Improving Students' Academic Writing: Building a Bridge to Success

Final Report for

National Writing Project Local Sites Research Initiative

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Executive summary

Writing matters for success in school and college, in the community and the workplace. Moreover, for under-represented, traditionally non-college-bound students, academic writing-especially the analytical writing that is the key to college success--is a gatekeeper. Surveys and studies consistently show that far too many of the teachers of these students are not prepared to teach analytical writing (e.g. Shulman, 1987), and have little access to the professional development they need to equip their students for the demands of college writing.

In 1998 the California Writing Project (CWP) responded to this need by launching Improving Students' Academic Writing (ISAW) as a statewide evaluation initiative. Over the next four years, ISAW evaluated the performance of over 12,000 9th-12th grade students of 85 CWP teacher-leaders from 46 low-performing high schools on a widely recognized assessment of academic writing and reading, the University of California Analytical Writing Placement Examination (UC AWPE). Teachers administered annual pre-/post-writing assessments using UC AWPE writing prompts. An outside group of experienced, certified AWPE readers annually evaluated the students' fall-to-spring improvement across seven features of writing. In each of the four years of this initiative, the majority of students demonstrated strong or exceptional achievement across the seven assessed features of writing.

Beyond evaluating student performance, however, the goal of ISAW was to improve the achievement of traditionally non-college-bound students through teacher professional development based on the evaluation of students' pre-/post-test results. This professional development included three academic-year mini-institutes focused on learning and developing instructional approaches to help students improve their analytical writing and critical reading. Participants designed assessments, developed assignments, and documented instructional strategies with the aim of supporting the writing achievement of their particular students. They also developed the CWP Analytical Writing Improvement Continuum, a powerful assessment and instructional tool that helps teachers and students focus on writing improvement rather than deficits; design assignments and lesson sequences that scaffold instruction in academic writing and critical reading; and situate their teaching as an inquiry into student improvement. Thus even in its earliest stages, ISAW was more than an evaluation study: it was also a research and development effort supported by a robust professional community of teacher leaders and researchers.

The present study, documented in this report, describes and assesses the ongoing work of ISAW. In 2007 the Local Site Research Initiative of the National Writing Project provided CWP the opportunity to build on the earlier work of ISAW, by systematically studying and comparing the writing achievement of high school students whose teachers were participating in ISAW programs with the writing achievement of students' of non-participating teachers. This two-year, quasi-experimental study evaluated the writing performance of 3,600 students in the classrooms of 87 ISAW and comparison teachers from 18 low-performing high schools, again using UC AWPE writing prompts for the pre-post-writing assessment.

Three local writing project sites—Northern California Writing Project (serving 7 rural schools), and Area 3 Writing Project and UCLA Writing Project (serving 11 urban schools)—participated in first year of the study, 2007-2008. At all three sites, ISAW professional development included summer institutes, school year in-service and study groups, embedded assessment using the ISAW Analytical Writing Improvement Continuum and formative assessment tools, statewide conferences, and curriculum development. In the second year (2008-

2009), we sharpened the focus of our research, looking at the effects of ISAW specifically on teachers and students in grades 11 and 12, in three urban schools from the Area 3 Writing Project. The research questions driving this two-year study were:

- How, if at all, does participation in ISAW affect teachers' instruction of writing?
- How, if at all, does participation in ISAW affect teachers' thinking about writing?
- How, if at all, does participation in ISAW affect teachers' assessment of writing?
- How, if at all, does teachers' participation in ISAW affect their students' writing outcomes?
- How, if at all, do the features of ISAW support teachers' growth?

In both years of the study, ISAW teachers outperformed their comparison counterparts as measured by statistically significant differences in all seven attributes of student writing evaluated by the NWP's Analytic Writing Continuum assessment, and in all 18 attributes of writing measured by the ISAW Analytical Writing Improvement Continuum assessment. These findings hold true for students who are English learners, as well as across racial and ethnic backgrounds, socio-economic status, and gender. Qualitative measures link specific changes in teachers' instructional and assessment practices to students' writing improvement.

Over the past 12 years, ISAW has become a year-round professional development program supported by CWP's 17 local writing projects that work with 72 low-performing high schools across California. Lessons learned from the present study, as detailed in the research report that follows, continue to inform ISAW program improvements in content, format, scope and outreach.

Introduction

Writing matters for success in school and college, in the community and the workplace. Moreover, for under-represented, traditionally non-college-bound students, academic writing-especially the analytical writing that is the key to college success--is a gatekeeper. Surveys and studies consistently show that far too many of the teachers of these students are not prepared to teach analytical writing (e.g. Shulman, 1987), and have little access to the professional development they need to equip their students for the demands of college writing.

In 1998 the California Writing Project (CWP) responded to this need by launching Improving Students' Academic Writing (ISAW) as a statewide evaluation initiative. Over the next four years, ISAW evaluated the performance of over 12,000 9th-12th grade students of 85 CWP teacher leaders from 46 low-performing high schools on a widely recognized assessment of academic writing and reading, the University of California Analytical Writing Placement Examination (UC AWPE). Teachers administered annual pre-/post-writing assessments using UC AWPE writing prompts. An outside group of experienced, certified AWPE readers annually evaluated the students' fall-to-spring improvement across seven features of writing. In each of the four years of this initiative, the majority of students demonstrated strong or exceptional achievement across the seven assessed features of writing.

Beyond the evaluation purposes, the goal of ISAW was to improve the achievement of traditionally non-college-bound students through teacher professional development. Professional development included three academic-year mini-institutes of 60 hours with the statewide network of TCs. These meetings, supported by the local writing projects, focused on learning and developing instructional approaches to help students improve their analytical writing and critical reading. Participating TCs designed assessments, developed assignments, and documented instructional strategies and approaches with the aim of supporting the writing achievement of their particular students. This community also developed the CWP Analytical Writing Improvement Continuum (AWIC), a powerful assessment and instructional tool that helps teachers and students focus on writing improvement rather than deficits; design assignments and lesson sequences that scaffold instruction in academic writing and critical reading; and situate their teaching as an inquiry into student improvement. Thus even in its earliest stages, ISAW was more than an evaluation study: it was also a research and development effort supported by a robust professional community of teacher leaders and researchers.

Over the next decade, ISAW became a year-round professional development program supported by CWP's 17 local writing projects that work with 72 low-performing high schools across California. However, while much of what teacher leaders learned in their ISAW work found its way into local site partnerships with high schools, this did not happen in the systematic way site Directors and TCs had hoped. So in 2007, CWP leaders saw the NWP Local Site Research Initiative as an opportunity to study what would happen if we intentionally drew on ISAW's instructional, assessment, and inquiry resources to move beyond a statewide in-service program, creating a targeted program of sustained in-service and assessment in partnership with teams of teachers from low-performing schools. The purpose of the present study is to evaluate the impact of ISAW as it was reconfigured into a year-round in-service program at three CWP sites, during 2007-2008 and 2008-2009.

ISAW program background

Purpose and content

Since its inception in 1998, ISAW had become a year-round professional development program supported by CWP's 17 writing project sites that work with 72 low-performing high schools across California to accomplish four overarching goals:

- Demystify the teaching and learning of analytical writing and critical reading, the 'gatekeeper' and 'currency' of college and workplace success;
- Examine how teachers can make analytical writing an integral component of a high school curriculum by focusing on and assessing student improvement;
- Accelerate the analytical writing improvement of students in grades 9-12, especially under-represented students, English learners, and struggling writers;
- Foster collaboration among high school, community college and four-year university teachers to move students along a pathway of academic preparation that leads to success in and beyond high school.

In reconstituting the ISAW program from a statewide continuity in-service program to a similar community specifically for teams of teachers from low-performing schools, CWP aimed to maintain the content and purpose of ISAW, while adapting the program for teachers who did not have the depth of subject knowledge about analytical writing, or the expertise and experience in teaching students to think and write analytically.

At its core, ISAW is a knowledge-building community of teachers who want to improve the teaching and learning of analytic writing. Laura Stokes (2010) describes the "three necessary contributors to the knowledge writing teachers must develop to improve their teaching 1) participation in the core discipline, i.e., 'doing writing' 2) inquiries into classroom practice in multiple contexts 3) traditional theory-based research." In ISAW teachers write analytical essays and discuss the skills needed to write analytically; they try out assignments and new teaching approaches, inquiring into and assessing students' writing improvement; and they study research and theories of analytical writing, and the development of students' analytical writing. Table 1 outlines ISAW program content and activities designed to remake a successful continuity program into a successful in-service/inquiry program focused on three of the goals listed above.

Table 1: Core Components of ISAW Programs

Program Content	Participant Activity	Related Student Skills
Demystify the teaching of analytical writing and critical reading	Explore through workshops, teacher writing and revision, discussions, inquiry, and assessment, the nature and demands of analytic writing	
	Explore how to teach strategies that help students organize and develop their analytical	Deconstruct and analyze texts (especially non-fiction texts)
	essays	Respond to and interact with a text
		develop a claim
		Build strong examples
		Evaluate and select evidence
		Structure the essay
		Create coherence between parts of an essay
		Revise and edit purposefully
		Revise sentences for logic and completeness
		Use subordination, coordination, and parallelism confidently

Write effectively on-demand or in-depth

Examine how to teach writing as a way to make cognitive connections with reading, so that students interact with, use, and extend the ideas in the reading

Examine how to teach analytical forms, not formulas

Demonstrate how teachers can make analytic writing an integral component of a high school curriculum and classroom culture by focusing on student improvement

Enlarge the classroom base for reading; move beyond the reading of novels, stories, plays, and poems required in the high school English curriculum to include more of the analytical essays, academic papers, literary essays, informational and journalistic pieces students will read in college

Develop, with the support of school and gradelevel colleagues, resources, assignments, and assignment sequences that help students understand the task and demands of issue-based writing.

Accelerate the academic writing improvement of all students—the college-bound, English learners, and struggling writers— and preparing more of these students for college-going and success should they choose to attend

Learn to use the ISAW Analytical Writing Improvement Continuum to help students recognize and document specific improvements in academic writing, demystify what to work on next, and write with an eye toward practice and improvement

Develop ways for school teams to share students' achievement and progress information as students transition to the next grade

Key to improving students' analytical writing is helping teachers learn to assess and track student progress, and providing opportunities for discussing with school and grade-level colleagues the implications of assessment for diversifying writing instruction. Thus ISAW puts its Analytical Writing Improvement Continuum at the center of the formative assessment process and uses it to guide teachers' inquiry into improving the writing of diverse students.

State and local context

Part of the challenge teachers face in implementing ISAW approaches and resources is making room for ISAW within California's accountability and curriculum mandates. This was not the case when ISAW was first developed ten years ago. For the last five years, however, far too many school districts mandate writing programs that emphasize formulaic writing in response to excerpted and decontextualized literature passages, or bland informational paragraphs from district-approved textbooks; or curricula that include only the types of writing tested by the California Standards Test (CST) and the California High School Exit Exam (CAHSEE). These writing programs often default to writing practice for state tests and district quarterly benchmark assessments -- all of which factor into the federal reporting of Adequate Yearly Progress (AYP) or the state's reporting on the Academic Performance Index (API). Many districts have further narrowed the curriculum by creating pacing plans that include only what is tested, and detail what every teacher will focus on, some even linking content to a fixed calendar.

On the one hand, teachers are required to teach toward the CAHSEE and CST bar —7th or 8th grade standards according to the CAHSEE blueprint, a low bar for high school students.

On the other hand, the Superintendent of Education, policymakers and legislators, and many district administrators challenge teachers to create instructional opportunities for students that have "rigor and relevance" and prepare students for college and the workplace. Accompanying that challenge are demands for teachers to implement multiple and sometimes competing interventions at the same school: for instance, International Baccalaureate and Advanced Placement classes; outreach programs from public, private, and community colleges; and a course for seniors developed by the California State University aimed at reducing the number of students in university remediation courses.

Furthermore, these conflicting approaches to teaching come with many mandates pertaining to curriculum and professional development. Most require teachers to deliver paced, scripted instruction and tests, collect test scores without discussing or analyzing their implications for instruction, and de-emphasize professional judgments to adjust instruction for individual students—all of which run counter to ISAW approaches. The result is that teachers in ISAW programs find they must work just as hard to find a place for ISAW approaches and resources in a test-prep writing program as in a transition-to-college writing program.

Although federal measures of AYP and state measures on the API determine much of what is taught, the degrees of instructional freedom varied widely across the three cohorts of program teachers from the three CWP sites that inform this study. Teachers in Northern California experienced considerable professional license to create school and classroom writing programs, and did not have to implement curriculum pacing guides. Teachers in the greater Sacramento area, Area 3 Writing Project's service area, found themselves constrained by district-developed common assessments, curriculum pacing guides, and mandated district professional development, but they were able to exercise some local autonomy in adjusting the pacing guides and augmenting the curriculum. Teachers in the Southern California high schools were overwhelmed by district mandates controlling and calendaring curriculum, testing, and a staggering number of professional development requirements.

CWP knew going into this research study that in many high schools, once students pass the CAHSEE graduation requirement, many teachers do little if any teaching of writing, except for students in Honors or Advanced Placement classes. For many high schools on the Program Improvement Schools list—the state's list of schools in accountability trouble— English teachers are required to teach only reading skills from grades 9 through 12. At those same Program Improvement schools, English learners and other marginalized students are routinely assigned to intervention or remediation programs (rather than mainstream English classes), where the state-adopted textbooks are workbooks and any writing is generally of the fill-in-the-blank variety. Students who are not traditionally college-bound, and English learners, are given little instruction in the analytical writing that will prepare them for college. Even traditionally college-bound students are not getting classroom instruction in analytical writing. In short, writing in high school is generally given short shrift or ignored. Thus, CWP's main programmatic challenge has been to situate ISAW in the complex California context of mandated curriculum and accountability, while adapting to regional and district variances.

Framework

Writing in the world of higher education

Secondary teachers hoping to prepare their students to do the writing required in the world of higher education, generally referred to as 'academic writing', must first navigate the debate over what this mode of writing actually is. According to David Bartholomae in his public debate with Peter Elbow in the early 1990s, academic writing is "the real work of the academy ... [which] makes us think of the page as crowded with others" (Bartholomae, 1995, p. 63). Bartholomae develops the notion that academic writing takes place within a community: It is a conversation in which the writer refers to points made by others. In their work interviewing professors and students across disciplines at George Mason University, Thaiss & Zawacki (2006) found three common features that characterized academic writing: "disciplined and persistent inquiry, control of sensation and emotion by reason, and an imagined reader who is likewise rational and informed" (p. 8). In a similar study, Carter (2007) found vast differences in how faculty in different disciplines expressed their expectations. Carter went on to delineate the connections across academic writing tasks, referring to these similarities as metagenres, or genres that represent different "ways of doing" associated with various disciplines. Although these metagenres echo the common features found by Thaiss & Zawacki, in general, the literature shows a lack of agreement on the sort of literacies, especially writing, students need to be successful in the world of post-secondary education.

This array of definitions creates a dilemma for K-12 practitioners who must both develop definitions of academic writing and determine the best instructional tools and practices to develop students' knowledge and skills. Perhaps in response to this dilemma, along with pressure to prepare students for standardized assessments of writing and their own lack of education in how to teach writing, many teachers utilize formulas to teach academic writing. The most common of these is the five-paragraph essay. But as Rosenwasser and Stephen (2009) state, "Although it has the advantage of providing a mechanical format that gives virtually any subject the appearance of order, it usually lops off a writer's ideas before they have the chance to form" (p. 124). By privileging form over an exploration of ideas and analysis, the formulaic approach to writing stands in direct opposition to the type of writing expected in the post-secondary world. In order to move beyond formulaic approaches to teaching academic writing, teachers must establish their own concrete understandings of what academic writing is. Only then can they develop the specialized knowledge required to teach academic writing.

Knowledge required to teach academic writing

Acquiring this specialized knowledge is a crucial part of developing what Shulman (1987) refers to as pedagogical content knowledge, or the special knowledge teachers have not just of the specific content to be taught but also of the pedagogy necessary to teach that content. In the case of academic writing, developing pedagogical content knowledge means not only understanding conceptually what academic writing is but also how best to teach it to the students in a given classroom. Building upon Shulman's work, Ball, Thames, & Phelps (2008) have attempted to break down pedagogical content knowledge into its constituent parts. They suggest that, in order to teach the content of mathematics, teachers must have *specialized content knowledge*, or the content knowledge and skill unique to teaching that extends beyond the *common content knowledge* needed in settings other than teaching. This *specialized content knowledge* allows teachers not only to explain the content to their students but also to be able to analyze and

understand errors made by students in order to help steer them in the correct direction. In addition, teachers must also develop their *knowledge of content and teaching*—which is an amalgam of deep content knowledge as well as strong pedagogical knowledge. When these two types of knowledge are combined, the resulting knowledge is of pedagogy specially formatted for the specific content. Teachers must also develop their *knowledge of content and students*—an amalgam of deep content knowledge and general knowledge of students. Again, when these two are linked, teachers can tailor the content for specific students.

To understand better what this looks like in practice, we apply the framework of Ball et al. (2008) to the teaching of writing. In academic writing, *specialized content knowledge* includes not just knowing what academic writing is, but also how it is used in the world of school and beyond, along with how individuals develop as academic writers. The *knowledge of content and students* requires connecting this content knowledge with the teachers' knowledge of students as developing writers. And finally, the *knowledge of content and teaching* related to academic writing takes the *specialized content knowledge* and connects it to the knowledge of how to teach academic writing, including knowledge of specific instructional practices and when to apply those practices. This framework describes the knowledge needed to teach academic writing, so we turn now to the question of how best to develop this specialized knowledge in teachers.

Developing teachers' specialized knowledge

Collaborative communities provide one possible context for developing new understandings among groups of educators in professional development settings. But there is a danger in oversimplifying what it means to be a professional teaching community. Numerous studies warn against calling just any group of teachers working together a 'professional teaching community' (Palincsar et al., 1998; Grossman, Wineburg, & Woolworth, 2001; Lieberman & Miller, 2008).

Grossman et al. (2001) identify four dimensions of a professional teaching community: (a) formation of a group identity and norms of interaction; (b) navigation of fault lines within the group; (c) negotiation of the central tension present in a professional teaching community; and (d) acceptance of communal responsibility for individual participants' growth. Working with a group of social science and English teachers at a single high school for an extended period, Grossman et al. found that only after the group developed in each of these areas did members truly engage with one another, negotiating understandings that could serve both individual and collective development and improvement of their pedagogy.

First, the group had to move beyond the level of pseudo-community, or interacting as if everyone agreed with all ideas presented. Operating at this level kept participants from grappling with new content. This movement required an acceptance of the central tension in a professional community of teachers: The tension between participants' desire to improve their own professional practice and their need to continue their intellectual development in the subject matter being taught (Grossman et al., 2001). Part of grappling with this tension also required understanding the need to move from *distributed cognition*—in which group members accept that the group's collective wisdom and knowledge exceed that of any individual—to *cognition distributed*—or the redistribution of this collective knowledge to individual group members. Moving to this level requires an acceptance that ideas presented in the group are the public property of the group, and thus, that all group members share responsibility for ensuring that everyone develop this deeper level of understanding. This cannot happen if the group remains a pseudo-community in which participants cannot argue productively about content.

It is worth noting that the purpose of the professional development conducted by Grossman et al. was not to develop specialized content knowledge, but to bring English and history teachers together to read and, eventually, develop an interdisciplinary curriculum. Our study builds on this concept of a collaborative professional community, to investigate the possibility of developing content knowledge through participation in such a community.

Research questions

From the literature, we know about the complexity of knowledge needed to teach analytical writing and the possible venues for developing this knowledge. From experience working in California's education system, we know about the myriad contextual constraints teachers face. But we also know from experience about the power of the ISAW approaches for improving the teaching of analytical writing. The purpose of this study was to share ISAW approaches with teachers currently negotiating the constraints of their particular contexts to determine:

- How, if at all, does participation in ISAW affect teachers' instruction of writing?
- How, if at all, does participation in ISAW affect teachers' thinking about writing?
- How, if at all, does participation in ISAW affect teachers' assessment of writing?
- How, if at all, does teachers' participation in ISAW affect students' writing outcomes?
- How, if at all, do the features of ISAW support teachers' growth?

