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Articulating Claims and Presenting Evidence: A Study of Twelve Student Writers, From First-Year Composition to Writing Across the Curriculum

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IN RECENT DECADES, composition studies has directed increased attention to the ways that students' writing in first-year composition (FYC) prepares them for their later writing across the curriculum (WAC). Recent scholarship has worked to identify the characteristics and contexts common to literacy development as students progress from FYC to WAC. Among the rhetorical skills most critical to students' disciplinary writing is the ability to construct effective arguments (Graff, 2003; Hillocks, 2010, 2011). This longitudinal study examines the transfer of a key component of argumentation—the ability to articulate claims and support them with evidence—from FYC to WAC in the junior and senior years.

A number of longitudinal studies (Herrington, 1984; McCarthy, 1987; Walvoord & McCarthy, 1990; Herrington & Curtis, 2000; Carroll, 2002; Theiss & Zawicki, 2006; and Beaufort, 2007) examine the complexities of transferring skills and abilities from FYC to later work across the curriculum. Among the core findings in this body of work are, first, that the development of writing ability during the college years does not come easily, and, second, that the notion of *transfer* is central to student growth between FYC and WAC. Indeed, as Smit (2004) suggests, "The ability to transfer knowledge and ability from one context to another is *what we mean by learning in the first place*" (p. 130, emphasis added). The transfer of writing skills from one context to another is often unpredictable: such transfer "depends on the learners' background and experience, factors over which teachers have little control" (Smit, 2004, p. 119). When transfer does occur, it comes about because learners "see the similarity between what they have learned in the past and what they need to do in new contexts" (Smit, 2004, p. 119). In order, then, for students to transfer skills beyond FYC and into WAC, they must be prepared and encouraged to do so.

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Researchers have only recently begun to examine, more specifically, the transfer of argument skills from FYC into WAC. In a pilot study presenting self-reported comments from seven student writers as they moved from FYC into their first two years of WAC, Wardle (2007) found that skills do not transfer unless students "*perceive a need* to adopt or adapt most of the writing behaviors they used in FYC for other courses" (Wardle's emphasis, p. 76). In their study of two student writers' formation of claims during their first year of study in both FYC and WAC, Greene and Orr (2007) conclude that the substantive differences in the two domains force students to adapt strategies learned in FYC in order to maximize their utility across the curriculum.

Such adaptation is seldom simple. Fukuzawa and Boyd (2008) note that students frequently struggle as they begin WAC, in large part because they do not always understand clearly the writing requirements they face beyond FYC. For a variety of reasons, direct transfer of writing skill from one context (such as FYC) to another (such as WAC) is unlikely; only certain "portable" skills may be accessible to students as they move into their major fields of study (Smit, 2004; Dias et al., 1999). To become truly adept, students must develop recognition of their fields as coherent collections of diverse perspectives in which they themselves must advance their own arguments (Thaiss and Zawacki, 2006). These complexities underscore Rose's (1989) "myth of transience"—the belief that writing skills can be learned completely in a single class or as a simple result of a prescribed course of action. For students to become successful, capable writers instead requires a protracted period of time during which they encounter many opportunities to write and receive feedback in multiple contexts.

To better understand the complexities of this transfer of argumentation skills, we examined the work of twelve student writers as they transitioned from FYC to their later WAC, ranging from traditional liberal arts to education, nursing, and science. Our analysis is based on Toulmin's (1958/2003) broad formulation of argument and its emphasis on claims and evidence. Toulmin's model begins with what he called the *claim*, the main point a writer hopes to assert. A claim, whether of fact, policy, or value, is then supported by *evidence* (what Toulmin called the *data*). Evidence may take the form of examples, statistics, testimony, and/or analogy; evidence may be offered in different forms, quantities, or combinations, depending upon the rhetorical situation. Toulmin's model also accounts for *qualification*: such may include, for instance, exceptions which limit the strength of the claim or its evidence. The other elements of Toulmin's model—such as its *warrants* (what the reader must believe in order to agree that the evidence supports the claim), *backing* (evidence provided in support of the warrant), and *rebuttals*—convey the nuances of an argument more so than its basic structure, which can be seen primarily in its claims and evidence.

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Toulmin's taxonomy of argument allows for accommodation of the generic features of argument, primarily its use of claims and evidence, across multiple disciplinary areas. With it, we set out to address the following: Did students employ claims in their writing in FYC and WAC? Were students' claims clear, concise and qualified? Did students support claims with authoritative, varied, and documented evidence? As students progressed through and beyond FYC to WAC in their various undergraduate majors, did their abilities to employ claims and evidence improve?

Methods

Our study was conducted at a comprehensive Midwestern public four-year university requiring a single four-credit FYC course. Taught by a range of instructors, from teaching assistants to adjunct, temporary, full-time, and tenured faculty, FYC includes a significant reading component, typically culminating in a substantial source-based argumentative research project. Beyond FYC exists a WAC requirement, where students complete at least two, and frequently more, such courses, typically in their selected majors.

