questionnaire

Pre-test interview

1. How do you teach argumentation skills?

Post-test interview

2. Did you do anything differently this semester when you taught argumentation skills?
3. Did you use *i-Claim* in the treatment sections beyond the researcher’s session?
4. When *i-Claim* was used in the treatment sections, what did you do in the control sections?
5. What are your perceptions of students’ argumentation skills?
Appendix H

Human Subjects Review Board Approval

TO: Nada Dabbagh, College of Education and Human Development

FROM: Sandra M. Sanford, RN, MSN, CIP, Director, Office of Research Subject Protections

PROTOCOL NO.: 5653  Research Category: Doctoral Dissertation

TITLE: The Effects of i-Claim on First-Year College English Composition Students' Argumentation Skills

DATE: February 5, 2008

Cc: David Beach

On 2/5/2008, the George Mason University Human Subjects Review Board (GMU HSRB) reviewed and approved the above-cited protocol following expedited review procedures.

Please note the following:

1. Copies of the final approved consent documents are attached. You must use these copies with the HSRB stamp of approval for your research. Please keep copies of the signed consent forms used for this research for three years after the completion of the research.

2. Any modification to your research (including the protocol, consent, advertisements, instruments, etc.) must be submitted to the Office of Research Subject Protections for review and approval prior to implementation.

3. Any adverse events or unanticipated problems involving risks to subjects including problems involving confidentiality of the data identifying the participants must be reported to Office of Research Subject Protections and reviewed by the HSRB.

The anniversary date of this study is 2/4/2009. You may not collect data beyond that date without GMU HSRB approval. A continuing review form must be completed and submitted to the Office of Research Subject Protections 30 days prior to the anniversary date or upon completion of the project. A copy of the continuing review form is attached. In addition, prior to that date, the Office of Research Subject Protections will send you a reminder regarding continuing review procedures.

If you have any questions, please do not hesitate to contact me at 703-993-4015.
Appendix I

Faculty Participant Invitation

I am working on my dissertation and will be collecting data next semester. I am seeking volunteers who will be teaching two sections of the same version of ENGL101 to allow me to study students’ argumentation writing skill in their classes.

I have been examining *i-Claim: Visualizing Argument*, an interactive CD-ROM often packaged with Bedford St. Martin’s texts, as supplementary instruction material for argumentation skill development. This tutorial would be an additional resource for students to use when writing arguments. My research questions are: (1) Is a student’s mastery of argumentation skills in a timed writing test enhanced by using a computer-based tutorial (*i-Claim*) for argumentation skills? (2) Do students feel confident about their argumentation skills as a result of using *i-Claim*? (3) Do students feel more confident about using computer-based tutorials to facilitate their learning as a result of using *i-Claim*? This will be a quasi-experimental study with some qualitative measures. I do not foresee taking more than two hours (over two class sessions) in TOTAL of class time throughout the semester.

What the research study will entail:

- One of your ENGL101 sections would receive the *i-Claim* tutorial; the other would not.
- I would ask students to complete surveys on their attitudes towards learning, instructional technology, and argumentation skills.
- Students would, in the third week of class, take a 30-minute computerized writing test, and towards the end of the study, another 30-minute writing test. You would have access to their tests for any evaluation purposes you deem necessary.
- In the treatment groups, I would schedule the class in a computer lab and give students a demonstration of *i-Claim* and guide them through a particular argumentation assignment.
- I would ask for student volunteers to be interviewed so I could learn about their perceptions of argumentation skills, what they are learning regarding argumentation, and how they are implementing what they learn.
- All students would be asked to complete three short questionnaires at the beginning of the study and one at the end of the study. These would be done before the computerized writing test.
- At the end of the study, I would ask you if you noticed any discernable difference in student writing because of the presence of the tool.

You are under no obligation to participate; I am conducting this research outside my role as an instructor in the English Department. All study protocols will be reviewed and approved by Mason's Human Subjects Review Board.

If you would be willing to be a participant in my research study, or would like more information, please contact me at dbeach@gmu.edu or 703-993-2762.

Thank you for your consideration.

David Beach
Doctoral Candidate, Instructional Technology/Composition/Rhetoric
College of Education and Human Development
Appendix J

Student Participant Invitations

I am seeking study participants enrolled in ENGL101 during the Spring 2008 semester for my dissertation research. Your instructor has agreed to be a research participant in my study, and I am inviting you to be a part of my study.

If you participate in this study, you would be asked to do the following:

- Write two 30-minute essays, one at the beginning of the study and one towards the end of the study.
- Complete three short surveys at the beginning of the study and one towards the end of the study.
- Volunteers would be asked to participate in two interviews during the study.

You are under no obligation to participate. All study protocols will be reviewed and approved by Mason's Human Subjects Review Board.

If you would be willing to be a participant in my research study during your advanced composition course, I will be in your class the third week of the semester with an Informed Consent Document. If you would like more information, please contact me at dbeach@gmu.edu or at 703-993-2762.

Thank you for your consideration.

David Beach
Doctoral Candidate, Instructional Technology/Composition/Rhetoric
College of Education and Human Development
Appendix K

Informed Consent for Participant Students

INFORMED CONSENT (for participant students)
Protocol for Exploratory Study of First-Year College English Composition Students' Argumentation Skills

RESEARCH PROCEDURES
This research is being conducted to explore argumentation skill development in first-year English composition courses. If you agree to participate, you will be asked to complete four short surveys (three at the beginning of the study and one at the end) and write two computer-based essays (one at the beginning of the study and one at the end of the study). If you volunteer for further study, you will be asked to participate in two 30-minute interviews (one at the beginning of the study and one at the end of the study).

RISKS
There are no foreseeable physical, psychological, social, or legal risks or discomforts.

BENEFITS
There are no benefits to you as a participant other than the furthering of research in composition pedagogy.

CONFIDENTIALITY
The data in this study will be confidential. Observations and recordings will remain confidential during the study phase. Pseudonyms will be used during the study. Additionally, transcriptions of observations and interviews will be secured in a locked filing cabinet to which the researcher has the only key.

PARTICIPATION
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party. If you choose not to participate, your instructor will provide you with a similar, alternative assignment.

CONTACT
This research is being conducted by David Beach, a doctoral candidate in the College of Education and Human Development. He may be reached at 703-993-2762 (e-mail dbeach@gmu.edu) for questions or to report a research-related problem. Mr. Beach’s doctoral dissertation advisor is Dr. Nada Dabbagh, associate professor. She may be reached at 703-993-4439 (e-mail ndabbagh@gmu.edu). You may contact the George Mason University Office of Sponsored Programs at 703-993-2295 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT
I have read this form and agree to participate in this study.

__________________________   _________________________
Name                          Date of Signature

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Appendix L: Informed Consent for Participant Instructors

INFORMED CONSENT (for participant instructors)
Protocol for “The Effects of i-Claim, an Instructional Technology Tutorial, on First-Year College English Composition Students' Argumentation Skills: An Exploratory Study”

RESEARCH PROCEDURES
This research is being conducted to explore the integration and use of i-Claim, an interactive, instructional technology tutorial for argumentation skill development, and its effect on argumentation skill development in first-year English composition courses. If you agree to participate, you will be asked to have your students complete four surveys (three at the beginning of the study and one at the end) and write two computer-based essays (one at the beginning of the study and one at the end of the study), and volunteer students will be interviewed twice during the study to discuss their perceptions about their argumentation skills and confidence with writing arguments. In addition, you will be asked to have one class (the treatment group) use the interactive, instructional technology tutorial argumentation tool during one class session.

RISKS
There are no foreseeable physical, psychological, social, or legal risks or discomforts.

BENEFITS
There are no benefits to you as a participant other than the furthering of research in composition pedagogy.

CONFIDENTIALITY
The data in this study will be confidential. Observations and recordings will remain confidential during the study phase. Pseudonyms will be used during the study. Additionally, transcriptions of observations and interviews will be secured in a locked filing cabinet to which the researcher has the only key.

PARTICIPATION
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

CONTACT
This research is being conducted by David Beach, a doctoral candidate in the College of Education and Human Development. He may be reached at 703-993-2762 (e-mail dbeach@gmu.edu) for questions or to report a research-related problem. Mr. Beach’s doctoral dissertation advisor is Dr. Nada Dabbagh, associate professor. She may be reached at 703-993-4439 (e-mail ndabbagh@gmu.edu). You may contact the George Mason University Office of Sponsored Programs at 703-993-2295 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT
I have read this form and agree to participate in this study.