Program description

ISAW: Year one (2007-2008)

Three CWP sites participated in the present study: Northern California Writing Project (serving rural schools), and the Area 3 and UCLA Writing Projects (serving urban schools). In 2007-2008, the study evaluated the effects of ISAW on the teaching and learning of analytical writing across the ISAW programs of the three sites. That effort continued in 2008-2009, but the focus of the research in the second year was sharpened to consider the effects of ISAW on teachers and students in grades 11 and 12 of three urban schools. (See Appendix A for the components of ISAW that were common across all three sites, along with components unique to each site.)

All three year-one ISAW programs included 60 hours of professional development. Both UCLA and Area 3 began with a three-day summer institute before school started. The remaining meetings were spread throughout the school year. Because of the geographical spread between participants, the Northern California program featured five two-day meetings (Friday-Saturday).

The primary focus of the three-day institute and the initial weekend meeting was to develop participants' knowledge of analytical writing, by 1) reading and discussing excerpts from texts about analytical writing; 2) engaging in their own analytical writing in response to a released prompt from the University of California Analytic Writing Placement Exam (AWPE); 3) examining samples of students' analytical writing. Participants were also introduced to specific approaches to address analytical writing with their students, by participating in demonstration lessons taught by the program leaders. Finally, activities were included to promote the creation of community among participants, ranging from traditional ice-breakers, to participants working together to develop common understandings of key concepts.

An important component of the initial meetings was familiarizing participants with the ISAW Analytic Writing Improvement Continuum (AWIC). Because participants needed to determine their students' baseline proficiency in analytical writing, they were asked to administer a pre-assessment in the form of specific AWPE-released prompts to one focus class. Early in the school year, the participants scored these pre-assessments together using the AWIC. The information participants obtained from this scoring was used to guide not only how they would instruct their students through the remainder of the year, but also what supports they needed to be able to implement this instruction. The specific supports needed by each group of participants determined the topics addressed in the remainder of the follow-up meetings.

Throughout the year, other topics and activities across all three ISAW programs included: prompt deconstruction; analysis of sample student writing; reading-support strategies; the use of text sets; and opportunities to connect program activities and resources to individual classrooms. Common resources used across all programs included: the ISAW AWIC; *Teaching Analytical Writing* (Gadda, Peitzman, & Walsh, 1988); *They Say/ I Say: The Moves That Matter in Academic Writing* (Graff & Birkenstein, 2006); and *Reading for Understanding* (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999). Each program also included additional resources and topics to address participants' specific needs.

At the end of the school year, participants again administered the AWPE to their focus classes. Just as at the beginning of the school year, at their final follow-up meeting participants scored their students' papers using the AWIC to determine any improvement between students' pre- and post-writing. Participants began the day with a norming session and ended the day with an opportunity to reflect on the results of the scoring and their students' growth over the year.

In addition to regularly scheduled meetings, all year-one participants attended a fall statewide ISAW conference held at UC Berkeley in the fall of 2007. This conference, which was open to any educator regardless of participation in ISAW, began with an opening session on Friday evening. The morning keynote on Saturday, by a CWP Site Director, showcased uses of technology to introduce students to the features and practices of academic writing. Two breakout sessions, led by CWP TCs, offered nine topics from which participants could choose. Topics ranged from using writers' notebooks to improve students' academic writing, to writing analytically about literary texts, to addressing matters of race while maintaining academic rigor. The day ended with a keynote workshop, also led by a CWP Site Director, inviting participants to see academic literacy as understanding how to participate in an intellectual community.

In addition, ISAW participants attended a five-hour pre-session on Friday. This session featured three integrated workshops, each led by an ISAW program leader. Topics included analysis of rhetorical structures in text, understanding academic writing as a conversation, and working with issue-based texts in participants' own classrooms. The evening keynote then led all participants in an analysis of writing produced by students in ISAW teachers' classrooms.

ISAW: Year two (2008-2009)

In the second year of the study (2008-2009), we sharpened the focus of our research to examine the effects of ISAW on teachers and students in grades 11 and 12 at three urban schools: two program schools served by the Area 3 Writing Project site, and one comparison school.

The 2008 fall conference, held at UC Davis, was a day-long event exclusively for ISAW participants. The day began with a keynote workshop led by an Area 3 WP TC, who walked participants through the process of scaffolding the synthesis of information from multiple

sources for an academic research paper. Each participant then attended two breakout workshops (led by CWP TCs) chosen from three topics: crafting meaningful curriculum while using adopted materials, utilizing text sets to help students develop perspectives as readers and writers, and improving students' reading of texts.

During year two, participating teachers in Area 3 WP's ISAW program attended 11 days (seven full-day meetings and four afternoon meetings) of professional development. The first three days took place during the summer, while the remaining eight meetings were spread throughout the school year. The first four and final full-day sessions were held on the university campus that houses the Writing Project site, while the remaining two full-day sessions were held in classrooms at a local junior high school. The first afternoon session was held in the classroom of one of the facilitators. The remaining afternoon sessions were held at the school of two of the participants. Key foci of these sessions, building on year-one activites, included: learning to score using the AWIC, sharing approaches to teaching analytical writing, using templates and blogs to help students understand academic writing as participating in a conversation, and developing students' analytical thinking skills. For more detail about the foci and activities of each meeting, see Appendix B.

Participants

In year one, the program group comprised 187 students of 15 teachers at six different schools. The student demographics of these six schools varied widely. For example, the percentage of English Language Learners (ELLs) ranged from 2.6% at Program School 5 to 44.3% at Program School 2. Across all program schools, a majority of the students received free and reduced lunch (ranging from 61% at Program School 5 to 100% at program School 2). In year one, an additional 118 students of seven teachers at two different high schools comprised the comparison group. In the comparison group, the percentages of students classified as ELLs was similar to that of the program schools, ranging from 10.1% to 30.5%, while the percentage of students receiving free or reduced lunch ranged from 45.9% to 83.4%.

In year two of the study, the total number of students and teachers in both the program and comparison groups decreased. The program group comprised 147 students of seven teachers from two schools. The comparison group consisted of 122 students of seven teachers at a single school. Of the seven program teachers whose students' scores were included in our data, four were new participants in the study in year two, and three participated in both years one and two.

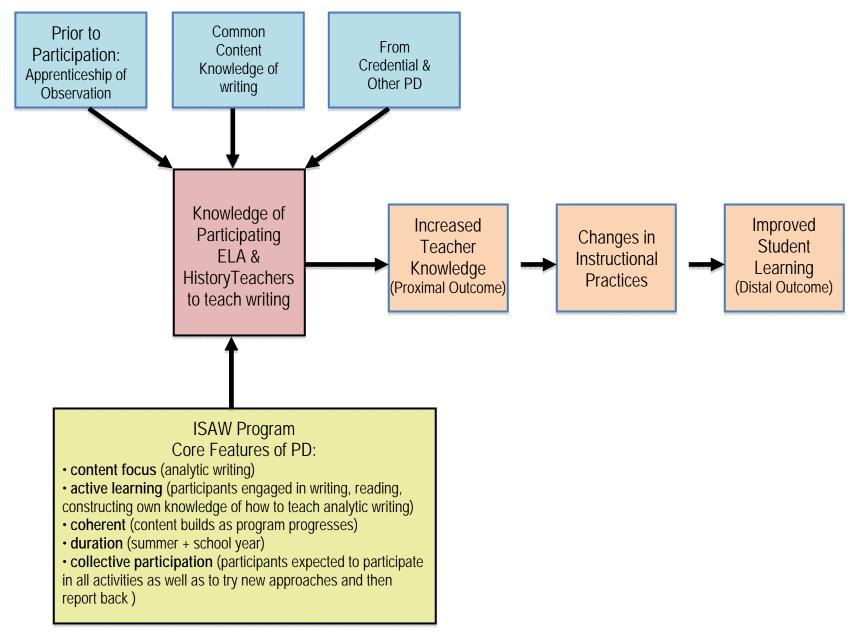
Overall across years one and two, a total of 1168 students of 49 teachers from 13 different schools were included in the CWP scoring. These teachers were participants in three different regional ISAW programs. Of those 49 teachers, 38 participated in year one and 41 participated in year two, while 27 participated in both years one and two. See Appendix C for a demographic breakdown of participants whose students' pre- and post-assessment writing was scored at each national scoring session described in "Data collection and analysis," below.

Method

In order to develop a complete picture of the ISAW program and its impact on teachers' knowledge, instructional practices, and their students' writing achievement, we aligned our data collection and analysis with Desimone's (2009) model for evaluating professional development,

as illustrated in Figure 1. Desimone's model demonstrates the importance of capturing what Wayne, Yoon, Zhu, Cronen, & Garet (2008) classify as the *proximal outcomes*—those within close proximity to the program itself—as well as the *distal outcomes*—those outcomes farther removed. In this study, the proximal outcomes include changes in teacher knowledge and teacher practice, while the distal outcomes include changes in student achievement.

Figure 1: Aligning the proximal and distal outcomes of professional development.



In our data collection and analysis we attempted to capture all of these outcomes, as well as describe the professional development process. Table 2 demonstrates the alignment of our data collection and analysis procedures with our research questions.

Table 2Alignment of Research Questions with Type of Outcome, Data Collected and Plan for Analysis

Research Question	Type of Outcome Evaluated	Data Collected	Plan for Analysis
How, if at all, do the features of ISAW support teachers' growth?	Proximal	Field Notes (ISAW Meetings) Documents & Photos Focus Group Interviews Individual Interviews	Qualitative analysis; constant comparative method
How, if at all, does participation in ISAW affect teachers' thinking about writing?	Proximal	Field Notes (ISAW Meetings) Documents & Photos Surveys (Reflection) Focus Group Interviews Individual Interviews	Qualitative analysis; constant comparative method
How, if at all, does participation in ISAW affect teachers' instruction of writing?	Proximal	Reflecting on One Assignment Field Notes (ISAW Meetings) Documents & Photos Surveys (Reflection) Focus Group Interviews Individual Interviews	Qualitative analysis; constant comparative method
How, if at all, does participation in ISAW affect teachers' assessment of writing?	Proximal	Field Notes (ISAW Meetings) Surveys (Reflection) Focus Group Interviews Individual Interviews	Qualitative analysis; constant comparative method
How, if at all, does teachers' participation in ISAW affect their student writing outcomes?	Distal	Pre- and post-student writing samples Pre- and post-student writing sample scores	Statistical analysis of students' scores from CWP scoring and NWP scoring

Data collection and analysis: Teachers

Year one: Program. Each of the leaders for the three ISAW programs submitted agendas for their initial meetings. For UCLA and Area 3, this agenda lists all activities for the three-day institute. For NCWP, the agenda lists all activities for the first weekend (Friday-Saturday) session. In addition, the conference program for the two-day Fall ISAW Conference includes titles and abstracts for the opening general session, the keynote workshop, the 17 breakout workshops, and the closing keynote workshop.

Year one: Comparison. Teacher Surveys (Appendix D) were collected from 11 comparison teachers in the Spring of 2008. This survey asked questions related to teaching experience, professional development experience, and analytical writing perceptions and practices. The questions about professional development experience and analytical writing perceptions and practices featured Likert-scale response options.

Year two: Program (A3WP). In an effort to learn how teachers were implementing what they learned from ISAW throughout the school year, beginning in November we asked participants to complete a "Reflection on One Assignment" (Appendix E), in which they described an assignment they had recently used to teach writing, explained why they chose to do this assignment, and reflected on their students' responses.

In year two, field notes were recorded in the format outlined by Schatzmann & Strauss (1973) from observations of all activities at all Area 3 WP ISAW meetings, including the one-day ISAW conference. During each ISAW meeting, notes of leaders' and participants' comments were kept throughout the session as well as observational notes. Soon after, these notes were typed into an expanded form, with additional interpretive thoughts and comments inserted. All handouts provided to participants, as well as all e-mails sent to them, were collected. When participants created charts or posters in groups, photos were taken and included in the field notes.

Year two: Program and comparison. Focus group discussions were held with two groups of program teachers (five teachers from one school, and four teachers from the second school). Seven teachers from the comparison school also participated in a focus group interview. These discussions followed the Interview Protocol for the Comparison Teacher Focus Group (Appendix G). All three focus-group discussions took place after school at the respective teachers' school sites. Following the interviews, the recordings of the discussions were transcribed in the manner outlined by Capps & Ochs (1995).

All the teachers completed the "Reflections on Teaching Analytical Writing" survey (Appendix F), asking them to explain their conceptions of analytical writing, what shaped those conceptions, how they teach analytical writing, and the challenges they face in teaching it. Teachers who took part in focus group interviews completed paper versions of the survey prior to the focus group discussions. All other participants completed the survey via e-mail.

Analysis. Analysis began as data were being collected, through interpretive thoughts and comments that were recorded as the researchers expanded their field notes. Once the field notes were complete, data were analyzed systematically using the constant comparison method (Glaser & Strauss, 1967). Categories developed inductively through several passes of the data. Initially, open coding was used to mark themes that ran throughout the field notes. Labels for these codes emerged primarily as descriptors for actions observed repeatedly. For example, "valuing of participants" marked instances where facilitators explicitly showed appreciation for participants' input or ideas. Passages could be coded simultaneously in multiple ways. These instances of multiple codes often highlighted richly revealing moments within the professional development. Following the initial coding, data collected under each code were reviewed to determine whether or not definitions of themes were stable; necessary adjustments were made at this point. As category properties were fine-tuned, comparisons were made between established categories and between events in categories. In this way, the process of analyzing data was fluid and recursive. Finally, attempts were made to build a model that linked emerging themes to larger, overarching themes arising from the analysis (Miles & Huberman, 1994).

Various frameworks informed the analysis, particularly Shulman's (1987) concept of pedagogical content knowledge and Ball et al.'s (2008) further analysis of common content knowledge, specialized content knowledge, knowledge of content and students, and knowledge of content and teaching. While Ball et al. developed this framework for teaching mathematics, our study demonstrates that it is also relevant for teaching writing. In addition, the four dimensions of a professional teaching community articulated by Grossman et al. (2001) were used to determine whether or not each ISAW group did in fact function as such. These included

a) formation of a group identity and norms of interaction; b) navigation of fault lines within the group; c) negotiation of the central tension in a professional teaching community; and d) acceptance of communal responsibility for individual participants' growth.

Data collection and analysis: Students

Surveys. All program and comparison teachers in both years of the study completed demographic surveys (Appendix H) about their focal classes as well as all their other classes. Data included the number and grade level of students in each class, and the relative level of each class. Teachers also provided demographic information about their students, including ethnicity, socioeconomic status, English Learner and Special Education designation. Survey responses were tabulated and analyzed quantitatively.

Pre- and post-writing assessments. Pre- and post-writing samples written in response to released AWPE prompts were collected from students in focus classrooms of program and comparison teachers in both years of the study. Prompts were administered in an A-B-B-A order: some students received prompt "A" as a pre-assessment and prompt "B" as a post-assessment, while other students received prompt "B" as a pre-assessment and prompt "A" as a post-assessment. Different sets of prompts were used each year.

Evaluative framework. To ensure technical rigor and credibility, scoring and data processing were conducted independently of the local research sites. In both year one and year two, a randomly selected sample of matched pairs of student essays was evaluated at a national scoring conducted by the National Writing Project; in addition, in year two all matched pairs were scored at a statewide scoring conducted by the California Writing Project.

At the California scorings, the writing was assessed by CWP Teacher Consultants and UC AWPE experts using the ISAW Analytical Writing Improvement Continuum, which includes 18 components of analytical writing. At the 2008 CWP scoring, 461 pairs of essays written by participants' students were scored, as well as 288 pairs of essays written by comparison teachers' students. At the 2009 CWP scoring, 706 pairs of essays written by participants' students were scored, as well as 143 pairs of essays written by comparison teachers' students.

At the NWP scorings, the writing was scored by Teacher Consultants using the NWP's Analytic Writing Continuum. At the NWP scoring in 2008, 198 pairs of essays written by participants' students were scored, as well as 121 pairs of essays written by comparison teachers' students. At the NWP scoring in 2009, 155 pairs of essays written by participants' students were scored, as well as 144 pairs of essays written by comparison teachers' students.

The NWP scoring used the NWP Analytic Writing Continuum, a writing assessment system based upon the framework of the Six+1 Trait Writing Model (Bellamy 2005). This rubric, which includes refined and clarified definitions of the constructs measured as well as anchors, scoring commentaries, training and calibration processes, assesses the following attributes of writing:

- <u>Content</u> (including quality and clarity of ideas and meaning) -- The content category describes how effectively the writing establishes and maintains a focus, selects and integrates ideas related to content (i.e., information, events, emotions, opinions, and perspectives) and includes evidence, details, reasons, anecdotes, examples, descriptions, and characteristics to support, develop, and/or illustrate ideas
- <u>Structure</u> -- The structure category describes how effectively the writing establishes logical arrangement, coherence, and unity within the elements of the work and throughout the work as a whole

- <u>Stance</u> -- The stance category describes how effectively the writing communicates a perspective through an appropriate level of formality, elements of style, and tone appropriate for the audience and purpose
- <u>Sentence Fluency</u> -- The sentence fluency category describes how effectively the sentences are crafted to serve the intent of the writing, in terms of rhetorical purpose, rhythm, and flow
- <u>Diction (Language)</u> -- The diction category describes the precision and appropriateness of the words and expressions for the writing task and how effectively they create imagery, provide mental pictures, or convey feelings and ideas
- <u>Conventions</u> -- The conventions category describes how effectively the writing demonstrates age-appropriate control of usage, punctuation, spelling, capitalization, and paragraphing

A national panel of experts on student writing, along with senior NWP researchers, determined that the Six +1 Trait model, while sufficiently comprehensive, required extensive modifications to make it more appropriate for use in research studies. The following modifications were implemented in the NWP Analytic Writing Continuum prior to the scoring conference:

- The scale of the rubric was extended from four to six points in order to ensure sufficient discrimination and therefore to allow increased sensitivity to any changes that might be observed.
- The language defining the attributes was clarified to enhance the reliability of evaluative judgments.
- The evaluative judgments were modified to focus exclusively upon the student writing (where, on occasion, the rubric previously included references to the reader's reactions or to the writer's personality as the basis for judgment).
- Particular traits (notably <u>Content</u> (including quality and clarity of ideas and meaning), Structure, and Stance) underwent considerable revision in order to bring conceptual coherence to the constructs and thereby to enhance the reliability and validity of the scores relevant to those constructs.
- National anchor papers, detailed scoring commentaries, and extensive training and calibration procedures were developed to ensure not only the technical rigor of the system but also that the performance standards implicit in the system were sufficiently and appropriately high.

Scoring. The NWP scorers participated in six hours of training at the beginning of the conference. Their scoring was calibrated to a criterion level of performance, and was then recalibrated following every major break in the scoring (meals and overnight). Student writing was coded, with identifying information removed so that scorers could not know any specifics of the writing sample being evaluated (e.g., site of origin, group [program or comparison], or time of administration [pretest or posttest]). In 2008, reliabilities examined by attribute across grade levels (measured as inter-rater agreement, defining agreement as two scores being identical or within one single score point of each other) ranged from 83% to 93% with an aggregate across all scores of 87%; 19% of the papers were scored twice so that reliability could be confirmed. In 2009, reliabilities examined by attribute across grade levels ranged from 86% to 92% with an aggregate across all scores of 89%; 13% of the 2009 papers were scored twice. All data were

entered via optical scanning with built in checks for acceptable score ranges and the like. The resolution of all discrepancies and adjudication of disagreements within the double scored set of papers produced a highly accurate data file for use in our analysis.

To compare the differences in pre- and post-assessment writing scores between students' of program and comparison teachers, analyses were conducted using a one-way repeated measures analysis of variance (ANOVA). For each analysis, the student's writing scores on the selected trait served as the dependent variable. The between-subjects factor was *group*, determined by the status of the student's teacher (program or comparison). The within-subjects factor was *test occasion* (pre-assessment or post-assessment). Independent analyses were conducted for each trait of each rubric, in both years of the study, for a total of 50 separate analyses. The repeated measures ANOVA tests the assumptions of a) the normality of distribution; b) the heterogeneity of variance; and c) the absence of outliers, each of which are discussed below.