The students whose work is examined here are selected from a subset of those who had participated in an earlier study of FYC. The earlier study began with a statistically random sampling of FYC students (n=1501); the subset from which these students were selected was limited to those who had continued their college careers at the same institution, who were completing a declared major, and who expressed a willingness to participate. Participants were offered a $50 gift card to the university bookstore in exchange for their participation. Twelve students completed the full round of activities related to the study; their participation was voluntary and solicited in full cooperation with IRB regulations.

In order to examine more closely the individual students' transition from FYC to their later WAC coursework, we collected and triangulated data from multiple sources and at various stages of development. The earlier study provided source-based argument papers and performance assessments from students' FYC classes: students composed two source-based papers, written in response to similar prompts, near both the beginning and the conclusion of FYC. These were later evaluated in a double-blind scoring session by trained raters.[1] Portfolios of WAC projects were then collected from each participant, including written papers that employed systems of claims and their supporting evidence. The participants reviewed the work they had composed and selected five or six representative samples of their writing as indicated in Table 1.

1. After a pilot scoring and subsequent training session, inter-rater reliability for the final essay scoring was 97%. In those few instances where the two raters diverged, a third rater adjudicated.

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Table 1. Writing across the curriculum genres. Projects requiring systems of claims and evidence are listed in italics.

Participant	Major	Genres in Major Field
Amy	Public Relations	news writing, feature writing, *research reports, performance reviews, analytical papers*
Claire	Pre-Law	*argumentation (in preparation for senior thesis), legal briefs and reports*
Evan	Pre-Law	*argumentation (in preparation for senior thesis), legal briefs and reports*
Hailey	Nursing	care plans, discharge summaries, health pamphlets, annotated bibliographies, *literature reviews, research reports*
Kate	Biology	*science lab reports, case studies, literature reviews*
Lois	Psychology	*research reports, letters to legislators*
Melanie	Business Education	*persuasive writing, case studies, research summaries*, lesson plans, autobiographies, *teaching philosophy statements*
Nikki	Health Promotion	*literature reviews, empirical research,* health pamphlets, *research essays*
Rita	Advertising	*literature reviews, self-assessments, empirical research, media plans*
Mary	TESOL/Spanish Education	*research papers, empirical research, literature reviews*, annotated bibliographies, lesson plans, *teaching philosophy statements*
Sheryl	Nursing	care plans, discharge summaries, health pamphlets, reflective journal entries, *outcomes statements, literature reviews, research reports*
Steve	Composite Engineering	*engineering lab reports*, shop orders

Student writing culled from these portfolios provides the primary data source for this analysis. Since few transfer studies present data from actual student discourse (as opposed to self-reported behaviors, e.g., Wardle, 2007), our analysis focuses nearly exclusively on the writing conducted in students' FYC and WAC coursework. Each student's portfolio provided the opportunity to examine student writing at three specific data points:

1. First-Year Composition, Start of Term
2. First-Year Composition, End of Term
3. Writing Across the Curriculum

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While students' portfolios included multiple samples of WAC, we limited our analysis to a single representative paper composed for an upper-division course. In all instances, student portfolios included at least one such paper that employed claims and evidence comparable to those produced in FYC. Using the results of the double-blind review conducted in the earlier study of FYC, we compared the set of WAC papers with each student's FYC work, in the process examining the following:

- *Claims*: Did the work feature discernible claims, and to what degree or extent?
- *Concision*: Were claims concise, or did they suffer from wordiness?
- *Clarity*: Were claims clear, or did they suffer from imprecision or ambiguity?
- *Qualification*: Were claims appropriately qualified?
- *Support*: Were claims supported with evidence, such as example, testimony, or fact?
- *Evidence*: Was evidence employed from researched sources or limited to personal experience?
- *Documentation*: Was evidence from sources acknowledged according to a recognized format (such as MLA, APA, CSE, etc.)?

The small sample size precludes us from making generalizations about any group of students beyond the twelve participating in this study. Additionally, we recognize that any single paper may be less than perfectly indicative of a student's ability. However, the papers selected for the analysis were volunteered by the students as representative of their recent work. Close analysis of multiple works produced by each student at three distinct moments in their undergraduate careers further allows for a considerable degree of familiarity with each individual sample of student writing and the overall work of each student in particular. In our analysis of the data, we witnessed a number of discernible patterns—both for individual students and for the group of them collectively—that suggest implications for student learning in general and WAC in particular.

Results

The study's twelve participants are identified by pseudonyms to preserve their anonymity. Table 2, Evaluation of Claims and Evidence, lists each participant's pseudonym and paper topics. Additionally indicated is each student's degree of success in employing claims and evidence in a specific paper at the three aforementioned data points, labeled as **1 FYC** (start of term), **2 FYC** (end of term) and **3 WAC**.

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Table 2. Evaluation of claims and evidence.