__________________________  __________________________
Name                                      Date of Signature
Appendix M

Alternative Assignment for Non-Participants

Today, we will review argumentation and approaching writing an argument as a process. We will cover claims, evidence, and reason within an argument.

Go to http://commhum.mccneb.edu/argument/summary.htm and review the Introduction and Steps 1 through 3.

When you have completed the review, go to Step 4, Short Practice Exercises for Spotting Conclusion and Reasons, and complete the three exercises.

Upon review and completion, go to Step 5, read the editorial, and write a reasonable two- to three-paragraph argument for federal law to be applied to the Minden school district’s athletic program. Submit your argument at the end of the class session.
Appendix N

Syllabi and Assignments of Participant Instructors

English 101 Syllabus

Spring 2008
Engl 101

Recommended Text:
The Nation, subscriptions are $6.97 for 12 issues; order at https://ssl.thenation.com/classroom/student.mhtml.

Required Materials: a business-sized file folder (put your name and email on the outside); a small 3-ring binder for class notes, and loose leaf paper.

Course Overview and Objectives: The purpose of this course is to improve your writing, to prepare you to write well for other courses, to give you a basis for continuing to write after leaving college, and to prepare you for work-place writing. We will divide our class time among writing, large-group discussion, and small-groups for feedback.

Methods of Instruction: On most Mondays and Wednesdays, we review various writing exercises that you will practice in class. On most Fridays, you will meet in small groups of three or four students to read or share your writing and to respond to the writing of other members of your group. Members of your small group will give you feedback each time you read or share a draft to them.

For the following Monday, you’ll revise your writing and submit it in your folder along your process log, a brief (not less than a quarter of a page, single spaced) description of how you wrote your drafts. Staple a process log atop every paper you submit so that I may respond to your process of writing. Process logs should reflect on the new techniques and strategies you tried in your drafts and should describe how you went about writing your essay. Like your essays, these logs may be written in the first person.

Each week I’ll read your writings and return them with global comments on your folder. In the beginning of the semester, these comments will focus mostly on content. As the semester progresses, my comments will shift toward revision and editing. In addition, I’ll hold mini-conferences with you at the beginning of class or at any time you can request a longer conference to talk about your writing. The comments that I write on the inside of your folder are intended to initiate a dialogue with you about your writing: your responsibility is to read my comments and respond, in writing, on the inside of the folder.
Course Requirements and Grading: Please bring a new or substantially revised writing of original non-fiction each week, along with copies for your response group. Writing submitted for other classes or written prior to this class may not be submitted for 101. If, at any point in the course you do not understand the assignments, please ask.

Most of our essays will be personal narratives; some will require research. I’ll help you to understand the basic structure of databases (records and fields), to search online databases, retrieve resources from these databases, and evaluate the sources for credibility, reliability, objectivity, and currency. I expect you to use the Internet as an initial source of your research, but not the only source. I want you to read books and articles to gain breadth of sources, and to interview people to gain depth of understanding.

Please use Microsoft Word to write all submitted drafts. I’ll check to make sure you know how to create, save, and retrieve documents, format them (including page numbers and reference pages), revise (add, delete, and reorder text), and print. In addition to the original copy on your computer, please save at least one electronic copy elsewhere (disk or flashdrive). Please save all printed drafts.

You must use your GMU email account, even if you have additional accounts to which you forward your mail.

I’ll give you progress grades every four weeks. Progress grades do not accumulate—they merely show your progress to date. It is possible for you to catch on to writing and improve your grade, or to slack off and hinder your grade. I will base your grade for the course on your final portfolio (which will contain all your written work), your in-class assignments, and your class participation. If you have any questions on your progress in the course, please ask me.

Grades are based holistically on your writing and class participation. Because I use holistic assessment, you will not receive grades for individual papers or participation in individual classes; however, if you attend class but your participation is poor, or if you arrive late for class, you class participation grades will reflect that.

The lowest passing grade for English 101 is a C. If you do not earn a C, you will get an N/C (No-Credit), which means you must repeat the course. N/C has no effect on your GPA.

Students in 101 do best when they forget grades and write because they care about their topics, and care about getting their points across to a real audience. If you feel you have been conditioned to care more about grades than learning, please see me.
**Writing Center:** All students must demonstrate mastery of basic skills to pass 101. Occasionally a student enters 101 with insufficient mastery of basic grammar, spelling, punctuation, and sentence structure. If your problems stem from your being a non-native speaker, I will give you the option to transfer to a section of English 100, Composition for Non-Native Speakers of English. If you want to stay in English 101, I may ask you to attend the Writing Center for additional help. Tutors in The Writing Center (Robinson A114; 703-993-1200) offer suggestions for revision and editing but will not edit or proofread your work. For hours, see their web site: writingcenter.gmu.edu.

**Late Assignments:** You must bring 3-4 copies of a new or substantially revised piece to class each Friday in order to be admitted to class. Because we work in response groups, it is not fair to others that you sit in a group without a draft of your own. While I do not grade individual papers, I do note it in your folder when you are absent and your writing is late, and I take it into consideration when I assign grades.

**Attendance and Class Participation:** Because we work in small and large groups, your attendance and active participation is essential for your own development as a writer and for the growth of the writing abilities of your classmates. Please attend all classes on time and participate actively. Students do best when they attend class, practice new techniques, turn in their assignments on time, and participate actively. If you miss a class, you must come to the next class with notes you have received from a fellow student. If the missed class includes exercises, you must also bring those completed exercises.

**Midterm Grades:** “In ENGL 101, students receive a midterm letter grade based on the work of the first seven weeks of the course. The purpose of this grade is to help students find out how well they are doing in the first half of the course in order to make any adjustments necessary for success in the course as a whole. Instructors calculate letter grades based on the completed course assignments as weighted on the syllabus through the seventh week. The work in the second half of the semester may be weighted more heavily, and so the midterm grade is not meant to predict the final course grade. Students may view their grade online at WebGMU.”

**English Department Statement on Plagiarism** “Plagiarism means using the words, opinions, or factual information from another person without giving the person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes; a simple listing of books and articles is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in the academic setting.

Student writers are often confused as to what should be cited. Some think that only direct quotations need to be credited. While direct quotations do need citations, so do paraphrases and summaries of opinions or factual information formerly unknown to the writers or which the writers did not discover themselves. Exceptions to this include factual information that can be obtained from a variety of sources, the writer’s own
insights or findings from their own field research, and what has been termed as common knowledge. What constitutes common knowledge can sometimes be precarious; what is common knowledge for one audience may not be so for another. In such situations, it is helpful to keep the reader in mind and to think of citations as being “reader friendly.” In other words, writers provide a citation for any piece of information that they think their readers might want to investigate further. Not only is this attitude considerate of readers, it will almost certainly ensure that writers will never be guilty of plagiarism.”

**Accommodations for Students with Disabilities:** Students with documented disabilities are legally entitled to certain accommodations in the classroom. If you have a documented disability, please contact me immediately. (Disability Resource Center: 703-993-2472)

**Tentative Calendar:** Dates below indicate when assignments are due. E.g. on Feb 11 you need to read and print the Orwell essay before coming to class. Readings prefaced by “in class” do not need to be read prior to class.

**Jan 23** Understanding the Syllabus; Introductions (name cards); Learning Logs; Swap contact information--Phone/email list. In-class: Mortimer Adler’s “How to Mark a Book”—**active reading.**

**Jan 25** Exercise: Reading Draft Aloud to Others; Responding, Response Groups, & Fishbowl Exercise.

**Jan 28** Peter Elbow’s concept of **freewriting.** **Exercise:** freewrite on list of prospective topics.

**Jan 30** Understanding the three appeals (rational, emotional, and ethical). Writing Time. **For next class, Students locate examples of the three appeals in advertisements and present them to classmates.**

**Feb 1** Writing # 1 (4 copies) with one Process Log. Peer Reviews.

**Feb 4** Submit Revision of Writing #1 (all drafts, including those commented upon by your group, and revised Process log). Comparing the 5-Paragraph Essay to the Five Parts of Discourse. **Last day to drop 5 February**

**Feb 6** The Parts of Discourse. Return writings, new strategies, conferences, writing time. **Exercise:** Writing Introductions.