2008 NWP Scores. The normality of distribution was tested by calculating the z-score for skewness and kurtosis for each category of scores and then comparing the results to the z-score for one standard deviation, 1.96. (For an overview of the descriptive data for each group across all six features of the NWP Analytic Writing Continuum, as well as the holistic score, see Appendix I.)This analysis revealed that across all features of the rubric, the scores violate the assumption of normality of distribution through skewness, kurtosis, or both. Scores (especially post-assessment scores) are clustered in the high range or the low range. The comparison group's post-assessment scores for the holistic assessment and the feature of diction are both skewed positively, clustered in the high range, as are the program group's post-assessment scores for the features of sentence fluency and conventions. The comparison group's pre-assessment scores for stance are also positively skewed. On the rubric feature of content, the pre-assessment scores of the both the program and comparison groups demonstrate negative kurtosis. There was also evidence of kurtosis for the comparison group's pre-assessment scores on the features of fluency, diction and structure. In short, the data do not meet the assumption of normality of distribution when tested by the repeated measures ANOVA.

However, results from Levene's Test for homogeneity of variance confirm that across all features of the rubric, the assumption of heterogeneity of variance has been met (see Appendix J). A scatterplot of the data also revealed an absence of outliers. Because two of the three assumptions have been met, we can assume the robustness of the ANOVA model.

2008 CWP Scores. The ISAW Analytical Writing Improvement Continuum assesses essays on 18 features of analytical writing. (The descriptive statistics of the 749 pairs of student essays assessed at the CWP scoring session are shown in Appendix K.) Using z-scores to analyze score distributions revealed positive skewness in the comparison group's pre-assessment scores on the features of Understanding and Use of Text, Developing Examples, and Reasoning, and the program group's post-assessment scores of Using Punctuation. Z-scores also revealed kurtosis for a number of the comparison group's post-assessment score distributions: Responding to Identified Topic, Addressing Demands of the Essay Topic, Understanding and Use of Text, Making Own Claim or Assertion, Developing Examples, Choosing Words, Employing Sentence Structure to Convey Ideas, Employing Sentence Boundaries, and Using Grammatical Relationships. In addition, kurtosis was detected in the comparison group's pre-assessment score distribution for Making Own Claim or Assertion. In fact, Levene's Test confirmed the homogeneity of variance of the data set (see Appendix L). On two features (Responding to Identified Topic and Addressing the Demands of the Essay Topic), the score distributions

violated two of the three ANOVA assumptions. Thus, results may be problematic in these areas. 2009 NWP Scores. At the 2009 NWP scoring, 299 pairs of student essays were assessed (see Appendix M for the descriptive characteristics of these essays). The z-test again revealed a number of violations of the assumptions of ANOVA. The distributions of post-assessment comparison scores on the holistic assessment, as well as the features stance and sentence fluency, are skewed. Both the program and comparison post-assessment score distributions for diction are also skewed. In addition, the pre-assessment score distributions for the program group on the features of content and structure, for the comparison group on diction, and for both groups on holistic and stance all demonstrate kurtosis. However, the assumption of heterogeneity of variance is violated only for the post-assessment score distribution in diction (see Appendix N). So while the analysis of post-assessment scores in diction may be problematic, the robustness of ANOVA corrects for assumption violations in the score distributions for the other features.

2009 CWP Scores. Analysis of the 847 pairs of student essays assessed at the 2009 CWP scoring conference (see Appendix O for descriptive details) reveals skewness in the comparison group's post-assessment scores on the features of Responding to Identified Topic, Concluding the Essay, Choosing Words, and Anticipating Readers' Needs. Additionally, the distribution of both the program group's and the comparison group's post assessment scores on Using Grammatical Relationships were skewed, though in opposite directions. This means that the program group's score were clustered along the high end of the rubric while the comparison group's scores were clustered around the low end. The comparison group's post-assessment score distributions also revealed kurtosis on the features of Responding to Identified Topic, Addressing the Demands of the Essay Topic, Understanding and Use of Text, Introducing the Essay, and Anticipating Reader's Needs. The score distribution of the program group's preassessment scores on Introducing the Essay also demonstrated kurtosis. In addition, Levene's Test revealed a number of violations of the assumption of heterogeneity of post-assessment score sets (see Appendix P). These violations occurred for the traits of Summarizing and Recapitulating, Making Own Claims or Assertions, Developing Examples, Using Textual Support, Introducing the Essay, Concluding the Essay, Choosing Words, Using Grammatical Relationships, and Using Punctuation. These violations of the assumptions of ANOVA suggest that analyses of these score data sets may be problematic.

Findings

Developing knowledge of analytical writing

Before considering how participating teachers developed new knowledge of academic writing, it is necessary to first look at the specialized content knowledge ISAW sought to develop. While ISAW leaders never offered participants a clear-cut definition of academic writing, the program focused squarely on preparing students to do the type of writing required by the University of California's Analytical Writing Placement Exam (AWPE). ISAW participants administered writing assessments to their students at the beginning and end of the school year using released AWPE prompts, with the expectation that by focusing their instruction on this type of writing, their students would perform better when responding to similar prompts at the end of the year.

The type of writing asked of students on the AWPE begins to approach Bartholomae's (1995) notion of academic writing as taking place within a dialogic community: The prompt invites students to agree or disagree with the author of the text. Although this is just one "other" and students are not required to draw on individuals outside this dyad to support their argument, the writing required by the AWPE is much closer to Bartholomae's definition than is the writing required by students taking the California High School Exit Exam (CAHSEE). The CAHSEE writing prompts range from asking students to write about why a person studied in school is important, to writing a persuasive essay to convince fellow students of the importance of getting rid of trash (California Department of Education, 2008). Neither of these prompts asks students to bring outside voices into their discussion, or take into account another person's perspective.

Through the Recapitulation-Invitation-Stipulation model. In the first ISAW session participants wrote their own responses to a released AWPE prompt, then discussed the processes they used and the skills they had needed to complete the task. This helped participants realize the knowledge needed to write analytically. Later in the day, participants analyzed both AWPE-style prompts and prompts from the related California State University exam, the English Placement Test. ISAW leaders introduced recapitulation, invitation, and stipulation as the three components of both prompt types: students were asked to recapitulate what the reading passage stated, invited to agree or disagree with the author, and given the stipulation that they could use experiences from their own lives and reading or their reading of the passage to support their positions. Thus within ISAW, academic writing came to mean analyzing a piece of text or an idea, developing a position about that analysis, and then supporting that position with relevant evidence. Because of the importance of analysis in this type of writing, academic writing came to be referred to as analytical writing by the ISAW leaders and participants alike. This definition was further reinforced through various assigned readings such as Teaching Analytical Writing (Gadda, Peitzman, & Walsh, 1988) and They Say/I Say: The Moves That Matter in Academic Writing (Graff & Birkenstein, 2006).

When asked to define analytical writing in end-of-year reflective surveys, participants said that it *takes a stand* ("the best analytic writing is driven by the author's claim"); it *builds on the ideas of others* ("analytic writing requires synthesis of ideas—and these are from other sources (reading, news media, personal sources) and personal observations"); it *uses evidence to support its claims* ("uses evidence to support a position on an issue"); it *analyzes*, ("uses writing to explore sides of an issue with logical reasoning"); and it *synthesizes*. But to be able to do these things, analytical writing also *requires knowledge of the content*. As one participant wrote: "Writers can't fake content. Their understanding of the content needs to be deep in order for the ideas to emerge in writing." Participants' responses suggested that they had internalized the

definition of academic writing implicitly promoted by the ISAW leaders through the emphasis on AWPE-like writing tasks.

While thinking of analytical writing in terms of recapitulation, invitation, and stipulation may be considered somewhat formulaic, it is important to differentiate this from the type of formula associated with the five-paragraph essay. The latter formula, as Rosenwasser & Stephen (2008) describe, prescribes an introductory paragraph that explains the essay topic and ends with a three-part thesis; three body paragraphs each developing one part of the thesis; and a concluding paragraph that summarizes the previous paragraphs and restates the thesis. In contrast, the 'recapitulation, invitation, stipulation' approach provides a guide to the components of an analytical essay without prescribing the structure of those components.

Through key readings. ISAW leaders challenged participants' thinking about formulaic approaches to essay writing by assigning readings such as "The popularity of formulaic writing (and why we need to resist)" (Wiley, 2000) or "The ill-effects of the five paragraph theme" (Wesley, 2000). Clearly, the leaders were aiming to push participants toward a definition of analytical writing that moved beyond the five-paragraph model. Discussing the readings prompted participants to negotiate their understanding of analytical writing.

In end-of-the-year surveys (see Appendix V), participants were prompted to complete reflective sentence stems that included "I used to know or think..." and "I now know or think..." Responses demonstrated changes in participants' beliefs over the course of their participation in ISAW. As one participant stated, I used to know or think: "5 paragraph essay was the way to teach writing." I now know or think: "5 paragraph essay has created a generation of kids who cannot really think about topics, form opinions, and eloquently write about their opinions." Participants came to realize that requiring a specific number of paragraphs actually stilted students' thinking.

Through the ISAW Analytical Writing Improvement Continuum. The final tool used to develop participants' specialized content knowledge was the ISAW Analytical Writing Improvement Continuum, which participants used to score their students' pre and post-assessment writing. This analytic rubric focuses on the type of analytical essay called for by the AWPE. It includes, among others, three subcategories that align directly with the three-part prompt (recapitulation, invitation, stipulation) of the AWPE: a) Responding to the Identified Issue/Subject; b) Summarizing/Recapitulating; and c) Making Own Claim(s) or Assertions.

In focus group discussions, participants mentioned the value of the ISAW AWIC for helping them to not only learn the features of analytical writing, but to articulate those to their students. As one noted, "I've internalized the language, (and) I really feel like it has changed my thinking about writing and made me a much better judge and evaluator of student writing. I've learned to focus on some of the domains of the writing." Another said the rubric "gave me tremendous ways to begin to articulate so that when I spoke to my students in the post-assessment, it was far different than when I spoke to them at the pre-assessment." For both of these participants, using the rubric throughout the year helped them develop their understanding of the features of analytical writing, and the language to talk with students about it.

Creating a community of learners

Key features of ISAW allowed a community to develop among participants, many of whom had not known one another before the program. In particular, program leaders made an explicit effort to demonstrate that they valued the knowledge and input of participants. They also continually

shared their own experiences with using the ISAW approaches to teach analytical writing, and they invited participants to collaborate and to negotiate their understanding of the content.

Valuing participants. From the first ISAW meeting, Anne¹, Denise, and Ally, the TCs leading the program, invited participants to contribute their knowledge, demonstrating that their input was valued. Early on, Denise invited participants to take a resource she had shared "back to your classrooms, try it out, and let us know how it goes." She thereby acknowledged she did not have all the answers while implicitly setting up the expectation that she would learn from participants. She also sent the message that she valued participants' knowledge and classroom expertise. Anne sent this message directly to participants as well when she responded to a participant's comment about where she saw herself needing to improve: "That's the thing about what we're doing here. It's not just about Denise, Ally, and I, but it's about bringing out all the resources in the room." Breaking down the barrier of the leaders as those with the only knowledge that matters, Anne, Denise, and Ally set up the expectation that participants would share their knowledge. This practice of sharing resources and learning from one another contributed to the enactment of Grossman et al.'s (2001) concept of group identity, as participants came to rely on each other's expertise in addition to that of the leaders.

Sharing experiences. Anne and Denise also established the expectation that participants would share their personal experiences, but they did this by slowly raising the threshold of what types of things participants shared. At first participants simply shared personal experiences, allowing them to control how much they revealed about themselves while also learning about one another. Participants shared increasingly significant information as the three days continued.

When participants discussed their reactions to the assigned readings, they were put into groups and asked, as a group, to come up with what they believed were the five main ideas presented in the text. Negotiating understandings in a small group allowed participants who may have been unsure of their interpretations to have their ideas affirmed by fellow group members. This collaboration also created another layer of trust among participants, as it illustrated that they could rely on one another.

Anne, Denise, and Ally often shared their personal experiences with the group both to model their expectations and to lower the risk for participants. The third follow-up meeting began with writing and then discussing participants' successes and challenges with teaching analytical writing. Denise shared that many of her high school freshmen were failing because they did not turn in assignments. Anne followed, expressing frustration with her third period students: 4 of 23 had turned in the last essay. By sharing their negative experiences, Anne and Denise demonstrated their vulnerabilities as teachers, aligning themselves with the participants. They also showed it was okay to not have the answers, which contributed to cohesion among participants as they began to recognize their commonalities.

It is important to note that Anne, Denise, and Ally would not have had these personal experiences to share if they had not been teachers who used the same approaches they were sharing with the ISAW participants. The fact that the ISAW leaders were practicing teachers was particularly valued by participants, as they shared in end-of-the-year discussions. One participant stated, "It's one thing to get materials and then interpret how to use them. But it's another to get the materials and get into an intimate conversation about the pros and cons of the materials: how best to use them, teacher-approved, how-to-do-it type stuff." Implicit in this participant's statement was his need to be able to interact with credible teachers who could guide him as he

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¹ All names of individuals and schools have been changed.

integrated the ISAW approaches into his teaching. The ISAW leaders had this credibility because they were currently using what they were sharing with their own students.

Similarly, participants valued the student work the leaders shared, as it provided a picture of what the approaches looked like in practice. Significantly, Anne, Denise, and Ally never brought just the work of their stellar students. Instead, they brought a range of student work with which participants could identify. One participant noted that seeing this work was important to her understanding of analytical writing: "It's come from watching people put on workshops that are showing me real live student work. It's given me—I'm building my own toolbox of how I can speak in such a positive way that this is not hopeless." By seeing that the work of students in the leaders' classrooms was not perfect, participants began to understand that improvement in writing is slow. In this way, too, they were able to identify with the leaders: Anne, Denise, and Ally were real teachers who faced the same challenges as they did.

Inviting collaboration and negotiation. Anne and Denise encouraged collaboration among participants, which further facilitated formation of the professional community. As with the sharing of experiences, the risk involved in the activities in which participants were asked to collaborate was controlled, and increased over time. Collaborating on discussing assigned readings involved some risk because of the challenge of mastering new content, but participants still had a concrete text to turn to. Collaborating on the creation of gingerbread men illustrating students' strengths and weaknesses, however, required participants to share their beliefs about students, so the personal risk increased. However, the activity required no new content knowledge, so the content risk was relatively low. Later in the day, participants collaborated on "De-Construction Report Charts." This activity raised the level of required content knowledge, while allowing each person to construct his or her own chart decreased the risk associated with sharing personal beliefs, as participants maintained control over what information was listed on their own charts.

Part of soliciting collaboration involved inviting participants to negotiate their understandings with one another. Early on, groups were given a list of writing genres and asked to place them on a continuum from most to least analytical. Participants had to interact to determine a group definition of analytical writing and to work out a method for organizing the genres. In doing this, they were negotiating meaning with one another. By Session Three, participants were asked to discuss the readings and as a group to list key points. This time the readings were position arguments against formulaic writing--a sensitive topic as many relied on the five-paragraph model to teach analytical writing. Participants, along with Anne and Denise, engaged in collaborative dialogue as they attempted to negotiate their understandings, both shared and divergent. By creating opportunities to discuss content, Anne and Denise not only drew on the collective knowledge, but they also allowed the participants to develop shared understandings, thereby further solidifying group cohesion.

Community realized. By later meetings, it became clear that a community had formed. In the seventh meeting, Carol, a participant in her second year of teaching high school, began to draw openly on the expertise of other group members. While listening to a member of her small group describe an instructional approach, Carol asked clarifying questions such as, "How did you identify which mini-lessons to use?" and "What rubric did you use?" Later in the evening, she also reached out to the large group by sharing her frustrations with how to implement what she was learning from ISAW. Both instances suggest her confidence in the knowledge of other group members to help her solve some of her classroom problems and demonstrate her level of comfort within the group to admit she needed help. Likewise, at the same meeting, another

participant asked a different group the pragmatics of selecting a single piece of writing for teaching revision. A new teacher, she clearly saw the group as a resource for guiding her development as a teacher of writing.

Participants also began to admit their shortcomings and reach out to the larger group for support. At Session Eight, when asked to share challenges they anticipated in implementing ISAW teaching approaches, one participant admitted, "I think it's going to be frustrating for me at first, but we need to do it." She not only recognized her own potential problems with implementing what she had learned, but she was willing to share these with the larger group, signaling her level of trust with the other participants.

Over the course of each year, participants came to realize that the communities that formed—both the general ISAW community and the school communities that attended the meetings together—were a valuable support for their growth. In his reflective survey, one participant said that his understanding of analytical writing had been supported by the "community of peers who face many of the same obstacles/problems to share thoughts, ideas, strategies, etc. (Commiserate!)" Participants valued the venue provided by ISAW, not just to learn about and improve their teaching of analytic writing, but also to have the opportunity to interact with other teachers who faced the same challenges. As one wrote, "I always need the support and knowledge of teachers in the trenches doing the same work with the same student populations." This same participant commented during a focus group discussion, "In education, there aren't a lot of places where you can let your challenges be as transparent and then, by that, have growth." This demonstrates that she saw the ISAW meetings as a place where she felt safe, where she could share her challenges and get support for how to move forward in her teaching; in other words, a professional community.

Developing knowledge of analytical writing pedagogy

The sense of community that developed allowed group members to interact with and begin to develop content knowledge of analytical writing. Importantly, this collaboration and negotiation led to the development of the knowledge of analytical writing intended by the ISAW leaders. In Ball et al.'s (2008) terms, what participants actually were developing was a common content knowledge of analytical writing that could form the foundation for their development of the specialized content knowledge they needed to really teach it, as well as the knowledge of content and teaching that would help them to do this.

For many participants, this was their first opportunity to engage in a systematic exploration of how to teach analytical writing. Many had received no such training in their preservice preparation, as illustrated by this interaction from a focus group discussion:

Kate ... did anyone here in their credentialing program get any explicit, um, teaching on how to teach writing?

Sara No. Nothing about your subject matter.

Jason No.

Kate notes later in the discussion, "This is the first time that I was given explicit instruction in how to teach applicable skills that my students need in order to be able to write." By creating a safe community and first developing participants' content-knowledge about analytical writing, ISAW filled a void in the pedagogical content knowledge (Shulman, 1987) of many participants.

Through group interaction. Participants primarily developed their knowledge of analytical writing through group discussions and activities. Much of this development was the result of negotiating understandings. When participants negotiated how to organize genres and where to place each along a continuum of analytical writing, they were beginning to develop their own definitions of analytical writing. Questions arose such as: Analytical for whom—the reader or the writer? Can we put some genres on an equal level? In the end, each group adopted a different way of organizing the genres, ranging from a focus on the purpose of the writing to using Bloom's taxonomy as an organizing schema. While engaging participants in thinking about how to define analytical writing, this activity demonstrated that not everyone shares the same definition. It served as an implicit reminder that participants' definitions might not be the same as what will be expected of their students at higher levels of education.

Similarly, discussions of readings allowed participants to process what they had read and, through collaboration and negotiation, develop their understandings of analytical writing. After participants read chapter one of *Teaching Analytical Writing* (Gadda et al., 1988), the main points shared from groups' discussions all focused on creating a definition of analytical writing. For instance, one group's main points included: (a) good analytical writing does embody a self; (b) analytical writing requires that the writer accommodate the needs of the reader more than his or her own preferences and tastes; and (c) good analytical writing requires a broad range of skills. At times, the sharing of definitions prompted further discussion in the large group about what constitutes academic writing. For example, after the above points were shared, a discussion ensued about the appropriateness of using "I" in academic writing. Thus discussions of readings served as a springboard for participants to begin testing and refining their common content knowledge of academic writing.