Amy	***topic***	*claims*	*concision*	*clarity*	*qualification*	*support*	*evidence*	*documentation*	***notes***
FYC 1	abstinence-only education	◉	○	○	○	○	◉	○	claims present in each ¶ but with pervasive problems
FYC 2	public smoking ban	◉	◉	◉	◉	◉	◉	◉	improved claims and use of evidence in every respect
WAC 3	Egypt's press freedom	◉	◉	◉	◉	○	○	◉	no improvement; claims exist but often unsupported
Claire	***topic***								***notes***
FYC 1	teen driving	○	○	○	○	○	○	○	all claims & evidence focused on self, no evidence in support
FYC 2	school uniforms	◉	◉	◉	○	◉	◉	◉	developing use of claims, but overreliance on "self" for evidence
WAC 3	treatment of juvenile offenders	◉	◉	◉	◉	◉	◉	✹	little improvement other than qualification, documentation
Evan	***topic***								***notes***
FYC 1	sex and media	○	○	○	○	○	○	○	claims present but reasoning is simplistic, circular, naïve
FYC 2	Patriot Act	◉	◉	○	○	○	○	◉	more concise, precise claims; evidence sometimes irrelevant
WAC 3	insanity defense	○	◉	◉	○	○	◉	✹	"encyclopedia style" prevents true claim + development
Hailey	***topic***								***notes***
FYC 1	minimum wage	○	○	○	○	◉	◉	◉	claims exist, yet lack concision and clarity; evidence is useful
FYC 2	illegal immigration	◉	◉	◉	◉	✹	◉	✹	claims more clear, precise; good sense of support/use of evidence
WAC 3	preeclampsia	◉	◉	✹	✹	✹	◉	✹	evidence limited to one source per paragraph; claims still wordy
Kate	***topic***								***notes***
FYC 1	parenting	◉	◉	○	◉	○	◉	○	claims always present, sometimes lacking clarity
FYC 2	global food market	✹	✹	✹	✹	✹	✹	◉	clear claims with excellent supporting evidence
WAC 3	garlic variations	✹	✹	✹	✹	✹	✹	✹	consistently effective claims supported by researched evidence
Lois	***topic***								***notes***
FYC 1	education	◉	○	◉	○	○	○	○	claims clear & conspicuous, but also naïve and lacking concision
FYC 2	9/11 conspiracies	✹	◉	◉	◉	○	◉	◉	improved claims yet continued difficulties with support
WAC 3	eating disorders	✹	✹	✹	✹	✹	✹	✹	concise claims with varied researched evidence as support
Mary	***topic***								***notes***
FYC 1	vegetarianism	◉	✹	✹	◉	○	◉	○	claims are reasonable, supported; no use of documentation
FYC 2	bilingual education	✹	✹	✹	◉	◉	◉	◉	improved claims and stronger evidence throughout
WAC 3	memory/recall & L2 FYC writing	✹	✹	✹	✹	✹	✹	✹	clear progress with source use and integration of evidence
Melanie	***topic***								***notes***
FYC 1	abstinence-only education	○	○	○	○	○	○	○	some claims exist in some ¶s; evidence limited to speculation
FYC 2	homeland security	◉	◉	◉	◉	◉	◉	◉	employs claims and provides evidence in support
WAC 3	executive leadership	○	○	○	◉	○	○	○	when present, claims lack concision, clarity; evidence often flawed
Nikki	***topic***								***notes***
FYC 1	rhetorical analysis	○	○	○	○	○	◉	○	claims are mostly mere paraphrases, with little support
FYC 2	banning/burning books	◉	◉	◉	◉	◉	◉	✹	awkward, wordy development but purposeful structure
WAC 3	suicide prevalence	◉	◉	◉	◉	◉	◉	◉	claims still lack concision; severe limitations in evidence

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Rita	*topic*							*notes*
FYC 1	minimum wage	●	●	●	○	○	○	○	claims are concise, clear, yet lack development, evidence
FYC 2	gay/lesbian & parenting	●	●	●	●	✹	●	✹	strong source use and integration in support of clear claims
WAC 3	media plan for hotel chain	✹	✹	✹	●	✹	✹	●	very clear, precise claims supported by strong evidence
Sheryl	***topic***							***notes***
FYC 1	rhetorical analysis	○	○	●	○	○	●	●	paragraphs begin with blunt topic sentences, usually paraphrases
FYC 2	autodidactic literacy	✹	●	✹	✹	✹	✹	✹	clear, focused, qualified claims with consistent evidence
WAC 3	uncertainty (oncology/obstetrics)	✹	●	✹	✹	✹	✹	✹	generally clear and qualified claims with strong evidence in support
Steve	***topic***							***notes***
FYC 1	anti-poverty aid	●	●	●	●	●	●	○	clear claims, competent development, no documentation
FYC 2	anti-Americanism	●	●	●	●	●	●	●	little/no progress except for documentation
WAC 3	thermo-mechanical analyzer	●	●	●	●	●	●	●	only some ¶s employ claims, but basic structure is observed

Legend: ○ **problematic** ● **acceptable** ✹ **exemplary**

1. First-Year Composition, Start of Term

At the beginning of first-year composition, students' writing demonstrated a number of difficulties with articulating and supporting claims. The first formal writing task prompted all students to "articulate and support a clear position on an issue raised by the assigned reading," and, in the process of doing so, to "formulate intelligent claims and make purposeful, appropriately documented use of authoritative sources as supporting evidence." Most of the twelve students in this study were able to compose paragraphs with discernible topic sentences, ones that directed the essay from one subtopic to the next, and in fact, with few exceptions, nearly every body paragraph from nearly every student paper began with such a sentence. That paragraphs begin with topic sentences appears to be a convention thoroughly inculcated in these students' prior learning. Yet at this stage, just three students were able to formulate claims and support them with documented evidence.