**Feb 8** Writing # 2 (four copies) with one Process Log.

**Feb 11** Submit Revision of Writing #2, Read/print out Orwell’s “Shooting an Elephant” [http://whitewolf.newcastle.edu.au/words/authors/O/OrwellGeorge/essay/ShootingElephant/index.html](http://whitewolf.newcastle.edu.au/words/authors/O/OrwellGeorge/essay/ShootingElephant/index.html)

**Feb 13** Audience Analysis, return writings, conferences, writing time.

**Feb 15** Writing # 3 (four copies) with one Process Log.
Feb 18 Submit Writing #3. Read/print out E. B. White’s “Once More to the Lake”
Reading for Research.
Feb 20 Documenting Academic Papers Exercise. Conferences, writing time.
Feb 22 Writing # 4 (four copies) with one Process Log.

Feb 25 Submit Revision of Writing #4
Feb 27 Print and Read Orwell’s “Politics and the English Language”
http://whitewolf.newcastle.edu.au/words/authors/O/OrwellGeorge/essay/politicaandenglish.html
Feb 29 Writing # 5 (four copies) with one Process Log.

March 3 Submit Revision of Writing #5  Mid-term read around.
March 5 Conclude Orwell’s “Politics and the English Language” Mid-term read around
March 7 Writing # 6 (four copies) with one Process Log. (Writing #7, due on March 28,
will be a persuasive essay; advance a narrowly-defined proposition about any pre-approved topic; include documented information, necessary background information, a refutation, and a works cited page) Conclude Mid-term read around

March 10-16 Spring Break
March 17 Conferences
March 19 Conferences
March 20 Conferences

March 24 Submit Revision of Writing #6 (Mid-term reporting/Elective Withdrawal Feb 18—March 21)
March 26 Return writings, new strategies, conferences, writing time.
March 28 Writing # 7 (four copies) with one Process Log.

March 31 Submit Revision of Writing #7. Virginia Woolf’s “Death of a Moth” puzzle.
April 2 Return writings, new strategies, conferences, writing time.
April 4 Writing #8 (four copies) with one Process Log

April 7 Submit Revision of Writing #8
April 9 Return writings, new strategies, and conferences; Visual description of your writing process.
April 11 Writing # 9 (four copies) with one Process Log.

April 14 Submit Revision of Writing #9
April 15 Selecting items for your final portfolio. Write around w/1st lines from previous essay
April 18 Writing # 10 (four copies) with one Process Log
April 21 Submit Revision of Writing #10; Discuss Portfolio Assessment, define terms
April 22 Preparing the Final Learning Portfolio Preface
April 25 Submit Writing # 11 Begin Final Read Around.

April 28 Final Read Around.
April 30 Course Evaluations.
May 2 Final Read Around, continued.

May 5 Conclude Final Read Around. Submit Portfolios.
May 6 Reading Day
Exams May 7—14

Final Portfolios are due at our regularly scheduled class, Monday May 5. I’ll grade them with only a brief comment (by now you have received all the feedback you need). Over the semester break, I’ll re-read your portfolios to help me design future sections of 101. You may collect your portfolios next semester. Be sure to make copies of anything you’ll need before then.
English Composition 101  
George Mason University  
Spring Semester 2008

Professor: 
Section:  
Office: 
Office Phone: (e-mail preferred)  
Office Hours: To be announced  
Mailbox: 
E-mail:

Course overview:

This is a writing course. You’ll get a lot of practice writing, both in and out of class. We’ll do lots of reading to see how professional writers handle their craft. We’ll have classroom discussions about what we read by professional and student writers. In small groups, you’ll have a chance to give and get feedback from your peers, and you’ll carry on a course-long “conversation” with me about the progress of your work. We’ll make several visits to Fenwick Library and computer classrooms. You’ll strengthen your skills in reading, writing, collaborative learning, and critical thinking. You will need access to a computer for a couple hours a week in this section.

Required Texts/Materials:

- A notebook for in-class writing.

Grading:

Grading is based on a scale of A, A-, B+, B, B-, C+, C, and NC (No Credit).

A=superior effort that combines effective organization, diction, focus, grammar, ideas, and critical thinking.

B=generally effective demonstration of writing principles and critical thinking skills.

C=adequate grasp of basic writing principles and methods of critical thinking.

NC=a composition level that does not merit fulfillment of the English 101 requirement.

While a grade of NC is not included in a student’s GPA, anyone receiving an NC is required to re-enroll for English 101.

Your final grade for this course will be weighted as follows:

- Photo Essay (500-750 words): 10%
- Definition Essay (750-1000 words): 15%
- Comparison/Contrast Essay (1000-1500 words): 20%
Assignments and Expectations:
There’s no substitute for what we do in class. Attendance is vital. If you have to miss a class, you’re responsible for finding out what was covered in your absence. Please come to class and be prepared to discuss assignments for that day. I do take attendance, and your attendance is a large part of your participation grade.

I start class on time. The first time you come to class late, you’re forgiven. Every time thereafter I count a late arrival as half a class absence.

The required formal papers should be typed, double-spaced, have 1-inch margins, and use 12-point Times New Roman font. (The only exception to this is the Photo Essay, which will be composed and submitted on the Web-site instead of on hard copy.) At the top, please put your name, the course name, and my name. No folders or laminated covers, please. Papers will be due on specific dates as announced in the class schedule. A paper turned in late after class the same day will be lowered one step (e.g., from a B to a B-). Papers turned in late after that are lowered one additional grade step per day. I will not accept papers through e-mail. The only way to get a late paper to me is to put it in my mailbox in Robinson Hall A Room 487 or give it to me at the next class.

Please note: The final paper must be submitted in hard copy form by the deadline given on May 5. Final papers submitted late will not be accepted.

You must complete a finished draft of all four required papers and maintain a journal in order to be eligible to pass the course.

Revision is an important part of writing. You’ll be doing first drafts of all four formal papers assigned, and those drafts will be given some degree of informal, ungraded feedback by me and your peers. These drafts will also be typed and double-spaced. Once you submit your formal paper and receive a grade, you may choose to rewrite it. If so, the rewrite has to be a thorough rethinking of the assignment, not just a “cosmetic” makeover. You need to get my permission to do the rewrite, and you must submit it by the deadline noted below. Your recorded grade for the paper will be an average of the two versions. You can use the rewrite option up to twice during the semester but not on the final Research Paper. If you receive a grade below a C, a rewrite is recommended. A paper with a grade of B- or above is probably not worth rewriting. Note: The rewrite option is not available to papers handed in late.
Rewrite Deadlines:

Photo Essay: To be determined

Definition Essay: March 28

Comparison/Contrast Essay: April 21

You will be given a mid-term evaluation during the eighth week of the semester. This grade is only intended to be a snapshot of your progress and will not figure in your final grade. Also, there is no final exam in English 101. The Research Paper will serve as a final project in which you display the skills you have been developing over the semester.

Course Objectives:
By the end of English 101, you will have demonstrated the ability to:

- Use strategies that focus on writing as a process, from brainstorming first ideas to editing final drafts;
- Recognize and write within different rhetorical modes;
- Use writing as a means of exploration and personal development;
- Read non-fiction with a critical eye for point of view and logical argument;
- Write essays that employ a solid grasp of focus, organization, diction, grammar, and critical thinking in expository modes;
- Engage in and use feedback on writing from your instructor and peers as a way to encourage effective revision;
- Use technologies including e-mail, word processing, and online database searching to facilitate writing;
- Use strategies for gathering information, evaluating sources, and synthesizing ideas in writing on a planned research topic;
- Produce writing that demonstrates basic competence in standard edited American English.

Plagiarism:
From the English Department Statement on Plagiarism:
“Plagiarism means using the exact words, opinions, or factual information from another person without giving that person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes; a simple listing of books and articles is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in an academic setting. Student writers are often confused as to what should be cited. Some think that only direct quotations need to be credited. While direct quotations do need citations, so do paraphrases and summaries of opinions or factual information formerly unknown to the writers or which the writers did not discover themselves.”
Plagiarism is a real problem, and we will be discussing it in more detail. For a review of George Mason’s Honor code, which you signed upon entering the university, go to http://www.gmu.edu/catalog/apolicies/#Anchor12. I reserve the right to use Internet services such as Turnitin in order discern whether a submitted piece of writing has been plagiarized. The Mason Honor Committee hears and acts upon dozens of cases involving cheating and plagiarism every semester.