Through the ISAW Analytical Writing Improvement Continuum. This knowledge was further refined when participants began to use the ISAW AWIC as a lens through which to analyze student writing. Participants' common content knowledge evolved as they negotiated the features of the AWIC. On day three, Anne asked participants to analyze multiple pieces of writing from the same student over two years and to talk about his growth in terms of the Continuum. As participants talked about specific features of the students' essays ("He's using evidence more effectively to make his point;" "He learned how to make connections. He included examples and was able to explain why they are relevant."), they began to appropriate both the language and the understanding of what the features of analytical writing looked like in the context of a student essay. This appropriation demonstrates their beginning development of knowledge of content and students; the AWIC allowed them to see how a student might develop the ability to write analytically.

At the end of the year, participants noted both in their reflective surveys and in their focus group discussions the value of the rubric in helping them focus their instruction of analytical writing. The rubric helped participants to notice specific trends in the types of instruction their students needed so that they could target future lessons to address these areas. Using the AWIC to score students' pre-assessments allowed some participants to develop an instructional plan for the year; as one participant shared in her focus group discussion, "The Improvement Rubric, with ISAW, for me the pre- and post-assessments actually helped me know where my students were and where I needed them to go, which is huge. Because then it's like there's something specific I can focus on." For other participants, having that particular focus allowed them to plan specific lessons to address problem areas. As one participant said in a survey response, "The improvement rubric as a tool has guided me toward students' trends

around writing. For example, background and context: I had students read samples of text and identify the background info with a highlighter and differentiate it from the evidence. This helped students identify context in their own writing." The AWIC provided a lens through which participants could identify where their students were struggling, and then plan instruction that targeted those areas.

Using the AWIC explicitly with their students also provided participants with a way to identify students' specific needs. As one participant noted, "I used the rubric to pinpoint individual places for growth. Specifically, it helped me realize the one or two things to focus on with each kid to make the most strides." Because the AWIC is broken down into very specific features of analytical writing, participants were able to understand exactly where their students excelled and where they needed to improve, and to share this information with students. As the year progressed, participants used the rubric to demonstrate their students' growth to them. As one wrote, "We (teacher and her student) looked at how they developed as a writer throughout the year. It really helped to give them a sense of confidence."

Through modeled lessons. In addition to asking participants to engage in the type of writing their students would be asked to do, Anne and Denise often asked participants to walk in the shoes of their students as they modeled specific teaching approaches. In these instances, participants were expected to engage in the same sorts of activities their students would do during a given lesson. On the first day, Denise and Anne together modeled how they explain prompt structure to their students. Just as they would do with their students, Denise and Anne provided participants with a list of model prompts and asked them to highlight the different components (recapitulation, invitation, and stipulation) in different colors. Participants were then given text and asked to construct their own prompts in this same style. Because they were presenting to a group of teachers, Anne and Denise provided the conceptual rationale (Grossman et al. 1999) for what they were asking participants to do. Anne commented, "This lets [students] see that it doesn't matter what sort of college they are going to. The expectation for the type of thinking and writing they're being asked to do is the same." Participants not only personally experienced the value of the activities but also further understood their purpose, a necessary step in developing their knowledge of content and teaching.

At the end of the year, participants particularly noted using their adaptations of this model in their own classrooms. When asked on the reflective survey to provide examples of how they addressed analytical writing with their students, several participants referred to "Recapitulation, invitation, stipulation as a means of prompt discussion." One participant noted the ease with which she was able to take this approach back to her classroom and introduce it to her students: "It gave me a tool that I could literally walk into the classroom the next day, say Hey, we're gonna practice this. And they practiced and they practiced and they got it! On my desk right now I have a stack of papers where they had different prompts and they highlighted each component." This participant successfully replicated with her students nearly exactly what participants had done in the workshop. For another participant, the recapitulation-invitationstipulation triad became a guide for the skills he wanted his students to practice regularly. "At some point in every day, they're having a touch on recapitulation or they're having a touch on some element of invitation or whatever else. The idea is that it's mass practice in all these different elements." This teacher did not necessarily always have his students breaking down prompts or writing full analytical essays, but by using these elements as a guide for his instruction, he helped his students develop the skills they would need when confronted with an analytical writing task.

The modeling of lessons continued throughout the year. At Session Nine, Denise walked participants through a series of activities she used with her students to help them understand analytical writing as participating in a conversation. In fact, the approaches she shared were adaptations of those presented in *They Say/I Say* (Graff & Birkenstein, 2006), so Denise also modeled how to take information from resources and adapt it to use with a particular population of students. Denise explicitly addressed the need to modify lesson content depending on the students in the room when admitting that the samples she shared were from her sophomore honors students: "When I do it with my ninth graders, I'm going to have to do a lot more scaffolding." Later, on their reflective surveys, participants noted their use of the *They Say/I Say* (Graff & Birkenstein, 2006) approach. Some said they used the approach just as it had been presented, noting that it "was a tremendous help to use templates for students to help present their ideas." Others, as Denise had modeled, took the approach and adapted it to fit their students' needs. One teacher "used the *They Say/I Say* to help seniors produce PowerPoints that represent various opinions on controversial topics." Modeling was effective for this participant, who clearly understood the rationale behind the approach Denise had shared, and modified it to fit her instructional goals.

Like the *They Say/I Say* lesson, all of the examples participants provided on their reflective surveys of how they addressed analytical writing with their students were adaptations of lessons that had been modeled in ISAW sessions. This suggests the importance of having participants actually experience the instructional moves from the perspective of students. Experiencing the instruction firsthand allows them to develop the conceptual rationale that can then guide what Ball et al. (2008) characterize as knowledge of content and teaching.

Through shared resources. Anne, Denise, and Ally frequently shared resources from their own classrooms. Whereas modeling a lesson actually had participants do the steps involved in the lesson as their students would, sharing a resource generally meant sharing handouts used to teach a certain concept. This sharing of resources occurred at every ISAW meeting except for the two focused on the scoring of students' pre-assessment writing. However, participants were generally not as engaged in interacting with the resources as they were when they participated in the actual processes. And, as shown by their responses at the end of the year, those print resources tended not to find their way into participants' instructional repertoires. While shared resources offered models of ways to teach analytical writing, they did not allow participants to fully "own" these approaches in the way that modeling did, as explained above.

Developing academic writing pedagogy

As has already been demonstrated, through participation in ISAW, participants were well on their way to developing specialized content knowledge of analytical writing. As discussed above, specialized content knowledge has several components: knowledge of content and students, knowledge of content and teaching, and the advanced content knowledge of analytical writing. Together, these components comprise the specialized content knowledge needed by teachers.

In responses to prompts on their reflective surveys, participants noted particular changes in their thinking, and development of their knowledge of content and teaching. For instance, one noted that, prior to ISAW, "I was at a loss as to where to start in teaching writing. I felt I didn't have any tools." By the end of the year, she had learned, "that there are explicit steps that can be taught (such as recapitulation-invitation-stipulation) to students to empower them with the ability to approach a prompt with a game plan and thus more confidence." Participating in ISAW meant developing particular pedagogical tools that teachers could use to guide their students'

development as analytical writers, tools they may have lacked previously.

Another participant noted that prior to her participation she "graded for everything (Red River) and viewed errors as failure. I didn't know any way to teach writing." This comment suggests this participant equated teaching writing with marking every error a student made on a paper in red ink. However, she reported now viewing "Writing as a process" and that she had "varied ways to identify progress instead of failure." She came to equate confusion with progress. Her response suggests not just a change in how she approached the teaching of writing but also a change in how she viewed her students' progress in writing, a sign of her development of knowledge of content and students.

Similarly, in a focus group discussion, another participant said she "used to think that if students didn't get it right, I had failed in teaching them how to write. I think now that writing is a messy process, and growth doesn't always follow a line graph format." Her picture of what improvement in writing looked like was becoming more clear. Rather than expect her students to improve incrementally from one assignment to the next throughout the year, she now understood, through her developing knowledge of content and students, that this is not a realistic expectation, that students' development as writers is "a messy process."

Results of the analysis of student scores

Across both years, students of program participants demonstrated statistically significant improvement in their writing when assessed on both the NWP's Analytic Writing Continuum and the ISAW Analytical Writing Improvement Continuum.

2008 NWP scores. Across all features of the NWP Analytic Writing Continuum, the interaction between group (program or comparison) and occasion (pre-assessment or post-assessment) was statistically significant ($p \le 0.05$). As Table 3 shows, the difference between gains made by the students of the program participants and those made by the students of the comparison teachers were statistically significant on all six traits assessed on the rubric, along as well as on the holistic score. (See Appendix Q for the results of Wilks' Lambda analysis of these data.) In addition, there was a significant difference in gains ($p \le 0.05$) between the pre- and post-assessments across all features by students in the program group.

Table 3Results of Single Factor Repeated Measures Analysis of Variance for 2008 Pre- and Post-Assessment Student Writing Assessed on National Writing Project Analytic Writing Continuum (Program N=198, Comparison N=121)

Score	Variance Component	df	Mean Square	F Ratio	Test of Significance P (F)	Effect Size
	Between subjects Program group (pre/post)	1	21.643	12.320	0.001	0.037
	Error (between)	317	0.856			
Holistic	Within subjects Occasion (pre, post)	1	24.202	28.283	0.000	0.082
-	Group x Occasion	1	3.929	4.592	0.033	0.014
	Error (within)	317	0.856			
	Between subjects Program group (pre/post)	1	31.239	17.935	0.000	0.054
+	Error (between)	317	1.742			
Content	Within subjects Occasion (pre, post)	1	24.313	26.944	0.000	0.078
	Group x Occasion	1	2.364	2.620	0.107	0.008
	Error (within)	317	0.902			
	Between subjects Program group (pre/post)	1	16.724	9.304	0.002	0.029
nre	Error (between)	317	1.798			
Structure	Within subjects Occasion (pre, post)	1	18.543	1	18.543	0.058
•2	Group x Occasion	1	3.907	4.119	0.043	0.013
	Error (within)	317	0.948			
	Between subjects Program group (pre/post)	1	28.577	16.803	0.000	0.050
•	Error (between)	317	1.701			
Stance	Within subjects Occasion (pre, post)	1	27.505	32.202	0.000	0.092
	Group x Occasion	1	8.204	9.605	0.002	0.029
	Error (within)	317	1.701			
Æ	Between subjects Program group (pre/post)	1	32.590	16.811	0.000	0.050
neuc	Error (between)	317	1.939			
Sentence Fluency	Within subjects Occasion (pre, post)	1	25.791	28.424	0.000	0.082
Sent	Group x Occasion	1	4.161	4.586	0.033	0.014
	Error (within)	317	1.939			
	Between subjects Program group (pre/post)	1	15.086	9.329	0.002	0.029
Ę	Error (between)	317	1.617			-
Diction	Within subjects Occasion (pre, post)	1	20.101	23.993	0.000	0.070
	Group x Occasion	1	3.237	3.864	0.050	0.012
	Error (within)	317	1.617	 		
so.	Between subjects Program group (pre/post)	1	29.609	14.709	0.000	0.044
ţį	Error (between)	317	2.013			
Conventions	Within subjects Occasion (pre, post)	1	21.369	24.918	0.000	0.073
S	Group x Occasion	1	3.758	4.382	0.037	0.014
	Error (within)	317	2.013			

2008 CWP scores. Table 4 shows that across all features of the CWP ISAW Analytical Writing Improvement Continuum, the interaction of group and testing occasion was statistically significant (p<0.05). Across each feature, when the gains made by the program teachers' students between the pre-assessment and the post-assessment were compared with gains made by students of the comparison teachers, those gains were not only greater, but statistically significant (p<0.05). The statistical significance of the interaction of group and occasion demonstrates that the difference between the gains made by the program group and the gains made by the comparison group can be attributed to the program students' teachers' participation in the ISAW program. (See Appendix R for the results of Wilks' Lambda analysis of these data.)

In all traits except Choosing Words, Employing Sentence Structure to Convey Ideas, Employing Sentence Boundaries, Using Grammatical Relationships, Using Punctuation, and Anticipating Readers' Needs, there was a significant difference between group, occasion, and the interaction of the two (p<0.05). This means that for the remaining 12 of the 18 features, the difference between the program group's pre and post-assessment scores was also statistically significant. The features for which these gains occurred were: Responding to the Identified Issue/Subject, Addressing the Demands of the Essay Topic, Understanding Text, Summarizing and Recapitulating, Making Own Claims or Assertions, Developing Example(s), Reasoning, Using Textual Support, Structuring and Organizing, Introducing the Essay, Using Paragraphs and Transitions, and Concluding the Essay. In fact, as highlighted in the previous section, the areas in which program students made the most gains align with the areas explicitly addressed within the ISAW program. (As discussed above, due to violations of two ANOVA assumptions, there is the possibility of a Type I error in the results for two traits: Responding to the Identified Issue/Subject, and Addressing the Demands of the Essay Topic.)

Table 4Results of Single Factor Repeated Measures Analysis of Variance for 2008 Pre- and Post-Assessment Student Writing Assessed on California Writing Project Analytical Writing Improvement Continuum (Program N=461, Comparison N=288)

Score	Variance Component	df	Mean Square	F Ratio	Test of Significance P(F)	Effect Size
	Between subjects Program group (pre/post)	1	20.024	12.817	0.000	0.025
5 <u>5</u>	Error (between)	747	1.064			
Responding to Identified Issue/Subject	Within subjects Occasion (pre, post)	1	8.664	25.454	0.000	0.033
Res Id Issu	Group x Occasion	1	3.612	10.613	0.001	0.014
	Error (within)	747	0.340			
ssay	Between subjects Program group (pre/post)	1	10.797	9.871	0.002	0.013
e E	Error (between)	747	1.094			
Addressing the Demands of the Essay Topic	Within subjects Occasion (pre, post)	1	7.785	25.119	0.000	0.033
Ad Demai	Group x Occasion	1	5.007	16.157	0.000	0.021
	Error (within)	747	0.310			
50	Between subjects Program group (pre/post)	1	31.531	28.711	0.000	0.037
t ği	Error (between)	747	1.098			
Understanding the Text	Within subjects Occasion (pre, post)	1	7.452	18.828	0.000	0.025
Und	Group x Occasion	1	4.530	11.446	0.001	0.015
	Error (within)	747	0.396			

જ હ	Between subjects Program group (pre/post)	1	42.725	32.053	0.000	0.041
zing latin	Error (between)	747	1.333			
Summarizing & Recapitulating	Within subjects Occasion (pre, post)	1	5.024	11.526	0.001	0.015
	Group x Occasion Error (within)	1 747	4.157 0.436	9.536	0.002	0.013
	Between subjects					
Claims	Program group (pre/post) Error (between)	747	5.122 1.093	4.688	0.031	0.006
Making Own Claims or Assertions	Within subjects Occasion (pre, post)	1	6.575	19.585	0.000	0.026
Making or ∆	Group x Occasion	1	4.274	12.731	0.000	0.017
-	Error (within)	747	0.336			
uples	Between subjects Program group (pre/post)	1	19.130	19.390	0.000	0.025
Ехаг	Error (between)	747	0.987			
Developing Examples	Within subjects Occasion (pre, post)	1	11.001	28.879	0.000	0.037
Deve	Group x Occasion Error (within)	1 747	7.588 0.381	19.918	0.000	0.026
	Between subjects	1	12.235	12.177	0.001	0.016
	Program group (pre/post) Error (between)	747	1.005	12.177	0.001	0.016
Reasoning	Within subjects	1	8.770	28.841	0.000	0.037
Reas	Occasion (pre, post)	1	6.992	22.995	0.000	0.030
	Group x Occasion Error (within)	747	0.304			
	Between subjects			26.751	0.000	0.047
la l	Program group (pre/post)	1	43.754	36.751	0.000	0.047
rext port	Error (between) Within subjects	747	1.191	6.700	0.000	0.000
Using Textual Support	Occasion (pre, post)	1	3.231	6.788	0.009	0.009
2	Group x Occasion Error (within)	1 747	4.881 0.476	10.255	0.001	0.014
	Between subjects Program group (pre/post)	1	6.472	5.961	0.015	0.008
& 8 8	Error (between)	747	1.086			
turin ganizin	Within subjects Occasion (pre, post)	1	6.174	20.147	0.000	0.026
Structuring & Organizing	Group x Occasion	1	6.943	22.660	0.000	0.029
	Error (within)	747	0.306			
ay	Between subjects Program group (pre/post)	1	10.660	8.768	0.003	0.012
e Essay	Error (between)	747	1.216			
Introducing the	Within subjects Occasion (pre, post)	1	8.336	27.181	0.000	0.035
oqnc.	Group x Occasion	1	5.383	17.551	0.000	0.023
Intr	Error (within)	747	0.307			
æ	Between subjects Program group (pre/post)	1	7.877	6.717	0.010	0.009
aphs ons	Error (between)	747	1.173			
Using Paragraphs & Transitions	Within subjects Occasion (pre, post)	1	9.933	30.245	0.000	0.039
sing P Tr	Group x Occasion	1	4.586	13.965	0.000	0.018
ä	Error (within)	747	0.328		•	
say	Between subjects Program group (pre/post)	1	22.796	20.024	0.000	0.026
the Es	Error (between)	747	1.138			
ding t	Within subjects Occasion (pre, post)	1	6.439	17.753	0.000	0.023
Concluding the Essay	Group x Occasion	1	6.881	18.972	0.000	0.025
	Error (within)	747	0.363	1		
s u s ≥	Between subjects Program group (pre/post)	1	0.279	0.221	0.639	0.000

						1
	Error (between)	747	1.261			
	Within subjects Occasion (pre, post)	1	3.177	12.234	0.000	0.016
	Group x Occasion	1	3.342	12.870	0.000	0.017
	Error (within)	747	0.260			
nce	Between subjects Program group (pre/post)	1	2.116	1.807	0.179	0.002
Con	Error (between)	747	1.171			
Employing Sentence Structure to Convey Ideas	Within subjects Occasion (pre, post)	1	5.040	19.573	0.000	0.026
Smplo Struct	Group x Occasion	1	2.470	9.592	0.002	0.013
– 22	Error (within)	747	0.258			
	Between subjects Program group (pre/post)	1	1.042	0.880	0.348	0.001
rie e iii	Error (between)	747	1.183			
Employing Sentence Boundaries	Within subjects Occasion (pre, post)	1	4.936	18.775	0.000	0.025
ള ∞ ജ	Group x Occasion	1	1.337	5.084	0.024	0.007
	Error (within)	747	0.263			
E	Between subjects Program group (pre/post)	1	1.155	1.023	0.312	0.001
nati hips	Error (between)	747	1.129			
Using Grammatical Relationships	Within subjects Occasion (pre, post)	1	2.651	10.486	0.001	0.014
Sing Rel	Group x Occasion	1	2.233	8.831	0.003	0.012
1	Error (within)	747	0.253			
ion	Between subjects Program group (pre/post)	1	0.096	0.080	0.777	0.000
Į.	Error (between)	747	1.203			
Using Punctuation	Within subjects Occasion (pre, post)	1	4.177	15.299	0.000	0.020
Using	Group x Occasion	1	2.558	9.367	0.002	0.012
	Error (within)	747	0.273			
	Between subjects Program group (pre/post)	1	2.901	2.697	0.101	0.004
iting Neec	Error (between)	747	1.076			
Anticipating Readers' Needs	Within subjects Occasion (pre, post)	1	5.624	20.183	0.000	0.026
Ar Rea	Group x Occasion	1	5.007	17.966	0.000	0.023
	Error (within)	747	0.279			

2009 NWP scores. As Table 5 illustrates, the results from the 2009 NWP scoring also demonstrated statistically significant differences between the program and comparison groups and pre-assessment and post-assessment writing across all features of the rubric (p<0.05). (See Appendix S for the results of Wilks' Lambda analysis of these data.) Thus the gains observed in the students of program participants can be attributed to their teachers' participation in the ISAW program. In fact, the scores of the comparison students fell in every area assessed on the rubric, including the holistic score.