Nine students struggled to articulate claims that posited arguable, supported propositions separate from the evidence intended to support them. Amy, for instance, argues that "Texas, which accepts more money than any other state for abstinence-only education funds, which is more than 12 million dollars annually, has the fifth-highest teen pregnancy rating"[2]—in the process conflating her claim with the evidence intended to support it. More commonly, students managed to separate claims from the evidence offered in their support, as Claire does here: "When most teenagers turn 16 the first thing on their mind is getting their license and all they care

2. All examples of student writing are presented verbatim, with any errors or inelegancies left intact and unmarked.

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about is taking their friends out and driving around." The claim lacks concision, and the evidence that follows is lax, but the point is sufficiently clear.

Only on occasion did students articulate claims that were models of concision. In an essay on euphemisms in the debate over vegetarianism, for instance, Mary claims "Supporters of vegetarianism tend to use words that stir the emotions." Often when students were able to articulate claims of fact, value, or policy in an arguable proposition, as Mary does above, they struggled with concision and precision. For instance, this claim of Hailey's could easily—and more effectively—be articulated in significantly fewer words: "Another issue that could arise if the minimum wage were increased would be the number of people dropping out of high school could increase." And at times, difficulties with precision and concision rendered students' claims obtuse, as is the case in this example from Kate: "Two extremes are present among parents involving their influence on their children. Although there is a middle between the extremes, the highest level of influence is present at opposite ends of the scale."

While students at the beginning of FYC exhibited a conceptual understanding of claims as a structural device, though not a developed ability to articulate them with precision and concision, their use of supporting evidence was limited. In a few cases, students struggled to provide any instances of supporting evidence. Claire's claim above about newly-licensed teen drivers, for example, is unsupported by any fact, statistic, testimony, or anecdote. Hailey follows her claim about minimum wage not with supporting evidence but with idle speculation: "If you were able to get a pretty decent paying job without even graduating high school then why would you waste your time at high school when you could be making respectable money somewhere where you didn't need a degree." And Amy, having already confused her claim and her evidence, develops her idea only by explaining her confusion: "If someone could explain those numbers to me, and how it makes sense that so much money doesn't help the gigantic state, the abstinence only education is quite obviously not helping the Texas area, why should it work anywhere else?" These writers' difficulties supporting claims with any specific source-based evidence severely limits their abilities to argue successfully.

More common for these first-year writers, though, was the simple tactic of supporting a claim with one or two simple instances of evidence in support. Melanie, for instance, supports this reasonably concise, unambiguous claim—"More and more people are starting to conclude that the abstinence-only message is ineffective with teens"—with two facts: first, that ten states refuse federal money, and second, that of the remaining 40, Texas receives the greatest amount. Yet neither directly supports the claim as written, and no source is correctly acknowledged. While all of the students whose work we examined demonstrated difficulty with documenting sources,

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a few of them managed to support their claims with more concrete examples and evidence, even when documentation was missing or incomplete. For instance, Mary's claim about the language of vegetarianism is supported with a quoted appeal to authority: "PETA (People for the Ethical Treatment of Animals) describes many animals as having human characteristics.'"

In sum, as they started FYC, all twelve students exhibited at least a rudimentary knowledge of paragraph development: all of them employed basic strategies of separating subtopics or reasoning into discrete paragraphs and nearly always began those paragraphs with topic sentences. Often, however, those topic sentences did little more than announce new subtopics; rarely did they posit arguable propositions. When they were able to articulate claims, students at this stage demonstrated a number of difficulties, primarily with precision and concision, but also with presenting the claim as a discrete entity, separate from its supporting evidence. The evidence used in support of claims, meanwhile, when provided, is often self- rather than source-based, frequently insufficient, and sometimes less than fully supportive of the claim it is intended to develop.

2. First-Year Composition, End of Term

Near the conclusion of first-year composition, the students wrote a second paper in response to the same prompt that had motivated their earlier papers. As before, all twelve demonstrated command of topic sentences and the basics of paragraphing. After a semester of instruction, all twelve also had made progress with regard to formulating claims. However, there were considerable differences in the amount of improvement students demonstrated.

Four of the students (Lois, Kate, Mary, and Sheryl) consistently formulated claims that were both arguable and also supportable with documented evidence. In a paper on the benefits of bilingual education, Mary's claims in particular stand out for their concision and appropriateness: "Second, bilingual education allows students to retain their own cultural identity while learning another language." More usual among these four, though, are claims that are clear and arguable but lacking in concision, like this one from Lois's paper aimed at debunking various 9/11 conspiracies: "Since the three attacks on the Pentagon and the World Trade Center, and adding the attempted attack proposed by Flight 93 on the Capital building, almost every single official finding, piece of evidence, or fact presented to support the government's research has been brought under suspicion and scrutiny."