General Rules:
- No cell phones and no text messaging in class. Period.
- No surfing the Internet on laptops. Period.
- No eating in class. Period.
- No talking when someone else is talking. Period.

Electronic Communication:

Aside from my office hours, the best way to reach me is through e-mail. If I have an announcement to make or an assignment to update, I will do so via e-mail or WebCT. To set up your GMU e-mail account, go to http://web.gmu.edu and choose “Activate Mason E-Mail.”

We will also use WebCT for class postings, schedules, and important announcements. To access the on-line component of our course do the following:
- Open a browser.
- Go to https://webct41.gmu.edu.
- Log in by typing in your user ID (same as for e-mail) and your password.
- Open Eng-101-

Library:
We will spend at least one or two classes during the semester working in Fenwick Library. I hope you’ll spend a lot more time there on your own. Library skills workshops are offered at Fenwick on occasion. For more information, go to http://library.gmu.edu or call 993-3712 and ask for information on SiteSeeing@Fenwick.

University Writing Center:
Students seeking additional help with their writing should take advantage of this excellent resource. Open Monday-Friday in Robinson A114, the center offers in-person tutoring and an on-line writing lab. Call 993-1200 or visit http://writingcenter.gmu.edu.

Other Resources:
The Disability Resource Center is committed to assisting GMU students with documented disabilities. The Center is located in Student Union Building I, Room 222 and can be reached at 993-2474.
The Counseling Center offers individual and group counseling. The Center can be found in Student Union Building I, Room 364 and reached at 993-2380.

**Important Dates:**
- Martin Luther King Holiday, university closed: January 21
- First day of classes: January 22
- Last day to drop classes with no tuition penalty: February 5
- Last day to add classes: February 5
- Last day to drop classes: February 22
- Spring Break: March 10-16
- Last day of classes: May 5

**Abbreviated Weekly schedule**

(See WebCT calendar for updates and details):

**Week 1 (January 21-25):**
Syllabus review, introductions, read Roberts, pp. 61-70.

**Week 2 (January 28-February 1):**

**Week 3 (February 4-8):**
Photo Essay draft due by February 7. Read McCuen, pp. 251-255. Peer review completed for Photo Essay.

**Week 4 (February 11-15):**
**Photo Essay due February 13.** Read Roberts, pp. 104-110; Iyer, pp. 390-393; DeVoe, pp. 616-619; McCuen, pp. 91-99.

**Week 5 (February 18-22):**
Read Hight, pp. 394-401; McCuen, pp. 375-379; and assigned student essays.

**Week 6 (February 25-29):**

Week 7 (March 3-7):

Week 8 (March 10-14): Spring Break

Week 9 (March 17-21):
Comparison/Contrast draft due March 19—peer review. Read assigned student papers. Fenwick Library orientation.

Week 10 (March 24-28): No class this week—Student Conferences are held in my office.

Week 11 (March 31-April 4):
Comparison/Contrast essay due March 31; Fenwick Library visit.

Week 12 (April 7-11):
Read Vidal, pp. 361-364; Kondracke, pp. 364-370; McCuen, pp. 705-713; Computer classroom. read Hacker, pp. 101-111

Week 13: (April 14-18)
Discussion of student papers; Fenwick Library visit.

Week 14 (April 21-25):
Read Hacker, pp. 128-135; Research Paper draft due April 23. Peer review in computer classroom.

Week 15: (April 28-May 2)
Bibliography exercise; workshop for research questions and issues; class test.

Week 16: (May 5)
Research Paper due May 5 in class.

Schedule is subject to change. For detailed class assignments, go to WebCT: https://webct41.gmu.edu
ENG 101
Spring 2008
Assistant Professor:
Office hrs:
Office phone:

Course Goals:
This course is designed to help you improve your abilities to read, write, and think at a college level. In English 101, you will develop strategies to help you use writing as a tool for exploring and reflecting on your own ideas, as well as for informing and persuading your readers. You will need to develop critical reading and research techniques to support your writing, and learn appropriate technologies to assist your writing. English 101 emphasizes writing as a rhetorical process: you will explore beneficial ways to break a writing task into smaller steps such as generating and organizing ideas, investigating your topic, creating early drafts, seeking feedback, and revising. You will also improve your ability to adapt your writing to the needs of an audience or a situation, and your ability to revise and edit your own writing. This class will focus these disciplines under the umbrella of “Popular Culture”—what you define as researchers and writers as such and how it defines the nation in which we live. We will examine texts, media and other cultural iconography to help us understand the influence popular culture has on a plethora of social norms and definitions.

English 101 students are expected to develop college-level abilities for handling a range of texts, including

- increased abilities to closely and critically read a variety of nonfiction texts, including (but not limited to) argumentative texts, their own writing, and their peers' writing, in order to identify rhetorical strategies that they can apply to their writing
- abilities to create texts that respond to varied rhetorical situations in a range of written genres, to include (but not be limited to) US academic argument and research-supported texts
- their ability to edit their own writing when necessary so that it meets the common expectations of US academic audiences for Standard Edited American English

Textbooks and Materials available at the campus bookstore:
Required
- Applicable materials (Web sites, Media and Hand-outs)
Methods of Instruction
Most class sessions of English 101 will be interactive and will involve a significant amount of student discussion and writing. Students may be asked to work individually as well as collaboratively as they investigate issues, practice writing strategies and techniques, learn research and critical reading approaches, and review their own and their peers' writing. Students who attend regularly and stay engaged in class activities, who keep up with all of the assignments, and who block off sufficient time each week for thoughtful drafting and revising usually succeed in this class.

Course Requirements and Grading Percentages
Writing Assignment #1: 4 pages 20%
Writing Assignment #2: 7 pages 30%
Writing Assignment #3: 3 pages 15%
Reading Responses 15%
Group Presentation 10%

Participation in class discussion—including attendance—and in class writing assignments/wkshops: 10%

Reading Responses:
Responding to class readings is crucial. Summarize and examine your readings with a critical eye. Be thoughtful and react with opinion. No Plot summaries please. Look for what you relate to and understand, where you do not and why. Evidence of in depth comprehension of the readings we interpret in this course will hone your writing skills. All responses must be at least two pages, typed, double-spaced and set up according to MLA style. There will be three responses in total worth 5% each.

Drafts:
Rough drafts will help you and your peers critique problems you are experiencing as you create and revise each assignment. For 2 major assignments in this class I will be reviewing your rough drafts and returning them to you with feedback and suggestions. Please prepare to have TWO copies of your drafts ready on the dates your syllabus asks you to. If I do not receive a copy I cannot give you feedback.

Class Participation
If you are frequently late, you may lose class-participation points. However, in an emergency I would rather have you come late than not at all; if you get stuck in traffic but you can get here 20 minutes late, please try to come.
You should also be actively present. This implies brain awareness as well as the basic courtesies of formal social gatherings. Students who are sleeping, reading the newspaper, carrying on private conversations, answering or texting on cell phones, or working on assignments for other classes (etc.) are not wholly, actively present and thus may lose
class participation points for that day. If you are seriously unprepared for class or group work—having absolutely no draft for a draft workshop, for example—you may lose class participation points for that day. Any serious breach of good classroom conduct may cause you to lose all participation points.

**Completion Policy:**
You must complete all main assignments to earn a "C" or higher.

**Course Grading Policy:** In grading writing, I use the following general criteria: A "C" level grade (70-79%) denotes average college-level writing and achievement. The project is a competent response to the assignment: it meets, to some degree, all the assignment requirements, and demonstrates that the author has put significant time and effort into communicating his/her ideas to his/her targeted audience. It has a coherent focus or thesis, presents some support, and moves from point to point in an orderly fashion; sentence-level errors do not significantly prevent comprehension. It demonstrates awareness of the requirements of the author's field or discipline. Essays that do not meet these criteria will not earn a "C."