Table 5Results of Single Factor Repeated Measures Analysis of Variance for 2009 Pre- and Post-Assessment Student Writing Assessed on National Writing Project Analytic Writing Continuum (Program N=155, Comparison N=142)

Score	Variance Component	df	Mean Square	F Ratio	Test of Significance P(F)	Effect Size
	Between subjects Program group (pre/post)	1	8.454	4.773	0.030	0.016
	Error (between)	297	1.771			
Holistic	Within subjects Occasion (pre, post)	1	0.005	0.006	0.940	0.000
	Group x Occasion	1	4.249	5.379	0.021	0.018
	Error (within)	297	0.790			
	Between subjects Program group (pre/post)	1	14.092	8.080	0.005	0.026
÷.	Error (between)	297	1.744			
Conten	Within subjects Occasion (pre, post) 1 0.790 1.065 0.303	0.303	0.004			
	Group x Occasion	1	9.319	12.563	0.000	0.041
	Error (within)	297	0.742			
	Between subjects Program group (pre/post)	1	31.202	17.408	0.000	0.056
ure	Error (between)	296	1.792			
Structure	Within subjects Occasion (pre, post)	1	6.430	8.518	0.004	0.028
	Group x Occasion	1	12.974	17.186	0.000	0.055
	Error (within)	296	0.755			
	Between subjects Program group (pre/post)	1	12.037	6.843	0.009	0.023
e	Error (between)	295	1.759			
Stance	Within subjects Occasion (pre, post)	1	0.525	0.573	0.450	0.002
		1	7.192	7.852	0.005	0.026
	Group x Occasion Error (within)	295	0.916		+	
	Between subjects Program group (pre/post)	1	26.746	14.635	0.000	0.047
ncy	Error (between)	295	1.827			
Sentence Fluency	Within subjects Occasion (pre, post)	1	10.660	11.433	0.001	0.037
Sent	Group x Occasion	1	9.837	10.550	0.001	0.035
	Error (within)	295	0.932			
	Between subjects Program group (pre/post)	1	11.612	6.294	0.013	0.021
E	Error (between)	296	1.845			
Diction	Within subjects Occasion (pre, post)	1	1.083	1.253	0.264	0.004
	Group x Occasion	1	4.439	5.134	0.024	0.017
	Error (within)	296	0.865		+	
Conv entio ns	Between subjects Program group (pre/post)	1	24.442	12.684	0.000	0.041
	Error (between)	295	1.927			

Within subjects Occasion (pre, po	st) 1	3.559	4.513	0.034	0.015
Group x Occasio	n 1	10.616	13.462	0.000	0.044
Error (within)	295	0.789			

2009 CWP scores. Program students demonstrated statistically significant gains (p<0.01) from pre-assessment to post-assessment across all domains of the rubric when compared to the comparison group of students as shown in Table 6. Once again, the statistical significance of this interaction demonstrates that improvements made by the program group students can be attributed to their teachers' participation in ISAW. Additionally, on all domains except Choosing Words and Anticipating Readers' Needs, the difference in scores was also statistically significant (p<0.05) for the occasion, the group, and the interaction of the two. (See Appendix R for the results of Wilks' Lambda analysis of these data.)

As with the 2008 CWP scores, it is important to acknowledge the likelihood of a Type I error occurring due to the violation of ANOVA assumptions in the data sets for the rubric features of Summarizing and Recapitulating, Making Own Claims or Assertions, Developing Example(s), Using Textual Support, Introducing the Essay, Concluding the Essay, Choosing Words, Employing Sentence Boundaries, and Using Grammatical Relationships. However, given the fact that p<0.000 for the interaction of group and occasion in each of these areas, it is likely that the difference between the gains made by each group is still statistically significant. This conclusion is supported by the descriptive statistics in Table 3 which show that, as with the 2009 NWP scores, the scores of the comparison students actually declined between the pre-assessment and post-assessment.

Table 6Results of Single Factor Repeated Measures Analysis of Variance for 2009 Pre- and Post-Assessment Student Writing Assessed on California Writing Project Analytic Writing Continuum (Program N=706, Comparison N=143)

Score	Variance Component	df	Mean Square	F Ratio	Test of Significance P (F)	Effect Size
	Between subjects Program group (pre/post)	1	36.610	44.329	0.000	0.050
5 <u>5</u>	Error (between)	847	0.826			
Responding to Identified Issue/Subject	Within subjects Occasion (pre, post)	1	2.589	12.087	0.001	0.014
Res _l Id Issu	Group x Occasion	1	18.534	86.527	0.000	0.094
	Error (within)	847	0.214			
ssay	Between subjects Program group (pre/post)	1	33.258	38.947	0.000	0.044
g th	Error (between)	846	0.854			
Addressing the Demands of the Essay Topic	Within subjects Occasion (pre, post)	1	1.591	7.676	0.006	0.009
Ad Demai	Group x Occasion	1	19.974	96.385	0.000	0.102
	Error (within)	846	0.207			
gs.	Between subjects Program group (pre/post)	1	27.921	33.234	0.000	0.038
ž dji	Error (between)	846	0.840			
Understanding the Text	Within subjects Occasion (pre, post)	1	2.192	9.974	0.002	0.012
Und	Group x Occasion	1	16.118	73.328	0.000	0.080
	Error (within)	846	0.220			
Summa rizing & & Recapit ulating	Between subjects Program group (pre/post)	1	21.035	23.393	0.000	0.027
5 4 -	Error (between)	847	0.899		1	

				T		1
	Within subjects Occasion (pre, post)	1	2.557	9.679	0.002	0.011
	Group x Occasion	1	15.553	58.862	0.000	0.065
	Error (within)	847	0.264			
aims	Between subjects Program group (pre/post)	1	42.891	56.892	0.000	0.063
n Cla	Error (between)	847	0.754			
Making Own Claims or Assertions	Within subjects Occasion (pre, post)	1	2.032	8.244	0.004	0.010
Maki o	Group x Occasion Error (within)	1 847	15.893 0.246	64.506	0.000	0.071
70	Between subjects			+		
Developing Examples	Program group (pre/post) Error (between)	847	0.740	40.774	0.000	0.046
g Ex	Within subjects	1	2.159	7.919	0.005	0.009
lopin	Occasion (pre, post)		2.137	7.515	0.003	0.007
Deve	Group x Occasion Error (within)	1 847	0.273	49.672	0.000	0.055
	Between subjects	1	26.187	34.323	0.000	0.039
en.	Program group (pre/post) Error (between)	846	0.763	54.525	0.000	0.037
Reasoning	Within subjects Occasion (pre, post)	1	3.055	11.966	0.001	0.014
ž	Group x Occasion	1	14.007	54.869	0.000	0.061
	Error (within)	846	0.255			
	Between subjects Program group (pre/post)	1	7.321	7.362	0.007	0.009
ktual rt	Error (between)	847	0.994			
Using Textual Support	Within subjects Occasion (pre, post)	1	4.157	11.736	0.001	0.014
Usir	Group x Occasion	1	23.976	67.686	0.000	0.074
	Error (within)	847	0.354			
	Between subjects Program group (pre/post)	1	24.833	32.503	0.000	0.037
ng & zing	Error (between)	847	0.764			
Structuring & Organizing	Within subjects Occasion (pre, post)	1	1.194	5.451	0.020	0.006
Stru	Group x Occasion	1	17.357	79.247	0.000	0.086
	Error (within)	847	0.219			
ay	Between subjects Program group (pre/post)	1	41.256	54.308	0.000	0.060
e Ess	Error (between)	847	0.760			
oducing the Essay	Within subjects Occasion (pre, post)	1	2.776	11.955	0.001	0.014
oduci		1	15.030	64.736	0.000	0.071
Intro	Group x Occasion Error (within)	847	0.232			
	Between subjects	1	34.982	45.765	0.000	0.051
s ses	Program group (pre/post) Error (between)	847	0.764	100,00		
Using Paragraphs & Transitions	Within subjects	1	1.410	6.387	0.012	0.007
g Par Frans	Occasion (pre, post)	1			0.000	0.069
Using	Group x Occasion		13.852	62.738	0.000	0.069
	Error (within) Between subjects	847	0.221			
'ssay	Program group (pre/post)	1	30.519	38.669	0.000	0.044
Concluding the Essay	Error (between) Within subjects	846	0.789	6.500	0.000	0.000
ıding	Occasion (pre, post)	1	1.768	6.798	0.009	0.008
`onch	Group x Occasion	1	17.534	67.404	0.000	0.074
	Error (within)	846	0.260			
sing ds	Between subjects Program group (pre/post)	1	31.602	36.365	0.000	0.041
Choosing Words	Error (between) Within subjects	847	0.869			
•	Occasion (pre, post)	1	0.104	0.532	0.466	0.001

						_
	Group x Occasion	1	11.351	58.043	0.000	0.064
	Error (within)	847	0.196			
nce	Between subjects Program group (pre/post)	1	21.566	25.337	0.000	0.029
Con	Error (between)	847	0.851			
Employing Sentence Structure to Convey Ideas	Within subjects Occasion (pre, post)	1	0.798	4.325	0.038	0.005
Emplo Struct	Group x Occasion	1	9.805	53.123	0.000	0.059
	Error (within)	847	0.185			
	Between subjects Program group (pre/post)	1	40.481	46.553	0.000	0.052
ii s ii.	Error (between)	847	0.870			
Employing Sentence Boundaries	Within subjects Occasion (pre, post)	1	0.938	5.070	0.025	0.006
B &	Group x Occasion	1	6.412	34.662	0.000	0.39
	Error (within)	847	0.185			
<u> </u>	Between subjects Program group (pre/post)	1	34.517	42.433	0.000	0.048
mati hips	Error (between)	847	0.813			
Using Grammatical Relationships	Within subjects Occasion (pre, post)	1	0.874	5.121	0.024	0.006
Jsing (Group x Occasion	1	6.640	38.904	0.000	0.044
_	Error (within)	847	0.171			
ion	Between subjects Program group (pre/post)	1	39.052	48.892	0.000	0.055
nat	Error (between)	847	0.799			
Using Punctuation	Within subjects Occasion (pre, post)	1	1.124	6.429	0.011	0.008
Using	Group x Occasion	1	6.062	34.673	0.000	0.039
	Error (within)	847	0.175			
<u>s</u>	Between subjects Program group (pre/post)	1	33.777	43.628	0.000	0.049
ating Need	Error (between)	847	0.774			
Anticipating Readers' Needs	Within subjects Occasion (pre, post)	1	0.461	2.338	0.127	0.003
ARea	Group x Occasion	1	15.963	80.912	0.000	0.087
	Error (within)	847	0.197			

Discussion

Our findings suggest that specific features of the ISAW program did impact teachers' thinking about analytical writing and the instructional practices they used to address analytical writing with their students. In addition, the analyses of the student pre- and post-assessment writing suggest that the changes teachers made in their instructional practices as a result of their ISAW participation had a significant impact on their students' ability to write analytically (as defined by the AWPE exam and the features of the ISAW Analytical Writing Improvement Continuum). This section first discusses the most significant program features that contributed to these changes, then considers the significance of ISAW's impact on program teachers and students.

Significant program features

Strength of program focus. As discussed throughout the findings, the overall focus of the ISAW program was clearly on analytical writing. Each activity in which participants engaged was aimed toward developing their content knowledge of analytical writing, their teaching of analytical writing, or a combination of the two. Readings such as *Teaching Analytical Writing* (Gadda, Peitzman, & Walsh, 1988) and "The ill effects of the five paragraph theme" (Wesley, 2000), provided definitions of analytical writing that helped move participants away from equating the five-paragraph essay formula with good academic writing. Writing their own essay response to the AWPE helped participants understand what it is like to write an analytical essay and to think about the intellectual moves students must know how to make. Modeled lessons, such as prompt deconstruction or unpacking the "quote sandwich" approach from *They Say/I Say* (Graff & Birkenstein, 2006), provided opportunities for participants to develop pedagogy for addressing analytical writing with their students. But regardless of the activity, each maintained a strong and clear focus on analytical writing.

One distinction that must be made about the definition of analytical writing put forth by ISAW is that it does not necessarily get at the intricacies of metagenres articulated by Carter (2007). However, by asking students to recapitulate others' ideas and stipulating that they use evidence to support their ideas from a variety of sources, this definition does match Bartholomae's notion that academic writing "makes us think of the page as crowded with others" (Bartholomae, 1995, p. 63). Perhaps as secondary students develop into writers skilled at the type of analytical writing advocated by ISAW, they will be ready to tackle the metagenres described by Carter when they enter the post-secondary world of the university.

Development of a community. In developing our theoretical framework, we asked whether a professional development program focused on developing content could also develop into what Grossman et al. (2001) characterized as a professional teaching community. In order to be called such, the group members must demonstrate that a) they had formed a group identity with norms for interaction; b) they had navigated the fault lines within the group; c) they had accepted and negotiated the central tension of professional development between needing to improve their own intellect and also needing to improve their practice; and d) they accepted group responsibility for individuals' growth.

As demonstrated in the findings, participants wrestled with their own changing understandings of analytical writing, while at the same time they dealt with the ramifications of what this new knowledge meant for their teaching of analytical writing. Consequently, they were constantly negotiating the tension between improving their professional practice while also

continuing their intellectual development. In addition, participants navigated the fault lines of the group. Evidence of this navigation can be found in a Session Two discussion about formulaic writing, in which participants were not afraid to express their divergent viewpoints and negotiate their understandings with one another. As participants learned to use the ISAW Analytical Writing Improvement Continuum, they often shared their disagreement with one another as well as with the ISAW leaders. This ability to disagree with one another publicly while negotiating understandings signifies their movement beyond a pseudocommunity, in which participants express agreement for the sake of avoiding argument.

Participants also came to rely on one another as resources, seeking out the help of others when unsure of what instructional moves to make. And by the subsequent sharing of resources with one another or suggestions of approaches to try, participants demonstrated their willingness to accept responsibility for individual members' personal growth. They did not simply step back and watch other participants flounder, but stepped in to offer support when they could.

Significantly, and similar to the group Grossman et al. (2001) studied, the ISAW professional development spanned an extended period of time. After the initial three days in the summer, participants met together about once per month throughout the school year. This allowed them to take new ideas back to their classrooms and then return to the group for feedback. It also allowed the group to reach the level of teacher community articulated by Grossman et al. While the participants began to negotiate the fault lines within the group early on, it was not until later in the school year that they truly came to rely on one another for support. By this time, they had learned the strengths and weaknesses of others and knew that they could count on one another for the type of feedback that would help them move forward both in their own understanding of analytical writing and in their understanding of how to teach it. By comparing the actions of the ISAW participants to the dimensions set out by Ball et al. (2001), we conclude that they did develop into a professional teaching community in which the participants leaned on one another for support and, together, developed their understandings of analytical writing and their pedagogy for teaching it. Our findings suggest the importance of sustaining professional development over time so that participants have the opportunity to develop this deeper level of community.

Importance of leaders who are teachers. The role of the leaders was important in this community development. As discussed above, the leaders were practicing classroom teachers who were using—and at times struggling with—these same approaches with their own students. Our findings underscore the power of the NWP model of "Teachers teaching teachers." It is significant that two of the leaders taught in challenging contexts in traditionally underperforming schools, that mirrored the contexts faced by many of the participants. This added a layer of validity to ISAW that is rare in professional development. Whereas participants working in such contexts might otherwise dismiss the ISAW approaches with thoughts that such methods would not work in their contexts, for these participants that was not an option. Our findings underscore the importance of facilitators who are not just teachers, but teachers with extensive experience working with diverse student populations.

The leaders' acknowledgement of the struggles they faced in the classroom also contributed to the validity of the approaches offered, and, we believe, the willingness of participants to try the approaches. By not promising that everything they modeled would go perfectly, Anne, Denise, and Ally encouraged the participants to take risks, to try the approaches, and then to come back and share the results. Because the leaders modeled what sharing a struggle would look like—the group would offer support and suggestions—participants knew

that they too could share their struggles. This creation of a safe environment also contributed significantly to the formation of a community among group members.

Impact on teachers' knowledge and instruction of analytical writing

The ISAW program significantly changed teachers' knowledge of analytical writing, specifically in what Ball et al. (2008) would characterize as their common content knowledge of analytical writing. As our findings show, many high school English teachers enter the profession with little more knowledge of analytic writing than that which they acquired as students. Prior to their participation in ISAW, many teachers had not had opportunities to explicitly consider the intellectual moves that writers engage in when writing analytically. But as our findings illustrate, the explicit focus throughout ISAW helped participants to appropriate a definition of analytical writing as writing that takes a stand on an idea or issue, supports that stand with relevant evidence, and then analyzes that evidence with an articulation of how it supports the stand taken. The definitions of analytical writing provided by participants in their end-of-the-year survey aligned with those presented in ISAW, whereas, as many reported, prior to their participation their definition of analytical writing had been limited to the five-paragraph essay.

Besides growth in content knowledge, teachers reported making changes in their instructional practice as a result of their participation in ISAW. As reported in the findings, when asked how they currently addressed analytical writing with their students, the practices reported had all been modeled in the ISAW program. It is significant that the approaches shared simply through handouts distributed at ISAW program meetings did not appear to make their way into teachers' instructional repertoires, at least as they reported in their focus group discussions, reflective surveys, and assignment reflections. While the handouts may have contributed to participants' understandings of how to address analytical writing with their students, they did not contribute explicitly to changes in teachers' instructional practices. This finding suggests an important take-away for future professional development programs: Those instructional practices believed to be most effective should be modeled so that participants are able to understand them on both an experiential and a conceptual level.

The question remains whether or not participants developed the level of knowledge of analytic writing and analytical writing pedagogy that Ball et al. (2008) would characterize as specialized content knowledge. This includes knowledge of content and students (which requires connecting the content knowledge with the knowledge of students as developing writers), and knowledge of content and teaching (which takes the specialized content knowledge and connects it to the knowledge of how to teach academic writing, including knowledge of specific instructional practices and when to apply those practices). In addition, specialized content knowledge of analytical writing for teachers includes not just knowing what analytical writing is, but how analytical writing is used in the world of school and beyond, and how individuals develop as analytical writers.

The findings demonstrate that participants did develop in their *knowledge of content and students*. Specifically, from seeing models of student writing and from working with the ISAW Analytical Writing Improvement Continuum, participants developed an understanding of what development in analytical writing looks like. They learned not to expect students to develop incrementally and sequentially from one stage to the next and that, in fact, developing as a writer is a messy process. However, participants did not necessarily develop a clear understanding of how students develop as writers beyond knowing that this development is not linear; participants did not articulate general patterns in how student writers develop. This suggests that participants

still have further to travel along the trajectory of development in their *knowledge of content and students*, though their participation in ISAW did set them on this path.

Likewise, participants developed in the area of *knowledge of content and teaching*. Our findings illustrate some of the ways participants took the approaches they saw modeled in ISAW back to their classrooms and tried them out with their students. Specifically, participants noted the value in helping their students understand the recapitulation-invitation-stipulation prompt construction and shared ways they had adapted this approach to meet their instructional needs. Participants also reported adapting the approaches shared from *They Say/I Say* (Graff & Birkenstein, 2006) to help their students understand how to integrate quotes from others to support their arguments. From these reports of we conclude that participation in ISAW facilitated teachers' development of their *knowledge of content and teaching* related to analytical writing.

Although we can conclude that participants developed in each of these areas, we cannot conclude that they attained *specialized content knowledge*, though they appear to be well on their way. At this level of knowledge, participants would easily be able to articulate a depth of understanding of what analytic writing is in the world outside of school, what it looks like in student writing across stages of development, and myriad instructional approaches to address students' needs at each of these stages. In reality, to expect this level of knowledge development after just one or two years, especially considering the level of knowledge with which many participants entered the program, is unrealistic. This suggests the need for participants to be able to extend their participation in ISAW or in an ISAW-based community for a number of years. Developing specialized content knowledge requires extended time to study student development in analytical writing, try out different instructional approaches aimed at developing students' in specific ways, and learn from others engaged in the same type of inquiry. We hope to provide participants with further opportunities to develop their specialized content knowledge of analytical writing.

Impact on student performance

Although participants are still developing in their specialized content knowledge, the impact of ISAW on their knowledge of analytical writing and on their instructional approaches to address analytical writing with their students did positively impact their students' writing. Across both years, students of program participants demonstrated statistically significant improvement in their writing when assessed on both the NWP's Analytic Writing Continuum and the ISAW Analytical Writing Improvement Continuum.