The remaining eight students also improved their ability to articulate claims that were supportable with documented evidence, though unlike the four students discussed above, their efforts were more often problematic. Some claims, for instance, were overly simplistic, as Nikki's is in her argument against censorship: "The ability

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to read is a very useful and powerful quality that a large number of people have the capability of doing." Melanie posits a similarly oversimplified claim in her paper on homeland security: "One of the biggest changes after 9/11 was the enforcement of the USA Patriot Act." Though they are perhaps arguable, simplistic claims like these simply do not prepare the way for these writers to advance a delineated line of supporting evidence. Among the remaining eight students, there are also occasional examples of claims that are more expansive than can be treated well in the single paragraph. In his paper about the roots of anti-Americanism, Steve offers a grammatically suspect example: "Anti-Americanism is not a new idea; it has been around for decades; somewhat derived from America's beliefs and concepts of how the world should be run." While these examples indicate that not all twelve students had learned to formulate arguable claims with perfect consistency, this salient point remains: by the conclusion of FYC, all twelve students were regularly attempting to make claims that were supportable with documented evidence, even if at times their claims were in need of improvement.

One area where improvement was especially recognizable was in students' ability to qualify the claims they were making. At the start of first-year composition, nine of the twelve students had made no effort to qualify claims. However, at the conclusion of the course only two, Claire and Evan, still offered no instances of qualification. For Evan, this appears to be because he was still struggling to keep his claims and the ensuing argument separate from one another, as shown here in his paper on the effects of the Patriot Act: "The Patriot Act is a violation of American citizen's rights. It crosses the line between protecting Americans and invading privacy. Is it worth giving up our rights to feel a little bit safer?" The remaining ten students were at least occasionally able to qualify their claims, though qualification was not necessarily a consistent feature of their work. For example, in her paper arguing in support of the parental rights of gay and lesbian parents, Rita occasionally presents claims devoid of the sort of qualifiers that would help to focus her argument: "gays should be able to adopt children because being good parents has to do with their ability to love and support children, not with their sexual orientation." Later in the same paper, however, she qualifies some of her claims effectively: "There are *some* opponents of gay rights who argue that…" (emphasis added). For two students, Kate and Sheryl, qualification of claims had clearly become a regular feature of academic argumentation, as demonstrated in a claim Sheryl makes in a paper about autodidactic literacy: "Many governments wish to restrict their citizens to a narrow group of ideas and realize that people are more willing to conform if they do not have the power of books; therefore, people in these societies that choose to read face problems using the knowledge they gain." Demonstrating the writers' understanding of the value of

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qualifying terms (e.g., *many, few, some*, etc.), both Kate's and Sheryl's end-of-term papers qualify claims consistently.

At the end of FYC, students were still learning to marshal appropriate evidence to support their claims. As they had at the start of the course, some students were still struggling to provide sound supporting evidence. Hailey's claim about illegal immigrants taking jobs from American citizens, for instance, offers no real support other than undocumented anecdotal evidence: "a dry wall business owner said…." Steve attempts to support his claim about the source of anti-Americanism with a loose discussion of Cold War history, moving improbably from the Cuban Missile Crisis forward all the way to the Iraq War, a discussion he manages with little documentation or concrete evidence. And Lois tries to debunk a range of 9/11 conspiracy theories using little more than her own developing powers of reason. These three problematic examples notwithstanding, eleven of the twelve students did make progress in supporting their claims with appropriate documented evidence.

Students developed increasingly sophisticated means of supporting their arguments. Recall that at the start of the course Rita was unsure how to support her argument about minimum wage: "most of these people who earn the minimum are young people looking for pocket money, not poor families; therefore, the main purpose of the raise, reduce poverty, won't be achieved." However, in her paper arguing against discrimination towards gay and lesbian parents at the end of FYC, she demonstrates a keen ability to construct a source-based argument. In a paragraph opening with the qualified claim that "Many studies have proven this belief wrong after comparing children raised by gay and heterosexual parents," Rita weaves in four separate citations, each one introduced in accurate APA format with signal phrases that establish the credentials of the experts she quotes or paraphrases. Claire, a student who began FYC relying on her own opinions to support her argument about newly licensed teen drivers, at the end of the course supports her argument against school uniforms with appeals to authority ("Ackerman states in 'White Tops, Grey Bottoms' that…") and quotations from students she interviewed for the paper. While none of the twelve had completely mastered the use of appropriate evidence in support of their claims, all had moved away from the self-focused evidence that was a common feature of their writing at the start of the course. Mary's paper in support of bilingual education is a representative example of the gains students tended to make as they learned to use documented evidence: her paper cites and uses appropriately five sources.

As they concluded FYC, then, all twelve students had improved on the knowledge of paragraph development they possessed at the start of the course. Additionally, all twelve had made some progress with regard to articulation of appropriate claims, though there are examples in their work of claims in need of greater concision, qualification, and complexity. Of the twelve students, eleven demonstrated improvement

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in their ability to use documented evidence in support of their claims, having moved beyond the self-focused argumentation that characterized their initial papers for the course. Even for the one student (Evan) whose improvement was slight, there was progress in formulating claims, concision, and documentation. Over the course of FYC, then, all but one of the students markedly improved their ability to construct source-based academic arguments.