A "B" level grade (80-90%) highlights a strong example of college writing and thinking. In addition to meeting the "C" level requirements, such an essay goes further in some way(s): it demonstrates some insight into the "gray areas" of the topic, provides original or very thorough support that is tightly woven into the overall argument, reads smoothly at both the sentence and paragraph levels, and/or exhibits a personal "voice" or style. It has few sentence-level errors.

An "A" level grade (90-100%) marks a piece of writing that completely anticipates and satisfies the needs of the reader. Even more than in a "B" project, its responds to possible reader questions, uses a wide range of supporting evidence, engages the reader in a provocative conversation, provides unexpected insights or particularly useful recommendations, and/or uses language with care and facility.

"D" and "F" level essays do not meet the basic expectations of the assignment.

Students will receive comments, suggestions, and guidance to help them design, implement, and develop their writing and research processes. Comments and grades on individual pieces of writing are also responses to the writing-in-progress toward the final project. All assignments will receive a letter grade. However, an essay that receives a check minus indicates weak work. Any essay that receives a check minus must be revised.

**Submitting Class Work**
Assignments are due at the beginning of class on the due date. Essays must be typed and should conform to the following specifications. Students may need to adjust their
Software settings to adhere to these requirements:

- Times New Roman, 12 point
- Justification: left margin only
- Line spacing: double-spaced.
- Print: dark, and on one side of the page
- Graphics: in an appendix only
- Documentation: MLA

Assignments **must be stapled**, when they are not, the risk of my losing pages increases. Put your name, my name, the class session, and the date at the top of the first page. I accept emailed assignments only as "place-holders" to avoid a late penalty; unless otherwise stated, all assignments must be turned in as hard copy. You should keep all of your assignments as they are handed back to you.

**Late Work Policy**
Late assignments are those arriving any time after the beginning of class on the due date. If you need to, you can email me an assignment to avoid a grade penalty, but you must still turn in a hard copy as soon as possible. You may place an assignment in my mailbox; do not ask the office staff to validate that you have turned it in; do not put work on or under my office door or on my desk if I am not there. Late assignments will lose 5% of their points for each calendar day that they are late. Late-work penalties cannot be changed through revision.

**Revision Policy**
You may revise two of the three major assignments due before May 5 for a new grade. Revisions must demonstrate substantial change to the focus, support, approach, and/or organization of the essay in addition to comprehensive error correction, or they will be returned with no grade change. Revisions must be submitted with all previous drafts, and completed within two weeks of the essay’s return to you.

**English Department Statement on Plagiarism**
Plagiarism means using the exact words, opinions, or factual information from another source without giving that source credit. Writers give credit through the use of accepted documentation styles, such as parenthetical citation, footnotes, or endnotes; a simple listing of books, articles, and websites is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in an academic setting.

Student writers are often confused as to what should be cited. Some think that only direct quotations need to be credited. While direct quotations do need citations, so do paraphrases and summaries of opinions or factual information formerly unknown to the writers or which the writers did not discover themselves. Exceptions to this include factual information, which can be obtained from a variety of sources, the writers' own
insights or findings from their own field research—what has been called common knowledge. What constitutes common knowledge can sometimes be precarious; what is common knowledge for one audience may be so for another. In such situations, it is helpful to keep the reader in mind and to think of citations as being "reader friendly."

In other words, writers provide a citation for any piece of information that they think their readers might want to investigate further. Not only is this attitude considerate of readers, it will almost certainly ensure that writers will not be guilty of plagiarism. Consult the George Mason Honor Code for more information.

Students with disabilities
Students with documented disabilities are legally entitled to certain accommodations in the classroom. If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 993-2474. All academic accommodations must be arranged through the DRC.

The University Writing Center:
Since you will be writing several papers in this course, you may want to visit the University Writing Center (for assistance. The Writing Center is one of the best resources you will find on campus. They have an outstanding website that offers a wealth of online resources for student writers. You can schedule a 50minute appointment with a trained tutor to help with any phase of the writing process. You can also obtain assistance with papers by visiting the online writing center at http://writingcenter.gmu.edu/owl/index.html, but please plan ahead and allow yourself at least two days to receive a response. Make an appointment by calling 703-993-1200, or stop by and schedule a session.

Weeks 1-4
American Character and Image, Gender Roles

Week 1
01/22 Introductions/diagnostic essay
HW: Read and annotate these selections from Discovering Culture, Preface, Chapter 1—Warhol, Rufus, Rodriquez, and Deneen. (Ix-33) Be prepared to share opinions in class

01/24 introductions: introduce yourself, your major, interests; what you expect from this course and what you want out of it? Explanation of Reader responses responding to 01/02 readings
HW: Finish chapter 1 p.33-44. Type a 2 page (not an Essay, as it asks) reader response to #4 btm p.44
Week 2
01/29 Reader response #1 due. Reader response round table discussion.
HW: read and annotate selections from DC Chapter 2—Orbach, Smith p.45-62 and handout from Ariel Levy’s Female Chauvinist Pigs.
01/31 Sharing and responding to readings—do the writer’s convince the reader? How? Read Handout in class—“When a Toy is a Troll” Clips from Bratz™ Making connections.
HW: Read articles: “The Myth of Male Power” “Men as victims in Advertising” watch an hour or so of comedy central in the evening and make a few notes on how you see men as currently depicted in advertising—buffoon or brilliant bread winner? Prepare to share findings in class.

Week 3
02/05 Class debates—rhetorical strategies. Introduction to assignment #1
HW: Read selections from DC Chapter 3, McIntyre and Garrison: pp92-110 Read Selections from They Say, I Say pp.15-28. Start looking for articles—bring potential article with you to class Thursday.
02/07 Appealing to audience, Aristotle Style—methods of persuasion. In class writing about articles—forming your argument.

Week 4
02/12 Skepticism helps your argument: Lecture: Comedy—demystifying stereotypes? Gender, race?
HW: Read “South Park” article, Read in DC: Garrison “The Simpson’s as a Reflection Society”
02/14 Draft of Assignment #1 due. Peer workshop worksheet will be provided. Clips from SP, The Simpson’s. Group work
Group work.
HW: Read in DC selections from Chapter 4, Beck, Navarro and Tucker.

Week 5
02/19: TBA
HW: Read in DC Staples, pp. 157-159, read selected essays from Consumer Culture (TBA)
02/21: TBA
HW: Read selected essays from Consumer Culture (TBA)

Week 6

02/26 Return of drafts. Technology Class (Innovation Hall Rm. TBA.
HW: Work on polishing final drafts. Final Due 03/04 Reader response #2 due (02/28) on Beck, Navarro and or Tucker, Consumer Culture essays and or clips from in class media--your choice.

02/28 –intro to i-calim—Reader response #2 Reader response round table discussion. Introductions to Group presentations/

Week 7
03/04 Assignment #1 Due. Technology Class (Innovation Hall) Rm.318
“i-claim” Argument Surveys
Handout assignment #2 Part A: the topic proposal:
HW: Brain-storm…think about a topic you might address using the guide-lines.

03/06 Return of assignment #1. Meet in Innovation Hall  Rm 222
HW: Fine-tune your proposal—counter argument—Topic proposals WILL BE DUE at CONFERENCE. Be prepared to discuss your long-term plan in conference.