The use of two different assessment tools underscores the significance of these student outcomes. The NWP Analytic Writing Continuum, in addressing six traits associated with good writing, provides an overall assessment that yields important information about students' knowledge of and skills in writing generally, but does not reflect the specific content of the ISAW program. The ISAW Analytical Writing Improvement Continuum, on the other hand, while never intended to be an assessment tool for large-scale scoring sessions and not meant to provide a finite list of the features of analytical writing, does reflect the content of the ISAW program. With score areas that specifically relate to the recapitulation-invitation-stipulation prompt structure, the ISAW Analytical Writing Improvement Continuum provides a more detailed portrait of students as analytical writers, reflecting the specific focus of teachers who participated in the ISAW professional development program.

Conclusion

This study suggests several questions for further research, including how participating in ISAW together with members of a school-site team impacts participants' implementation, and thus development of the different aspects of specialized content-knowledge related to teaching academic writing. Another question that emerges from our study is how participating over multiple years in ISAW helps teachers move further along the trajectory of developing specialized content knowledge in writing.

This study provides evidence of the effectiveness of professional development that maintains a strong, specific focus and invites teachers to develop into a professional teaching community. Such programs may provide the best forum for extending teachers' common content knowledge of analytical writing toward specialized content knowledge that includes understanding how analytical writing is used in the world of school and beyond; knowledge of students as developing writers; and links between those understandings, and instructional practices for teaching analytical writing. This knowledge development can then lead to changes in teachers' instructional practices which can, ultimately, lead to positive changes in their students' development. However, as our study shows, this type of professional development must be sustained over time to allow for the formation of a strong community. Once the community is established, the members can support one another in taking risks with their new knowledge and in providing critical feedback to one another. This nurturing environment allows new knowledge to develop—which points to the critical role of the facilitator. Facilitators with practical experience using the approaches in the same type of school contexts in which the participants work results in buy-in from the participants that in turn leads to their appropriation of the approaches. As this study demonstrates, extending the work over time and enlisting facilitators who are also practitioners in similar contexts to the participants' are both critical factors in moving participants' knowledge beyond common content knowledge to the level of specialized content knowledge. By illustrating the effectiveness of the ISAW model in terms of its impact on teacher knowledge, instructional practices, and student outcomes, this study clearly demonstrates the power of the NWP "teachers teaching teachers" principle.

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Appendix AComponents Common Across ISAW Programs

Commonanta Common				
Components Common	Components Common to	Components Unique to	Components Unique to	Components Unique to
Across ISAW programs	Area 3 WP & UCLA WP	Area 3 WP	Northern California WP	UCLA WP
 writing responses to the 	S	 creating a continuum 	 developing a group 	 discussion of how to
AWPE	process used to write the	of genres of writing	definition of academic	honor the knowledge
 discussing the scoring 	AWPE essay	from most analytical to	writing	students bring with
guide used for the	 discussing specific 	least analytical		them
AWPE	strengths and challenges	 understanding prompt 		
 analyzing student 	of students, both	structures, including		
papers written to AWPE	generally and in relation	deconstructing existing		
prompts	to their writing	prompts and creating		
 becoming familiar with 	 seeing how ISAW 	new prompts		
the ISAW Analytical	leaders integrate			
Writing Improvement	academic writing into			
Continuum and potential	their larger curricula			
uses for it in the				
classroom				
 reading and discussing 				
articles and book				
chapters related to				
academic writing				
 discussing approaches 				
to improve students'				
reading comprehension				
 collaborating with 				
other participants on				
ways to integrate ISAW				
approaches in their own				
classrooms				
 reading and evaluating 				
student papers				

Appendix B

Foci and Key Activities from A3WP ISAW Meetings in 2008-09

	cuvities from A5 W1 15AW	meetings in 2000-07	
Session Number and Details	Focus	Key Activities	Resources Distributed
Session 1: July 28, 2008 8:30-3:30 Year One participants only	Developing knowledge of Analytical Writing Proficiency Exam (AWPE)	 ice breaker create analytic writing continuum write response to AWPE-prompt learn about improvement scoring using AWPE model and ISAW AWIC discuss prompt structure HW: Chapter 1 <i>Teaching Analytical Writing</i> (Gadda et al., 1988) 	- sample AWPE prompts - AWPE Scoring Guide - ISAW AWIC - sample prompts to teach students AWPE format - Teaching Analytical Writing (Gadda et al., 1988)
Session 2: July 29, 2008 8:30-3:30 Year One participants only	Developing knowledge of analytical writing Exploring instructional approaches	 ice breaker discuss homework reading create "gingerbread students" with strengths of students listed on inside and challenges on the outside view PowerPoint of Writing: A Ticket to Work or a Ticket Out discuss strategies to develop students' reading comprehension create Deconstruction Report Chart write prompts for classroom use HW: "The ill effects of the five-paragraph theme" (Wesley, 2000) or "The popularity of formulaic writing (and why we need to resist)" (Wiley, 2000) 	 handouts describing various reading strategies Deconstruction Report Chart handout and articles to use with "The ill effects of the five-paragraph theme" (Wesley, 2000) or "The popularity of formulaic writing (and why we need to resist)" (Wiley, 2000)

Session 3: July 30, 2008 8:30-3:30 Year One participants only	Understanding students' writing development in practice Exploring instructional approaches	 discuss homework reading examine one student's writing growth over two years in reference to the ISAW AWIC learn about study component of program learn about using text sets work time reflection on three days 	- sample handouts used to teach thematic unit with a text set
Session 4: Sept. 9, 2008 4:30-7:30 Year One & Two participants	Learning to score using the ISAW AWIC	 discuss logistics of administering pre-assessment participate in norming using the ISAW AWIC to score sample student writing 	 letter describing ISAW study from CWP Director ISAW pre- assessment guidelines and materials sample student writing
Session 5: Sept. 20, 2008 8:30-3:30 Year One & Two participants	Scoring pre-assessment essays using ISAW AWIC	 share observations recorded while administering preassessment participate in norming using the ISAW AWIC to score sample student writing score students' essays de-brief experience with large group 	- sample student writing
Session 6: Nov. 18, 2008 4:00-7:00 Year One & Two participants	Sharing instructional approaches used to teach analytical writing	 write about successes and challenges implementing what learned from summer share with large group and discuss Denise shares approach that does not require students to write a full essay Anne shares her developing approaches to teach revision 	 handouts from Denise for approaches she shared handouts from Anne for approaches she shared They Say/I Say (Graff & Birkenstein, 2006)

Response

Guidelines

ISAW: LSRI FI	NAL REPORT	California Writing Pi	roject APPENDIX B
Session 7: Jan. 13, 2009 4:30-7:30 Year One & Two participants	Sharing instructional approaches used to teach analytical writing	 write about successes and challenges implementing what learned from summer share with table group and discuss share assignments have used to teach analytical writing in small group Anne presents a recent revision lesson and shows student samples meet with one of leaders in small group to discuss challenges or areas where struggling 	- handout Denise used with her students to guide their revision
Session 8: Jan. 24, 2009 9:00-2:00 Year One & Two participants	Using <i>They Say/I Say</i> (Graff & Birkenstein, 2006) templates and blogs to help students understand academic writing as participating in a conversation	 participate in Writing Project workshop that demonstrates how to use <i>They Say/I Say</i> templates and blogs with students reflect on workshop in writing discuss challenges of approaches write a response using templates that can later be used as a model 	- handouts Denise uses with her students to teach <i>They Say/I Say</i> format, including sample readings and rubrics
Session 9: March 7, 2009 9:00-2:00 Year One & Two participants	Developing students' analytical thinking skills	 participate in Writing Project workshop that demonstrates how to develop students' analytical thinking discuss implementing approaches shared in workshop share successes and challenges 	 handouts from workshop detailing how to use "So What" strategy to develop students' thinking skills Write Team

from classrooms

peers' writing

- walk through process of using

Guidelines to learn a method of having students respond to

Write Team Response

Session 10: April 28, 2009 4:30-7:30 Year One & Two participants	Revisiting using the ISAW AWIC	 write about successes and challenges from classroom share and discuss participate in norming using the ISAW AWIC to score sample student writing discuss logistics of administering post-assessment 	 ISAW post- assessment guidelines and materials sample student writing
Session 11: May 16, 2009 9:00-3:30 Year One & Two participants	Scoring pre-/post- assessment essays using ISAW AWIC	 write about successes and challenges from classroom share and discuss participate in norming using the ISAW AWIC to score sample student writing de-brief process of improvement scoring of students' pre- and post-assessments 	

Appendix C

Demographics of Program and Comparison Schools Included in NWP Scorings (California Department of Education, 2009)

School	Teachers in Year 1	Students in Year 1	Teachers in Year 2	Students in Year 2	Percent School ELL	Percent School Free/ Reduced Lunch	African- American	American Indian/ Native American	Asian	Filipino	Hispanic or Latino	Pacific Islander	White	Multiple/ No Response
Program 1	2	20	4	100	30.1%	69.4%	27.1%	0.7%	26.8%	0.4%	31.2%	3.2%	8.2%	2.3%
Program 2	2	19	3	47	44.3%	100%	20.3%	0.7%	42.4%	0.8%	28.5%	3.1%	4.0%	0.2%
Program 3	3	33	0	0	13.6%	68.1%	0.6%	2.2%	0.8%	0.1%	46.5%	0.0%	49.6%	0.3%
Program 4	4	73	0	0	24.1%	75.9%	4.6%	2.6%	21.1%	0.7%	39.1%	0.7%	29.5%	1.8%
Program 5	2	18	0	0	2.6%	61.0%	1.5%	7.2%	1.1%	0.0%	10.7%	0.6%	79.0%	0.0%
Program 6	2	24	0	0	17.3%	67.8%	56.7%	0.2%	0.1%	0.1%	42.1%	0.2%	0.3%	0.4%
Comparison 1	6	96	7	122	30.5%	83.4%	13.7%	0.3%	2.0%	0.2%	79.2%	0.5%	3.8%	0.4%
Comparison 2	1	22	0	0	10.1%	45.9%	1.0%	0.3%	1.6%	0.5%	39.6%	0.6%	53.8%	2.6%

Appendix C, cont.

Demographics of Program and Comparison Schools Included in CWP Scorings (California Department of Education, 2009)

School	Teachers in Year 1	Students in Year	Teachers in Year 2	Students in Year 2	Percent School ELL	Percent School Free/ Reduced Lunch	African- American	American Indian/ Native American	Asian	Filipino	Hispanic or Latino	Pacific Islander	White	Multiple/ No Response
Program 1	7	93	5	112	30.1%	69.4%	27.1%	0.7%	26.8%	0.4%	31.2%	3.2%	8.2%	2.3%
Program 2	3	39	7	87	44.3%	100%	20.3%	0.7%	42.4%	0.8%	28.5%	3.1%	4.0%	0.2%
Program 3	2	53	3	76	2.3%	6.6%	2.4%	1.4%	12.7%	2.1%	8.3%	0.6%	72.5%	0%
Program 4	0	0	1	32	8.6%	23.9%	5.0%	0.6%	3.5%	1.8%	24.5%	0.5%	53.7%	10.3%
Program 5	0	0	1	23	1.7%	15.0%	4.9%	1.1%	7.7%	2.2%	11.0%	0.5%	72.4%	0.1%
Program 6	5	70	5	98	13.6%	68.1%	0.6%	2.2%	0.8%	0.1%	46.5%	0.0%	49.6%	0.3%
Program 7	4	73	6	119	24.1%	75.9%	4.6%	2.6%	21.1%	0.7%	39.1%	0.7%	29.5%	1.8%
Program 8	5	39	3	44	2.6%	61.0%	1.5%	7.2%	1.1%	0.0%	10.7%	0.6%	79.0%	0.0%
Program 9	1	5	1	12	4.2%	44.1%	0.4%	8.1%	1.8%	0.7%	15.2%	0.0%	70.0%	3.9%
Program 10	3	21	2	16	7.1%	42.6%	0.3%	0.0%	1.3%	0.0%	61.8%	0.0%	34.3%	2.3%
Program 11	6	46	5	42	17.3%	67.8%	56.7%	0.2%	0.1%	0.1%	42.1%	0.2%	0.3%	0.4%
Program 12	2	22	0	0	15.6%	67.7%	24.7%	1.6%	6.2%	1.0%	35.1%	1.3%	29.9%	0.3%
Program 13	0	0	2	46	15.0%	69.3%	0.4%	0.1%	9.6%	0.9%	85.9%	0.2%	2.8%	0.1%
Comparison 1	8	146	8	143	30.5%	83.4%	13.7%	0.3%	2.0%	0.2%	79.2%	0.5%	3.8%	0.4%
Comparison 2	5	116	0	0	10.1%	45.9%	1.0%	0.3%	1.6%	0.5%	39.6%	0.6%	53.8%	2.6%
Comparison 3	2	26	0	0	29.7%	81.6%	31.3%	0%	0%	0.2%	67.3%	0%	0.2%	0.9%

Survey for participants in the CWP Improving Students' Academic Writing Project

May 2000

Survey for Participants in the CWP Improving Students' Academic Writing Project

I.	Your Background
Na	me (please print): Date:
Sc	hool (full name):
Dis	strict <i>(full name):</i>
Yo	ur Writing Project site:
Α.	What is your gender? Female Male
В.	What is your racial background or ethnicity? (please check only one)
	African American/Black Pacific Islander/Filipino American Indian/Alaska Nativ White Asian Other: Latino/Hispanic
C. 12	Which grade level(s) do you teach this year? (circle all that apply) 9 10 11
D.	How many years of teaching experience have you had altogether? years
E.	How many years have you taught writing? years
	How long have you been involved with your California Writing Project site?
G.	Which of the following activities have you participated in at your CWP site? (check all that apply)
_	Inservice workshops held at your school
	Summer open program(s)
	Saturday workshop(s)
	Teacher research

	Invitational aummer institute (in 10
	Invitational summer institute (in 19)
	Other (please identify)
H. How m	nany other teachers at your school have participated in the Writing Project?
H. How m	nany other teachers at your school have participated in the Writing Project?

				•		evelopment and other ent been in the CWP?	
1	2	3	3	4	4	5	
I've been involved wi programs and netwo longer than I have wi CWP site	rks much	CWP site a nave been ir	nvolved with bout as long nvolved with and networ	as I other	CW	ve been involved with my P site much longer than I ve with other professional programs and networks	
J. Compared to y how intense is you your level of engage	ur involveme	nt in the C	WP in ter	ms of the	time	you spend with it and	
1	2		3		4	5	
I am more heavily invother professional de programs and organi than I am in the local	velopment zations	bed in My involvement in the CWP site is I am more heavily involvement about the same in intensity as my my local CWP site that in other professional in other professional					
K. Does your loca college/academic					progra Yes	am that focuses on	
If yes, what are the na program?			particip activity	ove you pated in thi or program	า?	If yes, for how long?	
1 2			No No	Yes Yes		<pre> months / years (circle one) months / years (circle one)</pre>	
3			No	Yes		months / years (circle one)	
L. In which of the college/academic				r schoo	l supp	port the teaching of	
1 Providing	g professiona	al develop	ment for to	eachers			
2 Maintain	ing internal s	study grou	ps				
3 Buying sp	ecial materials	s (e.g. non-	fiction anth	ologies a	nd bo	oks)	
4 Administ	tering district	assessme	ent(s) that	requires	acad	emic writing	
5 Being in	volved with t	he UC/CS	U Diagnos	stic Writir	ng Se	rvice	
6 Being in	volved in a p	artnership	with a loc	al univer	sity		
7 Other (d	describe):						

M. Have you had <u>other professional development experience directly related to college/academic writing</u> sponsored by your local UC or CSU campus or by specially funded projects <u>other than</u> the Writing Project? Was your participation connected in any way to your affiliation with your local Writing Project site? *(check all that apply)*

	I have had this experience	My participation was connected in some way with my involvement with the Writing Project
Receiving professional development through UC/CSU campus-sponsored outreach programs		
Serving as a Subject A or EPT reader		
Using an on-line writing diagnostic testing program		
4. Participating in a local writing diagnostic testing program		

II. Your English/Language Arts classes

A.	How many periods of English/Language Arts do you teach currently?	
	[If you teach other subjects, please list them:]	

B. What kinds of English/Language Arts classes do you teach? Complete one column for each type of class that you teach. If you teach several sections of a class that are essentially identical you will use one column for that class, indicating at the bottom how many sections of this class you teach. (For example, you would use just one column to describe three similar heterogeneous 9th grade English classes.) On the other hand, if several sections that you teach have the same title but differ in one or more key characteristics, complete one column for each section. (For example, if one section of your 10th grade literature class is offered to students in your school's regular track, and another section is designed for honors students, you would complete two columns.)

	Focus class for this project	Other focus class for this project (complete only	Other English/ Language Arts class # 1	Other English/ Language Arts class # 2	Other English/ Language Arts class # 3	Other English/ Language Arts class # 4
1. General Type of class (check one per column)		if you have 2 focus classes)	0lα33 π 1	Glα33 π Z	Glass # 5	- 01α33 π - 1
Regular literature and composition						
Other/specific topic (journalism, creative writing, African American writers, etc.)		<u></u>		<u> </u>		<u> </u>
2. Grade level (circle one per column)	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12
	OR Mixed	OR Mixed	OR Mixed	OR Mixed	OR Mixed	OR Mixed
3. Track level (check one per column)						
Regular						
Academic						
Honors/AP					<u></u>	
Heterogeneous/mixed						
Duration (check one per column) Quarter						
Semester						
Year				<u> </u>	<u> </u>	<u> </u>
5. Extent to which you emphasize academic writing in this class (check one per column) Little to no emphasis on academic writing Some emphasis on academic writing						
Heavy emphasis on academic writing						
6. # of sections of this class that you teach					<u> </u>	

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III.	Your students		
A.	How many students do you teach each da	ay?	
В.	How many students were in your Academ	ic Writing focus cla	ss ² when the project began?
C.	How many of the students who were in your for class? How many have moved, characteristics.		
D.	How many students have transferred into your	focus class since yo	u began the project?
Ε.	How many students in your focus class did	d you also teach las	t year? students
F.	Please use the chart below to describe you	ur current students.	(Estimates are fine)
		Total for <u>all</u> of your English/Language Arts students	Total for students in the class that is the focus of your Academic Writing study
1.	Student ethnicity	7 TTO STUDENTS	<u> </u>
	# African American/Black		
	# American Indian/Alaska Native		
	# Asian		
	# Latino/Hispanic		
	# Pacific Islander/Filipino		
	# White		
	# Other		
2.	# of special education students		
3.	# of students who are eligible for free lunch		
4.	# of Title I students		
5.	# of English Language Learners		

If you have more than one focus class, indicate the <u>total</u> # of students in your focus classes. In general, whenever a question asks about "your focus class" please provide a single answer that reflects your experience with both classes.

D. To what extent, if any, have your students had an opportunity to participate in programs and projects that may help them prepare for college writing?

	All of your English/Language Arts students	Students in the class that is the focus of your Academic Writing study
Are any of your students involved in UC- or CSU-sponsored outreach programs for underrepresented students?	Yes No [Don't know]	Yes No [Don't know]
If yes, approximate # of students who are involved in UC-sponsored outreach programs for underrepresented students	[Don't know]	[Don't know]
Have any of your students participated in Subject A or EPT writing diagnostic programs?	Yes No [Don't know]	Yes No [Don't know]
If yes, approximate # of students who have participated in Subject A or EPT writing diagnostic programs	 [Don't know]	 [Don't know]

IV. Your teaching context

A. Use the scale below to indicate the extent to which the following statements are true for you in your teaching overall, and for your focus class for the Students' Academic Writing Project.

1	2	3	4	5
Not at all true for me	Somewh	nat true fo	r me	Very true for me
		tŀ	Extent to which nis is true for all of my classes	Extent to which this is true for my focus class
Students come to me with experience in academic w	•			
University standards and part in guiding my teachin		ajor		
The administration at my s my approach to teaching w	• •			

B. Please use the scale below to indicate the extent to which each of the following is a support

or barrier to you as you teach academic writing.