3. Writing Across the Curriculum

As upper-division students writing across the curriculum and in various majors, students demonstrated a range of capabilities with regard to articulating and supporting claims. For seven of the twelve students (Claire, Hailey, Kate, Lois, Mary, Rita, and Sheryl), progress begun in FYC continued throughout the undergraduate degree, resulting in academic writing often (or in four students' cases, always) characterized by clear, qualified, and concise claims supported by appropriate documented evidence. For three of the remaining students (Evan, Nikki and Steve), development appears to have stagnated as they transitioned into writing in the major fields of study. These students at times demonstrated competence in the assessed areas, though, in places, issues that were problematic in FYC remained troublesome three years later. And, in two cases (Amy and Melanie), students seem to have regressed as writers, their senior-level work evidencing problems that were not present in their work at the end of FYC. These two cases aside, the general picture that emerges across the group is one of competence gained, particularly when compared to their writing as incoming students.

Ten of the twelve students were either always or nearly always able to articulate supportable claims in the papers we examined. However, the variation of students' majors dictated a considerable range in the types of claims students made. For example, in a course for her nursing major, Hailey's claims concern care procedures, as illustrated by this sentence from a paper on preeclampsia prevention: "Even though there is not a cure for preeclampsia there are things that the nurse can do to aid in the prevention of complications." Similarly, as a major in mechanical engineering, in his lab reports Steve now formulates claims related to correct experimental procedures: "Before anything can be inserted into the [Thermo-Mechanical Analyzer], the samples must be correctly prepared." For Hailey (Nursing) and Steve (Mechanical Engineering) as well as Kate (Biology), Rita (Advertising), and Sheryl (Nursing), the fundamental purpose of claims is not quite the same as it had been in first-year composition. Specifically, rather than setting up source-based argumentation, for each of these five writers claims now create rhetorical space for explaining results of an experiment (Kate, Steve), describing specific procedures (Hailey, Kate, Rita, Sheryl, Steve) or advocating for a precise course of action (Hailey, Rita, Sheryl).

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The remaining seven students were in disciplines that required claims that were more closely aligned rhetorically with those they had made in FYC. Some articulated concise claims supportable by documented evidence with consistency, as illustrated by this example from Lois's (Psychology) library-based research paper on eating disorders: "A new policy called *I Like Me* should be created to help teens deal with and prevent eating disorders." Lois draws on academic journal articles for support, introducing each source with a clear, effective signal phrase and formatting her in-text citations in accurate APA style. Slightly more complicated are some of Mary's (TESOL/Spanish Education) claims, as demonstrated in this sentence from an empirical study she conducted on second language learners' ability to retrieve memories stored in their first language: "Researchers believe that if more information can be gathered about how information storage and retrieval occurs, we will better understand the mental processes of first- and second-language writers." Mary supports her claim with evidence from three separate studies, each cited accurately in APA format. In these papers both Lois and Mary demonstrate consistently their sharpened understandings of the way to formulate and support claims in their respective disciplines.

Other students struggled to articulate workable claims consistently. For instance, in a research paper on juvenile justice, Claire (Pre-Law) conflates two claims with one another: "It is a known fact that the effect of a treatment program varies depending on the individual offender. Treatment programs are designed to change the life course of young offenders and deter them from getting involved with juvenile justice." While her work sometimes provides successful claims, Nikki (Health Promotion) on occasion struggles with clarity, as in this example from a research paper on suicide prevalence: "This issue of being in a rural area is a large factor of difficult access to healthcare." Nikki does show some ability to formulate appropriate claims, though her support often takes the form of loose, awkward paraphrasing of source articles. Consider, for example, this excerpt from an essay on the prevalence of suicide in urban vs. rural areas: "A research article that was addressed is by Gessert (2003), it suggests that rurality may serve as a marker for low levels of social combination and that social and demographic change may have affected rural areas more undesirability [sic] than urban areas." Nikki does not address the source subsequently in her essay, missing the opportunity to articulate more precisely how the article advances a connected line of reasoning. Nikki repeats this pattern throughout the paper, resulting in an essay that consists of a sequential presentation of source summaries.

Though at times some claims are problematic, only two students did not demonstrate the ability to formulate claims supportable by documented evidence. As he had in FYC, Evan (Pre-Law) still struggles to separate his claims and evidence from one another, as in this passage from a historical research essay on the insanity

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defense: "The case of Charles Guiteau is a good example of why the McNaughton Rule was insufficient. Guiteau was obviously insane, but was found guilty when he should have been found not guilty by reason of insanity." Although Evan follows this with one and half pages detailing the Guiteau case, the text reads more like an encyclopedia entry about his subject rather than as an argument for how Guiteau's conviction exemplifies the insufficiency of the McNaughton Rule. Similarly, Melanie (Business Education) struggles to articulate sound claims, a surprising finding given that she had made progress in this area during first-year composition. As a senior, however, her claims lack both precision and direction, as evidenced in this example from a paper on the role of executive leadership in contemporary business: "Looking at four different studies they imply that leadership does not effect an organization, but once correcting some methodological problems with the studies they actually show a much larger impact that leadership does make." From here, Melanie offers four quick bullet points paraphrasing the four studies she refers to, but she does not articulate or address any of the "methodological problems" referred to in her claim.