Week 8:

(Spring Break)

Week 9
03/18/20th — Conferences: explanation of Part B of assignment #2--IPD assignments
HW: Read In They Say.. Preface and Introduction-ix—15 begin to locate scholarly articles. Work on IPD

Week 10
03/25 TBA
HW: Read In They Say pp. 15-38 locate more articles scholarly articles related to topic. Research and continue drafting IPD

03/27 BRIEF DISCUSSION OF IPD-SAMPLE IPD’S
Presentations begin: Groups 1,2, and 3
HW: Read In They Say pp. 39-63

Week 11
04/01 Presentations 4, 5, and 6
HW: Read In They Say...Part 2 pp. 74-87
04/03  **2 copies of Draft of IPD Due at least 4 pages of research**—Peer Workshop. Lecture: how skepticism helps: counter argument.  
**HW: Read in They Say…Part 3 pp. 101-122**

**Week 12**
04/08 Return of drafts. **Introduction to Part C:** The final draft of Assignment #2. Transitions/beginnings and endings (tying it all together) in class writing.  
**HW: Work on Part C: the final draft.**

04/10 **More work on Part C.** Transitions/beginnings and endings (tying it all together) in class writing.  
**HW: Polish part C: the final draft.**

**Week 13**
04/15 **Assignment #2 due.** Documentary: *Wal-Mart: The High Cost of Low Price*  
**HW: Read Opinion handouts—The Good side of the Wal-Mart Effect: Respond in two typed pages to all articles for Reader response # 3 Due 04/22.**

**Week 14**
04/22 **Return of Ass#2. Reader Response # 3 Due:** Meet in Innovation Hall  Rm. 317  
**HW: Read Hand out from: The Wal-Mart Effect.**

04/24 **Introduction to Assignment # 3. Final clips of WM.** Final questions and concerns.  
**HW: Work on draft 2 pages due 04/29.**

**Week 15**
04/29 **Draft of Assignment #3 Due: 2 pages**—Peer workshops. Final questions and concerns.

05/01  **Last Day of Class. Assignment #3 due.**  
**Note* Re-writes for assignment #2 will be due the following Tuesday 05/06 between 11:00 am to 2pm in my office Robinson B 443.**
(Investigative Process Draft-IPD)
Part B: Draft for Assignment #2

The rough draft of this assignment should be 4-5 pages. At that point you should have at least 4-6 sources that you will develop into your discussion. This draft is most important as a build up to the final paper as it will contain the research, or “meat” for your final discussion. The IPD should foster your individual critical thinking capabilities and eventually help your paper “hang” together.

At the top of this paper you will want to note what your research question is: I am studying…etc.

In order for you to develop your own thoughts and draw sound conclusions about your research question, you will need to know, and thoroughly understand, how experts address the similar question. A strong research essay is more than what the writer thinks augmented by some strong quoted material. **Good research essays, professional ones, make claims based on the writer’s (your critical viewpoint and analysis of expert thinking and data. In this way you come to your own conclusions, and begin with your own ideas regarding the subject.**

The focus of this process paper is to get you to have a real sense of your sources and to allow those sources “voice” in your paper. This paper should help you have a clear understanding of the conversations that your sources engage in so that you can begin to understand your place in it. Essentially, this is a three step process: 1) Compile, 2) Organize, 3) Synthesize. To complete this project successfully, you will need to work through these steps. You probably cannot successfully synthesize sources before you understand each individual source and then organize them into appropriate conversations.

Your investigative process paper **should not** be merely a list of expanded abstracts of each source. Such a conversation would sound like this: I looked at this source and it said… then I looked at this source and it said… Rather, I want you to work toward a more sophisticated synthesis. This is a demanding a challenging assignment, but quite rewarding.

**Compiling:**

For each source, you must give the appropriate MLA citation. See MLA Guide. Read and carefully annotate the source. Use the following questions as a guide for your note taking.

- What is the author’s primary argument? Can you identify a claim?
- What words or terms are fundamental to that argument? Make sure you understand the vocabulary!
- What evidence does the author use to support the argument?
- What underlying assumptions shape the author’s position? Does he/she consider other viewpoints?
- What kind of piece (genre) is it? Is it a personal piece? Scholarly? Different kinds of pieces have different goals; Do you know what this author is striving to do?
Above all, you are searching for the author’s argument and rationale. You are searching for how the author supports his/her claims. You are searching for intriguing ideas that will help you develop your argument.

SUMMARY:
1) Choose two or three pithy quotations that best represent the author’s position. A pithy quotation gets to the heart of the matter. A pithy quotation is contestable and intriguing. A pith quotation is brief—somewhere between two and five lines of text. Record those quotations exactly as you find them in the source, preserving punctuation, including page number(s) and quotation marks.

RESPONSE
2) Re-present, in your own words, the fullness of the argument. Blend in, and unpack the quoted material you selected.
3) Next you should read over your summaries and determine where you might blend these arguments together. The most successful investigative paper will find ways to link and cross reference sources within paragraphs. For example, if you have three sources discussing gender differences, enter those sources in a single conversation. Your discussion might look something like this: While both Cole and Solomon point out... Jeffries extends his observation by adding.... In this way, your investigative paper presents an interesting web of information that is more interesting and thoughtful than a simple cataloguing of sources. You may frame your Investigative paper by explaining to your readers what your research question is, and then introduce us to the different kinds of responses you got from your sources. Think about and discuss how the author’s position and evidence affect your thinking about your question. Does it relate to your claim and in what way? How will it help you push your OWN IDEAS forward? Aim for a summary/response of about 1 page of text per source. Save.

Categorize and Organize: After you have completed the compilation portion of the assignment, take a look at what you have here. What kinds of categories does this stuff fall into? When you have compiled these summaries, you should begin to detect a pattern in the conversation. Which of these sources are discussing similar things in similar or dissimilar ways? Group like-minded conversations together. Your investigative process paper may contain different categories of information. Identifying and understanding the categories is a very good way to get control of your material.

You Investigative Draft should include a Works Cited List.

Part C: Final Assignment #2
You must thoroughly review 6-8 sources for your FINAL paper. The length for this final paper must be AT LEAST 7 pages.
ENGL-101: Composition

Office Hours: Tues/Thurs Noon - 1:00 pm, 4:30 – 5:30 pm & by appointment
Office:
e-mail:

Do you think writing is boring? Does just thinking about research or an assigned topic put you to sleep? This semester we’ll examine the tools professional scholars and writers use to make research and writing more engaging, and you’ll take boring topics and discover ways to make them interesting to yourself and your reader!

This course is designed to help you improve your abilities to read, write, and think at a college level. In English 101, you will develop strategies to help you use writing as a tool for exploring and expanding your own ideas, as well as for informing and persuading your readers. You will need to develop critical reading and research techniques to support your writing and learn technologies that assist you.

We’ll also look at how research is often organic, growing from the writing process and the writer’s desire to know more, rather than always being the first step in writing. We’ll examine the writing and research techniques used by professional writers and work together to incorporate them into your work. As you write, we’ll focus on the writing process—not just your final product.

By the end of the semester you will:
 Produce various types of writing
  Read carefully and thoughtfully
  Synthesize information to create new ideas, which you will express in your voice
  Develop a meaningful thesis and argue to support it, evaluating and using research as needed
  Critique your own and others’ writing

TEXTS & MATERIALS

Required:
Trimble, John. Writing with Style.
Readings and hand-outs available on WebCT
Money for printing and photocopying
A working GMU e-mail account that check regularly
REQUIREMENTS

Assignments
Note: More detailed assignments will be given.
Homework: For many of the texts, you will write a short response paper and/or submit discussion questions. You will also be required to provide written feedback on your peers’ work.
Quizzes: We’ll also have quizzes or graded in-class writing activities (both announced and unannounced). You can not make these up, but I drop your one lowest quiz or short activity grade at the end of the semester.
Researched Expository Essay: This paper will develop your descriptive, narrative and research skills, as well as offer you the chance to be creative and experiment with your writing (~5 pages).
Researched Argument: This paper will require you to develop and sustain an argument, supported by research. Your writing for this project should display your best skills as you develop and support a complex, arguable thesis (~7 pages).
Analytical Essay: In this final paper, you’ll use what we’ve learned about writing, audience and rhetorical strategies to analyze one of our texts. (~3 pages).

Grading
I grade on a weighted point system, as follows:

Paper #1—Researched Expository Essay: 150 pts. Class Participation: 10%
Paper #2—Researched Argument: 200 pts. Homework/Quizzes: 5-10 pts. each
Argument Development Activity: 12 pts.
Annotated Bibliography: 30 pts.
Paper #3—Analytical Essay: 100 pts.

At semester’s end, I will add all the points for the course and assign the participation component a point value equal to 10% of the course total. I will then add your points and divide by the total number possible to get a final grade percentage. Final grades are assigned as follows: A+ (100-97.5%); A (97.4% -93%); A- (92.9-90%); B+ (89-87.5%); B (87.4-83%); B- (82.9-80%); C+ (79-77.5%); C (77.4-73%). You must earn a grade of C or higher (not a C-) to complete the 101 requirement; students whose grades are lower than 73% earn an NC (No Credit) and must re-take English 101. Incompletes are not given in English 101.
I will file a midterm letter grade based on the work of the first seven weeks of the course. This grade will help you find out how you are doing in the class; but because many of the major assignments occur in the second half of the semester, you shouldn’t assume that it’s a prediction of your final grade. You can also stop by my office or e-mail me at any time to get your current grade.