1	2	2	3	4	5	
	ajor barrier		mixed or neutral fac		This is a major support	
to me as I		me as	I teach academic wr	ting	to me as I teach	
academic v	wnung				academic writing	
1	State curriculu	um framewor	ks			
2	State standar	dized test in v	writing (STAR)			
3	District standa	ardized tests	in writing (competend	ey tests, etc.)		
4	College/unive	rsity entrance	e requirements cou	rsework, entran	ce tests placement exar	ns in writing
5	Parent and co	ommunity beli	efs and demands			
6	Course curric	ula and mate	rials mandated by yo	ur school or dep	partment	
7	Organization	of the school	day (e.g. block sched	duling, integrate	d instruction, team teacl	hing)
8	Professional of	development	offered by my school	and district		
9	Experiences a	and programs	s offered by your loca	I CWP site		
10	Experiences of	offered by my	local CRLP site			
11	Membership i	n a professio	nal organization (e.g.	, NCTE/CATE)		
12	Informal oppo	ortunities to sh	nare ideas with my co	lleagues		
13	My own conte	ent knowledge	e, teaching repertoire	and judgment		
14	Specific need	s of our stude	ent population(s)			
15	Student belief	fs and demar	nds			
16		rovided by yo	ur local University of		cations, diagnostic testir lifornia State University	
17	Other non-CV (please identi			-preparation, fo	r example, AVID, SCOR	E for college
18	The CWP Stu	udents' Acad	emic Writing Project			
19	Other (please	e specify): _				

V. Your teaching practice

A. Use the scale below to indicate the extent to which you have needed to <u>emphasize</u> <u>various characteristics of good academic writing</u> in your focus class for the Students' Academic Writing Project given your analysis of the students' skills.

1	2	3	4	5
I gave this a		I gave this some emphasis -		I gave this a major emphasis
emphasis —		students had some need for		— my students needed a great
		in this area but this wasn't th	neir	deal of attention
needs for ski	IIIS IN	greatest need		to building this skill
other areas				
1.	Developing a	a central thesis for a piece	of acade	mic writing
2.	Organization	and form		
3	Developing i	deas fully with well-chose	n example	es and persuasive
	reasoning			
4	Connecting	examples to the thesis/poi	nt	
5	Coherence a	and good use of transitions	6	
6.	Sentence str	ructure—correctness and v	variety of	structures
7	Conventions	-correctness of gramma	r, usage, s	spelling
0	D			
გ	Demonstrati	ng understanding of the w	riting pror	npt/writing task
9	Demonstrati	ng understanding of readir	ngs	
		-	_	

B. How often do you use each of the following teaching practices in classes in which you emphasize academic writing? Use the scale below to indicate approximately how often you use these practices in your focus class and in similar classes that you have taught in the past.

1	2	3		4	5
Rarely (in fewer than 5 classes total)	Occasionally (up to 10 periods, or once per month)	In about 2 classes a mo		ut once or ce a week	Nearly every day
		· ·	requency of use in my focus class	in simila	cy of use r classes e past
	s <u>read</u> essays, reports, a sitory, nonfiction, persua				
argumentative writ	n, expository, persuasiv ing assignments (summ ditorials, analyses of text	naries,			
	s to do <u>informal writing</u> to their <u>analytic thinking</u>	0			
reports, and other	nts in discussions, deba oral language activities c thinking, logic and eas	·		_	
•	udents' development of dentering sentence structures				
6. Giving students	practice with timed writ	ing			
(such as Subject A	college writing standard or other college rubrics college academic writing	, or			

VI. Summary

A. Use the scale below to indicate the value of each of the following experiences you had in the CWP Students' Academic Writing Project. If your Project did not provide a particular type of experience, simply write "NA".

NA	1	2	3	4	5				
I did not have this	This experience was not at all valuable to me		This experience was mewhat valuable to n		This experience was of great value to me				
experience 1	Using college rub	ric(s) to	assess student wi	riting					
2	Learning about wa	•	each students of va	arious la	nguage, ethnic, and socio				
3	Learning about co	ollege w	riting course curric	ula, mat	erials, assignments				
4	Learning new stra	Learning new strategies for teaching academic writing that I can use in my classroom							
5	Having students v	vrite pra	ctice Subject A ex	ams					
6	Sharing my exper	iences v	with other teachers	s of acad	lemic writing				
7	Developing collab	orative	relationships with	universit	y writing instructors				
8	Getting new curric	culum m	aterials I can use	with my	students				
9	Informally sharing	ideas/p	oractices with teacl	hers at m	ny school				
10	Other (please sp	ecify:			1				
					/				

B. Use the scale below to indicate the ways and the extent to which your experience with the Students' Academic Writing Project has caused you to rethink your approach to teaching writing.

1	2	3	4	5
I have not re	thought	I have rethought		I have fundamentally
my approach	n at all	my approach		rethought my approach
		somewhat		
1.	My approach to s	sequencing units a	nd assignments	to develop my students' writing
2.	My concentualiza	ation and understa	nding of what ac	ademic writing is and what it
	entails	ariori aria ariacista	namy or what ac	addinic witting is and what it
3.	The standards I	emphasize to asse	ss my students'	development as writers
4.	The teaching m	aterials and reso	urces I use for	my curriculum
	The different no	anla nragrama		and that I turn to far halp and
5.	•		and other sour	ces that I turn to for help and
	new teaching id	eas		
6.	The relative am	ount of attention	that I give to a	cademic writing
			J	ŭ
7.	The types of wr	iting that I ask my	y students to do)
8.	My expectations	s for what my stu	dents are capa	ble of as writers
9.	Othor (doscribo	١		
ອ	Other (describe)		

C. Overall, how would you rate the contribution of the Students' Academic Writing Project to your capacity to teach academic writing? *(circle one for each row)*

			ow to indicate t wing statemen		
	Not true at all for me		Somewhat true for me		Very true for me
Through the Students' Academic Writing Project I have gained a deeper understanding of university expectations for writing	1	2	3	4	5
2. The Students' Academic Writing Project has helped me become more confident about my teaching of academic writing	1	2	3	4	5
3. This project gave me specific skills and knowledge I need to provide instruction that will help my students develop academic writing skills	1	2	3	4	5
4. The Students' Academic Writing Project has contributed to my ability to track and assess students' academic writing against college standards	1	2	3	4	5
5. The Students' Academic Writing Project has helped me support the academic writing development of lower-performing students	1	2	3	4	5
6. I have made use of the ideas from this project in teaching academic writing in classes other than the class that was the focus of this project	1	2	3	4	5
7. An opportunity to focus on academic writing has enriched my overall experience and involvement with the Writing Project	1	2	3	4	5
8. Overall, compared to other professional development projects in which I have participated, the Students' Academic Writing Project has been very worthwhile for me	1	2	3	4	5

	2	3	4	5
r side	of this s	heet.)		
NAL'	YTICAL	. WRITIN	G	
mportan	t features v	would you id	entify?	
	ANAL'	ANALYTICAL		ANALYTICAL WRITING

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California Writing Project APPENDIX E

ISAW: LSRI FINAL REPORT ASSESSING: Give some examples of how you have used assessment tools to inform your teaching of writing. C. CHALLENGES AND SUPPORTS IN DEVELOPING STUDENTS' ANALYTIC WRITING CHALLENGES: What are some particular challenges you have faced in teaching analytical writing? CHALLENGES: What are some particular challenges your students face when writing analytically?

California Writing Project APPENDIX E

SUPPORTS: What supports and other resources have helped to foster your understanding of how to teach analytical writing? SUPPORTS NEEDED: What supports and other resources do you still need to help further your understanding of how to teach analytical writing? D. DEVELOPMENT/CHANGES IN YOUR THINKING ABOUT ANALYTICAL WRITING Please describe any ways your thinking about analytical writing has evolved in the past year.
analytical writing? D. DEVELOPMENT/CHANGES IN YOUR THINKING ABOUT ANALYTICAL WRITING Please describe any ways your thinking about analytical writing has evolved in the past year.
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Please describe any ways your thinking about analytical writing has evolved in the past year.
Please describe any ways your thinking about analytical writing has evolved in the past year.
Please describe any ways your thinking about analytical writing has evolved in the past year.
Please describe any ways your thinking about analytical writing has evolved in the past year.
I used to know or think:
I now know or think:
What prompted my developed/revised understanding/thinking and how:
That prompted my developed revised diderstanding and new.

California Writing Project APPENDIX E

I used to know or think:
I now know or think:
What prompted my developed/revised understanding/thinking and how:

ISAW: LSRI FINAL REPORT

CWP • ISAW • Interview Protocol:

Program:

- 1. How do you address analytical writing in your classroom?
- 2. What supports or resources enable you to teach analytical writing?
- 3. What constrains you from teaching analytical writing?
- 4. Can you tell me a little bit about how you have used assessment tools in your teaching of analytical writing?
 - a. What sorts of information have you learned from those tools?
 - b. How have you used that information?
- 5. Are there things you are doing with writing this year that you wouldn't have done last year?
- 6. Has there been a time when ISAW has influenced the way you teach writing?
 - a. Your teaching strategies/skills?
 - b. Your goals in teaching writing? The way you approach analytical writing?
 - c. The way you teach to the different needs and strengths of your students?
 - d. Your attitudes and abilities regarding your own writing?
 - e. Your confidence/comfort teaching writing?
- 7. How has your involvement in ISAW influenced your students' skills and achievement?
- 8. How and why did you get involved in ISAW?
- 9. What component(s) of ISAW did you find most valuable? What component(s) of ISAW were least helpful?
- 10. Would you consider ISAW a professional community? Why or why not? Can you give me an example of something that happened that demonstrates this?
- 11. What else? Is there anything important you feel we've missed, or something I *should* have asked, but didn't?

Comparison:

- 1. How do you address analytical writing in your classroom?
- 2. What enables you to teach analytical writing?
- 3. What constrains you from teaching analytical writing?
- 4. Can you tell me a little bit about how you have used assessment tools in your teaching of analytical writing?
 - a. What sorts of information have you learned from those tools?
 - b. How have you used that information?
- 5. Are there things you are doing with writing this year that you wouldn't have done last year?
- 6. What else? Is there anything important you feel we've missed, or something I *should* have asked, but didn't?

ISAW: LSRI FINAL REPORT APPENDIX G:

I. The classes you	ı teach-	Teacher Name:
--------------------	----------	---------------

A. How many periods do you teach currently? _____

B. What kinds of classes do you teach? Complete one column for each type of class that you teach. If you teach several sections of a class that are essentially identical you will use one column for that class, indicating at the bottom how many sections of this class you teach. (For example, you would use just one column to describe three similar heterogeneous 9th grade English classes.) On the other hand, if several sections that you teach have the same title but differ in one or more key characteristics, complete one column for each section. (For example, if one section of your 10th grade literature class is offered to students in your school's regular track, and another section is designed for honors students, you would complete two columns.)

General Type of class (check one per column)	ISAW focus class	Other focus class for this project (complete only if you have 2 focus classes)	Other class # 1	Other class # 2	Other class # 3	Other class # 4
Social Science						
English/Literature and Composition						
Other/specific topic (journalism, creative writing, African American writers, etc.)						
Science	<u> </u>				<u></u>	
AVID						<u>——</u>
Other			<u></u>			
2. Grade level (circle one per column)	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12	9 10 11 12
	OR Mixed	OR Mixed	OR Mixed	OR Mixed	OR Mixed	OR Mixed
3. Track level (check one per column)						
Regular						
Academic/College-Prep						
Honors/AP/IB					<u></u>	
Heterogeneous/mixed			<u></u>		<u></u>	
ELD						
Duration (check one per column) Quarter						
Semester						
Year						
Extent to which you emphasize academic writing in this class (check one per column)						
Little to no emphasis on academic writing Some emphasis on academic writing						
Heavy emphasis on academic writing	<u> </u>					
6. # of sections of this class that you teach						

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	Teacher Name:										
II.	Your students										
A.	How many students do you teach each da	ay?									
В.	How many students are in your ISAW focus class ³ ?										
C.	For Year 2 Teachers— C. How many students in your focus class did you also teach last year? students										
D.	Please use the chart below to describe yo	ur current students.	(Estimates are fine!)								
4	Student ethnicity	Total for <u>all</u> of your students	Total for students in the class that is the focus of your ISAW study								
١.	•										
	# African American/Black										
	# American Indian/Alaska Native										
	# Asian										
	# Latino/Hispanic										
	# Pacific Islander/Filipino										
	# White										
	# Other										
2.	# of special education students										
3.	# of students who are eligible for free lunch										
4.	# of Title I students										
5.	# of English Learners										

³ If you have more than one focus class, indicate the <u>total</u> # of students in your focus classes. In general, whenever a question asks about "your focus class" please provide a single answer that reflects your experience with both classes.

Appendix IComparison of Descriptive Statistics for 2008 Student Writing as Assessed on National Writing Project Analytic Writing Continuum (Program N=198, Comparison N=121)

	Pre/		Standard	Range -	Skev	wness	Ku	rtosis
Feature	Post	Mean	Deviation	Statistic	Statistic	Standard Error	Statistic	Standard Error
Holistic								
Program	Pre	3.16	1.105	6.0	0.122	0.173	-0.182	0.344
	Post	3.73	1.092	5.0	0.188	0.173	-0.434	0.344
Comparison	Pre	2.95	1.233	6.0	0.278	0.220	0.243	0.437
	Post	3.19	1.192	5.0	0.077	0.220	-0.473	0.437
Content								
Program	Pre	3.27	1.101	6.0	0.176	0.173	-0.120	0.344
	Post	3.80	1.080	5.0	0.189	0.173	-0.387	0.344
Comparison	Pre	2.94	1.244	6.0	0.207	0.220	-0.089	0.437
	Post	3.22	1.233	5.0	0.157	0.220	-0.488	0.437
Structure								
Program	Pre	3.03	1.085	6.0	0.283	0.173	-0.067	0.358
	Post	3.54	1.156	5.0	0.224	0.173	-0.399	0.344
Comparison	Pre	2.86	1.234	6.0	0.353	0.220	0.447	0.437
	Post	3.05	1.267	5.0	0.243	0.220	-0.518	0.437
Stance								
Program	Pre	3.32	1.115	6.0	0.207	0.173	-0.040	0.344
	Post	3.98	1.077	5.0	0.090	0.173	-0.437	0.344
Comparison	Pre	3.12	1.192	6.0	0.013	0.220	0.259	0.437
	Post	3.31	1.177	5.0	-0.192	0.220	-0.539	0.437
Sentence Fluency								
Program	Pre	3.24	1.137	6.0	0.262	0.173	-0.242	0.344
	Post	3.82	1.151	5.0	0.031	0.173	-0.541	0.344
Comparison	Pre	2.94	1.271	6.0	0.327	0.220	-0.111	0.437
	Post	3.19	1.267	5.0	0.182	0.220	-0.648	0.437
Diction								
Program	Pre	3.22	0.985	6.0	0.232	0.173	0.228	0.344
-	Post	3.73	1.080	5.0	0.325	0.173	-0.407	0.344
Comparison	Pre	3.05	1.249	6.0	0.296	0.220	0.041	0.437
-	Post	3.27	1.190	5.0	0.091	0.220	-0.275	0.437
Conventions								
Program	Pre	3.22	1.139	6.0	0.166	0.173	-0.596	0.344
-	Post	3.76	1.141	5.0	0.018	0.173	-0.636	0.344
Comparison	Pre	2.93	1.289	6.0	0.255	0.220	-0.365	0.437
-	Post	3.15	1.286	5.0	0.153	0.220	-0.564	0.437

Appendix JLevene's Test for homogeneity of variance for 2008 Student Writing as Assessed on National Writing Project Analytic Writing Continuum (Program N=198, Comparison N=121)

0 1		U	\ 0		
		F	df	df_2	significance
Holistic					
	Pre	0.184	1	317	0.668
	Post	1.175	1	317	0.279
Content					
	Pre	0.797	1	317	0.373
	Post	2.887	1	317	0.090
Structure	1 000	2.007	-	51,	0.000
	Pre	1.241	1	317	0.266
	Post	0.543	1	317	0.462
Stance			_		*****
	Pre	0.036	1	317	0.849
	Post	4.052	1	317	0.045
Sentence Fluency	1 000	2	-	51,	0.0.0
zenienee i idenej	Pre	0.161	1	317	0.688
	Post	2.453	1	317	0.118
Diction	1 050	2.133	1	317	0.110
Diction	Pre	3.650	1	317	0.057
	Post	0.815	1	317	0.367
Conventions	1 031	0.013	1	317	0.307
Conventions	Pre	0.959	1	317	0.328
		0.939	1		0.328
	Post	0.830	1	317	0.557

Appendix KComparison of Descriptive Statistics for 2008 Student Writing as Assessed on California Writing Project Analytic Writing Improvement Continuum (Program N=461, Comparison N=288)

1 rojeci maiyiic		8 Impro				wness		rtosis			
Feature	Pre/	Mean	Standard	Range		Standard		Standard			
1 catalo	Post	1110411	Deviation	Statistic	Statistic	Error	Statistic	Error			
Responding to Ider	ntified To	nic				Litoi		Littoi			
Program	Pre	1.19	0.783	3.0	0.427	0.114	-0.338	0.227			
110814111	Post	1.45	0.853	4.0	0.367	0.114	-0.286	0.227			
Comparison	Pre	1.53	0.872	4.0	0.219	0.144	-0.162	0.286			
Compunson	Post	1.58	0.863	4.0	0.252	0.144	-0.052	0.286			
Addressing the Demands of the Essay Topic											
Program	Pre	1.20	0.37	3.0	0.346	0.114	-0.542	0.227			
	Post	1.47	0.857	4.0	0.299	0.114	-0.346	0.227			
Comparison	Pre	1.50	0.872	4.0	0.150	0.144	-0.209	0.286			
F	Post	1.53	0.831	4.0	0.298	0.144	0.037	0.286			
Understanding and											
Program	Pre	1.12	0.842	3.0	0.372	0.114	-0.722	0.227			
J	Post	1.37	0.899	4.0	0.277	0.114	-0.478	0.227			
Comparison	Pre	1.53	0.859	4.0	0.032	0.144	-0.331	0.286			
•	Post	1.56	0.848	4.0	0.117	0.144	-0.041	0.286			
Summarizing & Re	ecapitulat										
Program	Pre	0.87	0.884	4.0	0.860	0.114	-0.089	0.227			
•	Post	1.10	0.967	4.0	0.675	0.114	-0.242	0.227			
Comparison	Pre	1.33	0.965	4.0	0.319	0.144	-0.521	0.286			
•	Post	1.34	0.960	4.0	0.485	0.144	-0.047	0.286			
Making Own Clain	n or Asse	ertion									
Program	Pre	1.22	0.827	3.0	0.259	0.114	-0.668	0.227			
•	Post	1.46	0.868	4.0	0.226	0.114	-0.318	0.227			
Comparison	Pre	1.45	0.844	4.0	0.216	0.144	0.060	0.286			
	Post	1.47	0.838	4.0	0.295	0.144	0.197	0.286			
Developing Examp	oles										
Program	Pre	1.07	0.815	3.0	0.434	0.114	-0.456	0.227			
	Post	1.39	0.847	4.0	0.269	0.114	-0.311	0.227			
Comparison	Pre	1.45	0.829	4.0	0.047	0.144	-0.290	0.286			
	Post	1.48	0.810	4.0	0.143	0.144	0.045	0.286			
Reasoning											
Program	Pre	1.15	0.793	3.0	0.452	0.114	-0.248	0.227			
	Post	1.45	0.826	4.0	0.247	0.114	-0.250	0.227			
Comparison	Pre	1.48	0.815	4.0	0.044	0.144	-0.284	0.286			
	Post	1.50	0.800	4.0	0.053	0.144	-0.114	0.286			
Using Textual Supp											
Program	Pre	0.81	0.889	4.0	0.872	0.114	-0.212	0.227			
	Post	1.02	0.965	4.0	0.648	0.114	-0.365	0.227			
Comparison	Pre	1.28	0.901	4.0	0.311	0.144	-0.258	0.286			
	Post	1.25	0.877	4.0	0.452	0.144	0.251	0.286			
Structuring & Orga	_										
Program	Pre	1.30	0.799	4.0	0.344	0.114	-0.319	0.227			
	Post	1.57	0.836	4.0	0.172	0.114	-0.198	0.227			
Comparison	Pre	1.57	0.850	4.0	0.178	0.144	-0.161	0.286			
	Post	1.56	0.870	4.0	0.381	0.144	0.332	0.286			
Introducing the Ess	-	1.22	0.620	4.0	0.250	0.114	0.456	0.227			
Program	Pre	1.23	0.838	4.0	0.350	0.114	-0.456	0.227			
	Post	1.51	0.892	4.0	0.271	0.114	-0.369	0.227			
Comparison	Pre	1.53	0.878	4.0	0.206	0.144	-0.139	0.286			