At the conclusion of FYC, most of these students were still learning to support their claims with appropriate evidence. Over the course of their undergraduate degrees, however, six of them (Kate, Lois, Mary, Rita, Sheryl, and to a slightly lesser extent Hailey) had clearly improved upon the gains they made in FYC, reaching a point where claims were regularly supported with carefully selected and arranged evidence. Three of the students (Claire, Nikki, Steve), showed the ability to articulate claims, even if at times they struggled to produce writing where all claims were formulated appropriately and supported sufficiently. The remaining three students (Amy, Evan, Melanie) all struggled to formulate appropriate claims, producing instead either writing that conflated claims and evidence (Evan) or that was confused in its use of evidence and support (Amy, Melanie). As indicated by their writing in FYC, students generally began their university careers with little ability to formulate and support their claims in writing; however, as upper-division students writing across the curriculum, nine of the twelve made clear progress, expanding on and adapting improvements begun in FYC to meet the increasingly specific needs of their chosen fields of study.

Discussion

If one goal of first-year composition is to foster students' ability to articulate claims and present compelling evidence in support—as is very much the case at these students' institution—the evidence from this study suggests that the majority of students improved these abilities. All twelve of the students in the study demonstrated at least a degree of improvement in at least one area; ten of the twelve made gains in multiple areas.

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In some cases, the record of students' improvement was quite impressive, as evidenced in selected WAC papers from students' final year of undergraduate study. Consider, for instance, the six students whose uses of claims and evidence was in at least some respects exemplary in their WAC courses; all six had evidenced "problematic" work in more than one area at the start of FYC. For these writers, a path of improvement begun in FYC appears to have continued throughout the course and into WAC. Six of these students—Kate, Lois, Mary, Rita, Claire, Sheryl—demonstrate consistent development in nearly every respect and have become, near the conclusion of their college careers, adept at articulating challenging, concise, and qualified claims supported with researched evidence from a variety of authoritative sources. A seventh student, Hailey, had at least learned to use claims and evidence with consistency, if not great success.

For three others, evidence of improvement was less clear. Competent but not consistent, Steve, for example, is at the end of his studies little changed from the writer he was when he began work at the university. Similarly, Nikki's work as a senior is much as it had been at the conclusion of FYC, though it bears mentioning that she did chart improvement in multiple areas as an incoming freshman. Evan shows improvement in some of the areas, though in others his work remains conspicuously unchanged.

Two of the students, Melanie and Amy, did not make substantive improvements past FYC and, in some ways, showed signs of regression from their first year. Of course, as Smit (2004) contends, transfer is unpredictable and variable, a reminder that student writing ability is hardly static. Quite likely some of the students in this study who struggled may well experience success in other rhetorical contexts; by extension, the students who demonstrated competence may encounter rhetorical contexts that prove difficult to navigate. While our research methodology precludes final judgments on any of the writers participating in this study, the larger picture emerging from this research suggests that most students improved their ability to compose increasingly challenging academic arguments over the course of their undergraduate degrees.

Generic Variety, Rhetorical Constancy

Even our small sample size demonstrates the considerable variety of tasks student writers face across the curriculum. For the purposes of comparison, Table 1 lists the genres participants were asked to produce in their major fields of study. It should be noted here that we did not solicit an exhaustive list of all of the projects students completed across the curriculum; indeed, such a list, were it even possible to create with accuracy, would be extremely long. Rather, our participants volunteered a list of the projects they had worked on recently. For some students, the variety of genres far exceeds even that indicated. Mary, for instance, seeking a dual teaching degree (with

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coursework in Spanish, TESOL, and Education) while taking additional courses in English Literature and Chinese, as well as multiple internships and independent studies, had undertaken a vast array of writing experiences, from workplace tasks to blogs to reviews and other analytical papers in addition to the tasks listed above.

Yet despite this variety, all twelve of the students engaged in writing tasks that required them to articulate claims and support them with evidence. Even though our participants' majors spread across a range of disciplinary areas—liberal arts, physical sciences, social sciences, engineering, education, nursing—the rhetorical constancy of the need to support ideas with evidence suggests that the students' training in FYC was relevant to their future writing tasks. Indeed, while audiences, formats, lengths, topics, and conventions all varied from task to task, one frequent constant was that these students were often expected—sometimes explicitly, sometimes more implicitly—to structure their prose so as to support claims with evidence. While all students in the study brought to their FYC course a rudimentary understanding of topic sentences and paragraph development, this knowledge was clearly less than sufficient for advanced writing across the curriculum. Instead, each of them had to develop and improve their abilities to articulate and support claims, even as they faced increasingly varied and sophisticated tasks.