**Grading Criteria**

A "C" denotes average college-level writing and achievement. The essay is a competent response to the assignment: it meets, to some degree, all the assignment requirements, and demonstrates some audience awareness. It has a thesis, presents some support, and moves from point to point in an orderly fashion; sentence-level errors do not significantly prevent comprehension. Essays that do not meet these criteria will not earn a "C."

A "B" is a good paper that highlights a strong example of college writing and thinking. In addition to meeting the "C" level requirements, such an essay goes further in some way(s): it demonstrates some insight into the "gray areas" of the topic, provides original or thorough support that is tightly woven into the overall argument, reads smoothly at both the sentence and paragraph levels, and/or exhibits a personal "voice" or style. It has few sentence-level errors.

An "A" marks an essay that is a delight for the reader. Even more than in a "B" essay, its author anticipates and responds to possible reader questions, uses a wide range of supporting evidence, engages the reader in a provocative conversation, provides unexpected insights, and/or uses language with care and flair. It possesses virtually no mechanical errors.

"D" and "F" level essays do not meet the basic expectations of the assignment.

**Readings & WebCT**

The reading assignments are a crucial part of this course, forming the basis of most of our discussions and serving as instruction on writing. I expect careful, analytical reading. This level of reading requires you to give the text your full attention, wrestle with the ideas presented, and be prepared to discuss it intelligently in class.

We will use WebCT (Web Course Tools) for readings and assignments. To access WebCT:

- Get on the Internet and go to [http://webct41.gmu.edu](http://webct41.gmu.edu)
- Enter your userid and password, which are your Mason e-mail ID and password
- Click on ENGL-101-016/017-S08
- If this course does not appear in your “Courses” menu, please let me know.
You must bring a copy of the text to class each day, even if the reading was accessed through WebCT.

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WRITING ASSIGNMENT POLICIES & PROCEDURES

Essay Format
You should use the Modern Language Association (MLA) format. Each assignment should be typed, double-spaced, and in a reasonable 11 or 12-point font. Your name, our course number, Professor Lister, and the date should be on the first page (no separate title pages). Your last name and the page number should be on ensuing pages. All pages should be stapled or clipped together.

A meaningful end page is required for all major papers and their revisions. An end page is a reflection/analysis of your work on the paper. It can include difficulties encountered, your perception of the paper's strengths and weaknesses, and reflections about the paper or your writing process.

Peer Workshops
Peer workshops provide crucial feedback to help you improve your writing. For peer workshops, you will submit a draft of your paper with questions for your group to address. You are expected to participate fully in peer workshop sessions by providing each group member with meaningful written comments, which may be graded, and then further discussing the papers in-class.

Revisions
Because one of the goals of this course is development of your writing skills, I encourage revision. You may submit revisions of the first two essays of the semester. These must be genuine revisions, rather than edited papers. You should address the weaknesses of your original draft and attempt to strengthen your paper by looking at and expressing your ideas in a new way. You must consult with me to discuss possible revision strategies and goals before submitting a revision.

When you submit revised papers, you must include your original paper with my comments still attached and a new end page that describes your changes and their effect on your paper. If the revision results in an improved paper, I will assign a new grade and average the two together to produce a final grade. While you are not guaranteed to receive a higher grade for a revision, you will never receive a lower one.

Late Papers
Papers and other homework are due at the beginning of class, on the due date. For each class period that a paper is late, it will be penalized one grade. Moreover, **failure to submit any one of the major papers will result in failing the class.**
If you know in advance that you will be absent the day a paper is due, or if you are having serious difficulties, please see me in advance. Unless you speak with me before the deadline, you will receive a late paper penalty except under the rarest of circumstances.

I accept e-mailed assignments only as “place-holders” to avoid late penalties; all assignments must be turned in as hard-copy to be graded.

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**PARTICIPATION & COMMON COURTESIES**

Participation is ten percent of your grade for this course and is also what I use as the deciding factor for borderline grades. Because we operate as a community, it is important that you are present and actively engaged in class. This means participating in discussions and activities in a meaningful way, coming to class prepared, and being open to new ideas and viewpoints. While you are free to disagree with me or other students during class discussion, your comments should be intellectual rather than personal, and conversational rather than confrontational.

I note daily participation with a √+, √-, T, T+ or 0. Actively contributing in discussion and activities earns a √+ (1), average engagement in the class a √(.85), present but not participating fully a √-. (7), lateness or leaving early a T (.8), or being late but actively participating a T+ (.85). Rudeness or disrupting class will likely result in negative points. Missing or being extremely late to class, sleeping, or remaining silent and visibly bored will result in a 0, as will dealing with your cell phone. It should go without saying, but your cell phone must be TURNED OFF (not merely silenced) during class. If there is an emergency that requires you to keep your cell phone on, please notify me before that class begins.

You have two free absences to use throughout the semester, which you may want to save for genuine emergencies; all other absences result in a 0 for that day’s participation. *You will lose extra participation points for missing a peer workshop.*

If you are absent, you are still responsible for all homework and readings, much of which is available through our WebCT site. Contact me as soon as possible to have information e-mailed to you. *Make sure you have a working GMU e-mail account that you check regularly.*

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**OTHERIMPORTANT INFORMATION**
If You Need Help
I strive to be a readily available resource, and it is your right to consult with me. Please talk to me if you want to discuss writing or have questions or concerns about the class, a reading, or an assignment. I enjoy the opportunity to work with you. If you can’t make my office hours, we can try to schedule an appointment. You may also call or e-mail me, but most difficulties are best discussed in person so that we can review your writing together.

You may also want to visit the University Writing Center (http://writingcenter.gmu.edu), located in Robinson A114, for assistance. The Writing Center is one of the best resources you will find on campus. In addition to free individual tutoring sessions, they have an outstanding website that offers a wealth of online resources for student writers.

Plagiarism/Honor Code
Because you’re in this class to improve your writing, it’s important that all work submitted contain your original words and ideas. Plagiarism means using the exact words, opinions, or factual information from another source without giving that source credit. Writers give credit through the use of accepted documentation styles, such as parenthetical citation, footnotes, or end notes; a simple listing of books, articles, and websites is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in an academic setting. I will, therefore, submit any cases of cheating or plagiarism to the Honor Council.

If you are uncertain about whether you have plagiarized or relied too heavily on outside assistance, ask me before submitting the paper.

Students with Disabilities
Students with documented disabilities are legally entitled to certain accommodations in the classroom. If you are a student with a disability, please see me at the beginning of the semester and contact the Disability Resource Center (DRC) at 993-2474. All academic accommodations must be arranged through the DRC. I am happy to work with students and the DRC to arrange fair access and support.

Important Dates
Last Day to Add Classes: February 5, 2008
Last Day to Drop Classes: February 22, 2008
Last Day of Elective Withdrawal Period: March 21, 2008
**Spring Break: March 10-16, 2008**
<table>
<thead>
<tr>
<th>Date</th>
<th>Reading/Agenda</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>Jan. 22 (T)</td>
<td>Syllabus &amp; Introductions</td>
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<tr>
<td>Jan. 24 (Th)</td>
<td>Trimble, <em>Writing with Style</em> 1-2; Samuelson, “The Sad Fate of the Comma,”</td>
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<td>Jan. 29 (T)</td>
<td>Trimble, <em>Writing with Style</em> 3-4 Newman, “Every Shoe Tells a Story” (WebCT)</td>
<td>Bring a newspaper to class Newman Response A</td>
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<tr>
<td>Jan. 31 (Th)</td>
<td>Trimble, <em>Writing with Style</em> 5 Barrett, “The Sea of Information” (WebCT)</td>
<td>Goals Statement</td>
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<tr>
<td>Feb. 5 (T)</td>
<td>Mori, “Yarn” &amp; Montaigne “Of Thumbs” (WebCT) &amp; Trimble, <em>Writing with Style</em> 6-7</td>
<td>Mori Library Activity Newman Response B</td>
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<tr>
<td>Feb. 7 (Th)</td>
<td><strong>Meet in Computer Classroom</strong> Trimble, <em>Writing with Style</em> 8</td>
<td>Descriptive Paragraph 1 Paper #1 Topics</td>
</tr>
<tr>
<td>Feb. 12 (T)</td>
<td><strong>Meet in Computer Classroom</strong> Raimes, “Evaluating Sources,” 118-126</td>
<td>Descriptive Paragraph 2</td>
</tr>
<tr>
<td>Feb. 14 (Th)</td>
<td>Raimes, 155-57; 166-67 <strong>Meet in Computer Classroom</strong></td>
<td>Bring your “Keys for Writers” to class</td>
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<tr>
<td>Feb. 19 (T)</td>
<td>Trimble, <em>Writing with Style</em> 10 <strong>Meet in Computer Classroom</strong></td>
<td></td>
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<td>Feb. 21 (Th)*</td>
<td>Peer Workshop Prep <strong>Sample Draft Paper (WebCT)</strong></td>
<td>Paper #1 Peer Workshop Draft</td>
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<td>Feb. 26 (T)</td>
<td>Peer Workshop</td>
<td>Peer Workshop Comments</td>
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<td>Feb. 28 (Th)</td>
<td>Discuss Research Paper &amp; Topics</td>
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<tr>
<td>March 4 (T)</td>
<td>Raimes, 4a-4e, pages 51-59 &amp; 4k, 66-68</td>
<td><strong>Paper #1</strong></td>
</tr>
<tr>
<td>March 6 (Th)</td>
<td>Tan, “Mother Tongue” (WebCT) &amp; Raimes, 4g (pages 61-62)</td>
<td>Argument Development Act.</td>
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<tr>
<td><strong>March 10-16</strong></td>
<td><strong>No Class—Spring Break</strong></td>
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<tr>
<td>March 18 (T)</td>
<td><strong>Meet in Computer Classroom</strong> Raimes, 4f pages 59-61</td>
<td></td>
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<tr>
<td>March 20 (Th)</td>
<td>Gawande, “Final Cut”</td>
<td>Gawande Response</td>
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<tr>
<td>March 25 (T)</td>
<td><strong>No Class—Student Conferences</strong></td>
<td>Annotated Bibliography</td>
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<tr>
<td>March 27 (Th)</td>
<td><strong>No Class—Student Conferences</strong></td>
<td>Annotated Bibliography</td>
</tr>
<tr>
<td>April 1 (T)</td>
<td>Logic: Raimes, 4h-4j, pages 62-66, beginning at “key points,” stopping at “tech notes” &amp;</td>
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<tr>
<td>Date</td>
<td>Event Description</td>
<td>Notes</td>
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<tr>
<td>April 3 (Th)</td>
<td>Thesis Workshop&lt;br&gt;&lt;strong&gt;Meet in Computer Classroom&lt;/strong&gt;</td>
<td>Paper #2 Peer Workshop Draft</td>
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<td>MLA/Plagiarism Review Quiz</td>
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<tr>
<td>April 8 (T)*</td>
<td>Peer Workshop</td>
<td>Peer Workshop Comments</td>
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<tr>
<td>April 10 (Th)</td>
<td>Trimble, &lt;i&gt;Writing with Style&lt;/i&gt; 11&lt;br&gt;Distribute and Discuss Paper #3</td>
<td></td>
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<tr>
<td>April 15 (T)</td>
<td></td>
<td>Paper #2</td>
</tr>
<tr>
<td>April 17 (Th)</td>
<td>King’s “Letter from Birmingham Jail (WebCT)</td>
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<td>April 22 (T)</td>
<td>Lincoln’s “Gettysburg Address” &amp; Highet “The Gettysburg Address” (WebCT)</td>
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<td>April 24 (Th)</td>
<td>Trimble, &lt;i&gt;Writing with Style&lt;/i&gt; 9&lt;br&gt;Wainaina, “How to Write About Africa”</td>
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<tr>
<td>April 29 (T)*</td>
<td>&lt;strong&gt;Meet in Computer Classroom&lt;/strong&gt;</td>
<td>Paper #3 Peer Review Draft</td>
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<tr>
<td>May 1 (Th)</td>
<td>LAST CLASS: Wrap-up &amp; In-class Writing</td>
<td>--&lt;strong&gt;Paper #3&lt;/strong&gt;</td>
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<tr>
<td>May 8 (Th.)</td>
<td></td>
<td>-- <strong>Revisions (in my office)</strong></td>
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* These are peer workshop dates; see participation policy.
Researched Argument Essay

Your researched argument essay gives you a chance to explore a specific topic about which you’ve always wanted to know more. The topic is open, but you must narrow it down and be able to develop a complex, arguable thesis. The point of this approximately 7 page essay is to have a specific point (argument) that you’re making about the topic, which you then support using research.

Getting Started:
We’ll brainstorm ideas in class, but you should think of a question or topic about which you’re curious and that lends itself to an argument.

Objectives:
In undertaking this essay, you will learn to:
Survey research in order to narrow a topic and develop an argument
Choose credible scholarly sources
Use research to support and illustrate an intellectual argument
Write an academic argument

Part 1: Non-Researched Argument Development/Topic Proposal
After you’ve selected your topic and done some thinking about it (and possibly some preliminary research), we’ll spend time in class talking about how to structure an argument and develop your initial stance on your issue. You’ll then write a document that contains: 1) a paragraph delineating your current thinking about/position on this issue, 2) a bulleted list of main points for your current position, 3) a bulleted list of main points against your current position, and 4) questions you still have about the issue. This exercise will help focus your research, but it won’t necessarily serve as an outline for your final paper. Your stance on the issue may change later as you do more research; in other words, you may discover that you’re wrong and change your position. However, I want you to have thought about your topic in such a way that you, not your sources, are driving your writing process. We’ll discuss this assignment at your conference and talk about how your research has developed or changed your ideas.

Points: 12

Part 2: Annotated Bibliography
For this portion of the assignment, you will find 10 possible sources for your researched argument and write an annotated bibliography that both summarizes and evaluates the sources you’ve found. We’ll discuss this more in class so you’re sure what’s expected of you. Note that that you won’t necessarily use all ten sources in your paper and may, in fact, still need other sources. However, this activity will help you do thorough research so that you’re picking the best sources possible.

Points: 30
Part 3: Researched Argument Essay
After exploring your ideas about this topic in the non-researched argument and developing an annotated bibliography, you should be ready to focus your topic and use research to craft a strong thesis that’s the basis for your researched argument. This essay will use conventional methods of organization, quotation integration, citations, and analysis. Although you will use research and expert opinion in this essay, remember that your argument, ideas, analysis and voice should control the essay.

For the researched argument, you must meet the following source requirements:
Five Sources, at least two of which are scholarly (all must be credible, of course)
Only two of your five sources may be internet sources

I will evaluate your essay according to our regular grading matrix. In an excellent essay, the reader will find that:
The thesis is complex, arguable, and insightful
The argument explores the topic in an interesting way
The organization builds a linear, coherent argument
All points support the thesis
Subtle, meaningful transitions exist between focused, coherent paragraphs
The research is well integrated, without overshadowing the author’s ideas or voice
The analysis is logical and perceptive with a good mix of the author’s ideas and supporting evidence
Source requirements are met and sources are correctly documented and cited, per MLA standards
The author has included a meaningful end page

This essay should be your best writing, synthesizing all the elements of academic writing we’ve discussed this semester.
Points 200

Schedule:
2/28 (Th) Discuss research topics in class (bring initial topic idea or research question to class)
3/6 (T) Argument Development Activity Due
3/18 (T) Guided Research Session in Computer Classroom
3/25 & 3/27 No Class—Conferences (Annotated Bibliography Due at Conference)
4/3 (Th) Peer Workshop Draft Due (1 copy)
4/8 (T) Peer Workshop
4/15 (T) FINAL ESSAY DUE
REFERENCES


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CURRICULUM VITAE

David R. Beach has been a composition instructor and associate program administrator in George Mason University’s English Department since 1997, where he has worked closely with faculty in integrating instructional technology into composition curricula. His educational background includes an M.A. in English (Linguistics) from George Mason University and a B.A. in English Language and Literature from Marymount University. Prior to working in academia, Mr. Beach worked for the National Geographic Society in its Educational Media division.