Skills Transfer: From First-Year Composition to Writing Across the Curriculum

While the students in this study encountered in WAC a diverse variety of genres, most of those genres required them to support claims with evidence. In this regard, students appeared to benefit from related instruction in FYC. That is to say, students' development of ability to articulate and support claims in FYC appeared directly related to their ability to do so in their later WAC courses. All twelve participants developed their abilities to articulate and support claims while in FYC, and all of them were expected to employ those abilities in their WAC courses. Nine of the twelve were able to continue that improvement, but perhaps the more salient point is the relevance of FYC to WAC. Even though many FYC students do not have declared majors and fewer still can predict what writing tasks await them in the future, for all of the students in this study, the instruction and practice in composing claims and presenting evidence proved to be of value. As evidenced in their actual prose, most students benefited from that instruction during FYC and many continued to adapt that knowledge to their WAC as they undertook and completed their majors.

Given its relevance to these students' later experience in WAC courses, dedicated practice in articulating and supporting claims appears to be a vital part of their FYC instruction. For FYC instructors and program administrators, this kind of direct instruction will likely be relevant to students' future work in a number of majors.

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Eventually students will need to learn far more than methods of articulating and supporting claims, and they may well go on to work in a variety of genres. However, helping to develop students' articulation, concision, and qualification of claims, and instructing them directly in finding and presenting different kinds of evidence from researched sources, is work that can have a direct impact on students' later writing across the curriculum, even when any given student may go on to any of a number of possible majors.

For those who teach in or direct WAC programs, to us it would seem that continued attention to students' claims and evidence while in the upper division is advisable. If students have encountered such instruction in FYC, discussion of claims and evidence in WAC will relate directly to meaningful foundational work, an idea that reinforces Greene and Orr's (2007) work on transfer from FYC to WAC within the first year of students' university careers. Even as college juniors and seniors, student writers can benefit from direct instruction in the practice of composing claims. Tasks that require them to support claims with evidence can promote their understanding if the assignment directions and evaluation criteria emphasize these features. And instructors' feedback, whether offered on work-in-progress or the final product (or both), can attend to such matters as concision, qualification, and support.

The participants in this study all were routinely expected to compose in ways that required advanced uses of claims and evidence in their upper-division courses. Those who succeeded in doing so succeeded more generally at their writing tasks, just as those who struggled to articulate and support claims struggled more generally as well. For those who succeed as well as those who struggle, any opportunity for direct instruction, guided practice, and/or individualized feedback aimed at improving this vital skill is likely to relate not only to the task at hand but to the writer's prior experience, and to his or her continued development in the future. Ideally, the undergraduate experience, from first-year composition to writing across the curriculum, should provide contexts, opportunities, and feedback to foster that development.

REFERENCES

Beaufort, A. (2007). *College writing and beyond: A new framework for university writing instruction*. Logan, UT: Utah State University Press.

Carroll, L. A. (2002). *Rehearsing new roles: How college students develop as writers*. Carbondale, IL: Southern Illinois University Press.

Dias, P., Freedman, A., Medway, P., & Paré, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts.* Mahwah, NJ: Erlbaum.

Fukuzawa, S., & Boyd, C. (2008). The writing development initiative: A pilot project to help students become proficient writers. *CELT, 1*, 123-26.

The WAC Journal 23 (2012). © 2013 by Clemson University.
Copies may be circulated for educational purposes only.

Graff, G. (2003). *Clueless in academe: How schooling obscures the life of the mind.* New Haven, CT: Yale University Press.

Greene, S., & Orr, A. J. (2007). First-year college students writing across the disciplines. In P. O'Neill (Ed.), *Blurring boundaries: Developing writers, researchers and teachers: A tribute to William L. Smith* (pp. 123-56). Cresskill, NJ: Hampton.

Herrington, A. (1985). Writing in academic settings: A study of the contexts for writing in two college chemical engineering courses. *Research in the Teaching of English, 19*(3), 331-59.

Herrington, A., & Curtis, M. (2000). *Persons in process: Four stories of writing and personal development in college*. Urbana, IL: NCTE.

Hillocks, G., Jr. (2010). Teaching argument for critical thinking and writing: An introduction. *English Journal, 99*(6), 24-32.

Hillocks, G., Jr. (2011). *Teaching argument writing: Supporting claims with relevant evidence and clear reasoning*. Portsmouth, NH: Heinemann.

McCarthy, L. P. (1987). A stranger in strange lands: A college student writing across the curriculum. *Research in the Teaching of English, 21*, 233-65.

Rose, M. (1989). *Lives on the boundary*. New York, NY: Penguin.

Smit, D. W. (2004). *The end of composition studies*. Carbondale, IL: Southern Illinois University Press.

Thaiss, C., & Zawacki, T. M. (2006). *Engaged writers and dynamic disciplines: Research on the academic writing life*. Portsmouth, NH: Boynton/Cook.

Toulmin, S. E. (2003). *The uses of argument* (Updated ed.). New York, NY: Cambridge University Press (Original work published 1958).

Walvoord, B. E., & McCarthy, L. P. (1990). *Thinking and writing in college: A naturalistic study of students in four disciplines*. Urbana, IL: NCTE.

Wardle, E. (2007). Understanding "transfer" from FYC: Preliminary results of a longitudinal study. *WPA: Writing Program Administration, 31*(1-2), 65-85.