1971 W. LOIGI I I	WILL IX	LI OILI								
	Post	1.56	0.889	4.0	0.333	0.144	0.201	0.286		
Using Paragraphs a	nd Trans	itions								
Program	Pre	1.31	0.836	4.0	0.230	0.114	-0.574	0.227		
S	Post	1.59	0.890	4.0	0.099	0.114	-0.428	0.227		
Comparison	Pre	1.58	0.866	4.0	0.117	0.144	-0.215	0.286		
F	Post	1.63	0.876	4.0	0.287	0.144	0.190	0.286		
Concluding the Ess										
Program	Pre	1.02	0.784	3.0	0.454	0.114	-0.435	0.227		
- 8	Post	1.30	0.899	4.0	0.431	0.114	-0.316	0.227		
Comparison	Pre	1.42	0.874	4.0	0.295	0.144	-0.135	0.286		
	Post	1.41	0.929	4.0	0.395	0.144	-0.017	0.286		
Choosing Words	1 000		0.525		0.5>0	0.1	0.017	0.200		
Program	Pre	1.47	0.871	4.0	0.253	0.114	-0.648	0.227		
8	Post	1.66	0.885	4.0	0.200	0.114	-0.487	0.227		
Comparison	Pre	1.54	0.861	4.0	0.214	0.144	-0.310	0.286		
Comparison	Post	1.54	0.863	4.0	0.461	0.144	0.004	0.286		
Employing Sentence Structure to Convey Ideas										
Program	Pre	1.42	0.839	4.0	0.170	0.114	-0.560	0.227		
110814111	Post	1.62	0.826	4.0	0.207	0.114	-0.275	0.227		
Comparison	Pre	1.58	0.862	4.0	0.162	0.144	-0.273	0.286		
Comparison	Post	1.62	0.866	4.0	0.353	0.144	-0.025	0.286		
Employing Sentence Boundaries										
Program	Pre	1.47	0.848	4.0	0.110	0.114	-0.446	0.227		
110814111	Post	1.65	0.835	4.0	0.113	0.114	-0.307	0.227		
Comparison	Pre	1.59	0.856	4.0	0.153	0.144	-0.307	0.286		
Comparison	Post	1.64	0.874	4.0	0.351	0.144	0.073	0.286		
Using Grammatical			0.07.	1.0	0.551	0.111	0.075	0.200		
Program	Pre	1.47	0.820	3.0	-0.039	0.114	-0.713	0.227		
110814111	Post	1.63	0.806	4.0	0.098	0.114	-0.266	0.227		
Comparison	Pre	1.60	0.867	4.0	0.142	0.144	-0.348	0.114		
Companison	Post	1.61	0.851	4.0	0.324	0.144	-0.004	0.286		
Using Punctuation	1 050	1.01	0.051	1.0	0.521	0.111	0.001	0.200		
Program	Pre	1.50	0.867	4.0	-0.013	0.114	-0.673	0.227		
1 TOSTUIII	Post	1.70	0.841	4.0	0.040	0.114	-0.180	0.227		
Comparison	Pre	1.61	0.867	4.0	0.141	0.114	-0.319	0.286		
Comparison	Post	1.63	0.883	4.0	0.141	0.144	-0.206	0.286		
Anticipating Reade			0.883	4.0	0.227	0.144	-0.200	0.200		
Program	Pre	1.34	0.812	4.0	0.321	0.114	-0.263	0.227		
riogiani	Post	1.54	0.812	4.0	0.321	0.114	-0.203	0.227		
Comparison	Pre	1.55	0.818	4.0	0.161	0.114	-0.143	0.227		
Companison		1.56	0.842				-0.331 -0.206	0.286		
	Post	1.30	0.828	4.0	0.140	0.144	-0.200	0.280		

Appendix LLevene's Test for homogeneity of variance for 2008 Student Writing as Assessed on California Writing Project's Analytic Writing Continuum (Program N=461, Comparison N=288)

		F	df	df ₂	significance
Responding to Identif	-				
	Pre	11.30	1	747	0.001
	Post	0.032	1	747	0.858
Addressing the Dema					
	Pre	6.602	1	747	0.010
	Post	0.978	1	747	0.323
Understanding and Us					
	Pre	1.422	1	747	0.234
	Post	1.970	1	747	0.161
Summarizing & Reca		7 .000		5.45	0.005
	Pre	7.929	1	747	0.005
v. 1	Post	0.095	1	747	0.758
Making Own Claim o		0.255		5.45	0.551
	Pre	0.355	1	747	0.551
	Post	1.123	1	747	0.290
Developing Examples		2.002		- · -	0.050
	Pre	3.092	1	747	0.079
	Post	1.030	1	747	0.311
Reasoning	-				0.040
	Pre	4.227	1	747	0.040
	Post	0.594	1	747	0.441
Using Textual Suppor		0.044			
	Pre	0.044	1	747	0.835
	Post	2.754	1	747	0.097
Structuring & Organiz					
	Pre	2.727	1	747	0.099
	Post	0.045	1	747	0.833
Introducing the Essay					
	Pre	1.857	1	747	0.173
	Post	0.542	1	747	0.462
Using Paragraphs and					
	Pre	0.380	1	747	0.538
	Post	0.952	1	747	0.330
Concluding the Essay					
	Pre	15.734	1	747	0.000
	Post	0.678	1	747	0.410
Choosing Words					
	Pre	0.198	1	747	0.656
	Post	0.471	1	747	0.493
Employing Sentence					
	Pre	0.058	1	747	0.810
	Post	0.337	1	747	0.562
Employing Sentence					
	Pre	0.006	1	747	0.938
	Post	0.168	1	747	0.682
Using Grammatical R	elationships				
	Pre	0.424	1	747	0.515
	Post	0.613	1	747	0.434
Using Punctuation					
	Pre	0.080	1	747	0.777
	Post	1.376	1	747	0.241

Anticipating Readers' Needs				
Pre	1.151	1	747	0.284
Post	0.141	1	747	0.708

Appendix MComparison of Descriptive Statistics for 2009 Student Writing as Assessed on National Writing Project Analytic Writing Continuum (Program N=155, Comparison N=144)

	Pre/		Standard	Danga	Ske	wness	Ku	rtosis
Feature	Post	Mean	Deviation	Range Statistic	Statistic	Standard Error	Statistic	Standard Error
Holistic								
Program	Pre	3.14	1.072	6.0	0.193	0.195	0.517	0.389
	Post	3.31	1.230	5.0	0.373	0.195	-0.463	0.389
Comparison	Pre	3.08	1.100	5.0	0.365	0.206	-0.233	0.408
	Post	2.93	1.136	6.0	0.081	0.206	0.160	0.408
Content								
Program	Pre	3.21	1.130	6.0	0.330	0.195	0.451	0.389
	Post	3.52	1.113	5.0	0.116	0.195	-0.366	0.389
Comparison	Pre	3.16	1.087	5.0	0.506	0.206	-0.210	0.408
	Post	2.99	1.151	6.0	0.092	0.206	0.332	0.408
Structure								
Program	Pre	3.10	1.092	6.0	0.165	0.195	0.205	0.389
	Post	3.60	1.142	5.0	-0.011	0.195	-0.359	0.389
Comparison	Pre	2.94	1.155	6.0	0.321	0.206	-0.145	0.408
	Post	2.88	1.153	6.0	0.275	0.206	0.086	0.408
Stance								
Program	Pre	3.30	1.175	6.0	-0.006	0.195	-0.146	0.389
	Post	3.46	1.085	5.0	0.207	0.195	-0.251	0.389
Comparison	Pre	3.23	1.136	5.0	0.265	0.206	-0.358	0.408
	Post	2.97	1.245	6.0	0.049	0.206	-0.108	0.408
Sentence Fluency								
Program	Pre	3.14	1.165	6.0	0.293	0.195	0.141	0.389
	Post	3.66	1.150	5.0	0.175	0.195	-0.283	0.389
Comparison	Pre	2.97	1.184	5.0	0.289	0.206	-0.282	0.408
	Post	2.99	1.226	6.0	-0.046	0.206	-0.160	0.408
Diction								
Program	Pre	3.22	1.136	6.0	0.282	0.195	0.577	0.389
	Post	3.47	1.263	5.0	0.042	0.195	-0.791	0.389
Comparison	Pre	3.12	1.114	5.0	0.578	0.206	0.318	0.408
	Post	3.04	1.136	6.0	-0.101	0.206	-0.081	0.408
Conventions								
Program	Pre	3.07	1.146	6.0	0.258	0.195	-0.057	0.389
	Post	3.48	1.186	6.0	0.090	0.195	-0.070	0.389
Comparison	Pre	2.92	1.165	6.0	0.537	0.206	0.224	0.408
	Post	2.82	1.178	6.0	0.196	0.206	-0.082	0.408

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Appendix NLevene's Test for homogeneity of variance for 2009 Student Writing as Assessed on National Writing Project's Analytic Writing Continuum (Program N=155, Comparison N=144)

		F	df	df ₂	significance
Holistic					
	Pre	0.245	1	297	0.621
	Post	3.773	1	297	0.053
Content					
	Pre	0.053	1	297	0.819
	Post	1.416	1	297	0.235
Structure					
	Pre	0.381	1	296	0.538
	Post	0.235	1	296	0.628
Stance					
	Pre	0.348	1	295	0.556
	Post	0.404	1	295	0.525
Sentence Fluency					
~	Pre	0.003	1	295	0.955
	Post	0.001	1	295	0.980
Diction				_,	*****
	Pre	0.466	1	296	0.495
	Post	8.413	1	296	0.004
Conventions	- 050		-	2,0	
	Pre	0.000	1	295	0.984
	Post	0.221	1	295	0.639

Appendix OComparison of Descriptive Statistics for 2009 Student Writing as Assessed on California Writing Project Analytic Writing Improvement Continuum (Program N=706, Comparison N=143)

1 rojeci maiyiic		<u>8 1p. c</u>	,	Skewness Kurtosis						
Feature	Pre/	Mean	Standard	Range		Standard		Standard		
1 000010	Post	1.10411	Deviation	Statistic	Statistic	Error	Statistic	Error		
Responding to Ider	ntified To	pnic				Entor		Elloi		
Program	Pre	1.60	0.712	4.0	0.261	0.092	-0.058	0.184		
110814111	Post	1.98	0.726	4.0	0.162	0.092	-0.166	0.184		
Comparison	Pre	1.49	0.747	3.0	-0.446	0.203	0.008	0.403		
compunson	Post	1.31	0.711	3.0	0.006	0.203	-0.072	0.403		
Addressing the Demands of the Essay Topic										
Program	Pre	1.62	0.709	4.0	0.181	0.092	-0.336	0.184		
110814111	Post	1.99	0.721	4.0	0.052	0.092	-0.101	0.184		
Comparison	Pre	1.53	0.823	3.0	-0.158	0.203	-0.307	0.403		
	Post	1.33	0.759	3.0	0.264	0.203	-0.057	0.403		
Understanding and			01,00							
Program	Pre	1.51	0.703	3.75	0.218	0.092	-0.236	0.184		
2238-11-2	Post	1.87	0.754	4.0	0.154	0.092	-0.199	0.184		
Comparison	Pre	1.43	0.746	3.0	-0.269	0.203	-0.208	0.403		
F	Post	1.26	0.698	3.0	0.150	0.203	0.048	0.403		
Summarizing & Re			***************************************							
Program	Pre	1.31	0.735	3.75	0.535	0.092	0.229	0.184		
- 2	Post	1.67	0.829	4.0	0.429	0.092	-0.378	0.184		
Comparison	Pre	1.27	0.665	2.75	-0.211	0.203	-0.274	0.403		
	Post	1.12	0.625	3.0	0.332	0.203	0.630	0.403		
Making Own Clain			****							
Program	Pre	1.51	0.704	4.0	0.392	0.092	-0.103	0.184		
2238-11-2	Post	1.86	0.732	4.0	0.193	0.092	-0.120	0.184		
Comparison	Pre	1.34	0.687	2.75	-0.406	0.203	-0.394	0.403		
F	Post	1.17	0.610	2.25	-0.197	0.203	-0.420	0.403		
Developing Examp										
Program	Pre	1.45	0.699	4.0	0.516	0.092	0.184	0.184		
C	Post	1.79	0.742	4.0	0.406	0.092	-0.247	0.184		
Comparison	Pre	1.34	0.708	3.0	-0.213	0.203	-0.314	0.403		
1	Post	1.19	0.623	2.75	-0.165	0.203	-0.348	0.403		
Reasoning										
Program	Pre	1.45	0.698	4.0	0.483	0.092	0.261	0.184		
Č	Post	1.80	0.741	4.0	0.318	0.092	-0.238	0.184		
Comparison	Pre	1.36	0.706	3.0	-0.310	0.203	-0.302	0.403		
1	Post	1.23	0.653	2.75	-0.143	0.203	-0.448	0.403		
Using Textual Sup										
Program	Pre	1.13	0.798	3.75	0.290	0.092	-0.415	0.184		
Č	Post	1.58	0.905	4.0	-0.035	0.092	-0.471	0.403		
Comparison	Pre	1.27	0.665	2.25	-0.407	0.203	-0.702	0.403		
1	Post	1.09	0.613	2.75	0.133	0.203	-0.284	0.403		
Structuring & Orga	anizing									
Program	Pre	1.51	0.680	4.0	0.363	0.092	0.052	0.184		
Č	Post	1.85	0.717	4.0	0.158	0.092	-0.263	0.184		
Comparison	Pre	1.46	0.750	3.0	-0.400	0.203	-0.217	0.403		
	Post	1.26	0.665	2.75	-0.204	0.203	-0.509	0.403		
Introducing the Ess										
Program	Pre	1.48	0.688	4.0	0.477	0.092	0.019	0.184		
J	Post	1.84	0.736	4.0	0.229	0.092	-0.305	0.184		
Comparison	Pre	1.31	0.676	3.0	-0.347	0.203	-0.337	0.403		
=										

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Post 1.17	1011 11 1 2010 1 1										
Program Pre 1.52 0.686 4.0 0.297 0.092 -0.010 0.184 Comparison Post 1.84 0.727 4.0 0.130 0.092 -0.244 0.184 Comparison Post 1.21 0.646 2.75 -0.113 0.203 -0.514 0.403 Concluding the Essay Program Pre 1.40 0.695 3.75 0.400 0.092 0.018 0.184 Comparison Pre 1.31 0.694 3.0 -0.263 0.203 -0.380 0.403 Comparison Pre 1.51 0.780 4.0 0.238 0.092 -0.283 0.184 Comparison Pres 1.51 0.764 4.0 0.233 0.092 -0.120 0.184 Comparison Pre 1.40 0.747 3.0 -0.207 0.203 -0.278 0.403 Employing Sentence Structure to Convey Ideas Program Pre <		Post	1.17	0.634	3.0	0.134	0.203	0.115	0.403		
Post 1.84 0.727	Using Paragraphs a	and Trans	itions								
Comparison	Program	Pre	1.52	0.686	4.0	0.297	0.092	-0.010	0.184		
Post 1.21 0.646 2.75 -0.113 0.203 -0.514 0.403	_	Post	1.84	0.727	4.0	0.130	0.092	-0.244	0.184		
Concluding the Essay Program Pre 1.40 0.695 3.75 0.400 0.092 −0.283 0.183 Comparison Pre 1.31 0.694 3.0 −0.263 0.203 −0.380 0.403 Comparison Pre 1.31 0.600 2.25 −0.036 0.203 −0.332 0.403 Choosing Words Program Pre 1.55 0.723 4.0 0.423 0.092 −0.120 0.184 Choosing Words Post 1.79 0.746 4.0 0.330 0.092 −0.120 0.184 Comparison Pre 1.40 0.747 3.0 −0.207 0.203 −0.460 0.403 Employing Sentence Structure to Convey Ideas Program Pre 1.57 0.715 4.0 0.302 0.092 −0.186 0.184 Comparison Pre 1.57 0.715 4.0 0.231 0.092 −0.218 0.403	Comparison	Pre	1.38	0.691	3.0	-0.543	0.203	-0.385	0.403		
Program Pre post 1.76 0.760 3.75 0.400 0.092 0.018 0.184 Comparison Pre post 1.31 0.694 3.0 -0.263 0.203 -0.380 0.403 Post post 1.13 0.600 2.25 -0.036 0.203 -0.332 0.403 Choosing Words Program Pre 1.55 0.723 4.0 0.423 0.092 -0.120 0.184 Comparison Pre 1.40 0.747 3.0 -0.207 0.203 -0.278 0.403 Employing Sentence Structure to Convey Ideas Post 1.20 0.654 3.0 -0.038 0.203 -0.460 0.403 Employing Sentence Structure to Convey Ideas Program Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Comparison Pre 1.47 0.748 3.0 -0.231 0.092 -0.186 0.184 Comparison Pre 1.46 0.726 4.0 0.072 0.092 -0.228	-	Post	1.21	0.646	2.75	-0.113	0.203	-0.514	0.403		
Post 1.76 0.780 4.0 0.238 0.092 -0.283 0.183	Concluding the Ess	say									
Comparison Pre Post 1.31 0.694 3.0 -0.263 0.203 -0.332 0.403 Choosing Words Program Pre 1.55 0.723 4.0 0.423 0.092 -0.120 0.184 Program Pre 1.55 0.723 4.0 0.423 0.092 -0.493 0.184 Comparison Pre 1.40 0.747 3.0 -0.207 0.203 -0.278 0.403 Employing Sentences Structure to Convey Ideas Program Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Comparison Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Comparison Pre 1.47 0.748 3.0 -0.456 0.203 -0.168 0.403 Employing Sentence Brost 1.33 0.735 3.0 -0.014 0.203 -0.168 0.403 Comp	Program	Pre	1.40	0.695	3.75	0.400	0.092	0.018	0.184		
Post 1.13 0.600 2.25 -0.036 0.203 -0.332 0.403	_	Post	1.76	0.780	4.0	0.238	0.092	-0.283	0.183		
Program	Comparison	Pre	1.31	0.694	3.0	-0.263	0.203	-0.380	0.403		
Program Pre Post 1.79 0.723 4.0 0.423 0.092 -0.120 0.184 Comparison Pre 1.40 0.747 3.0 -0.207 0.203 -0.278 0.403 Employing Sentence Structure to Convey Ideas Program Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Porgram Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Comparison Pre 1.47 0.748 3.0 -0.456 0.203 -0.168 0.403 Employing Sentence Boundaries Program Pre 1.68 0.726 4.0 0.072 0.092 -0.228 0.184 Comparison Pre 1.43 0.718 3.0 -0.533 0.203 -0.168 0.403 Using Grammatical Relationships Post 1.33 0.749 3.0 0.087 0.203 -0.188 0.403 Using Grammatical Relationships Pre 1.66 0.695 4.0 0.012 0.092 -0.158 0.1	-	Post	1.13	0.600	2.25	-0.036	0.203	-0.332	0.403		
Program Pre Post 1.75 0.723 4.0 0.423 0.092 -0.120 0.184 Comparison Pre 1.40 0.747 3.0 -0.207 0.203 -0.278 0.403 Comparison Post 1.20 0.654 3.0 -0.038 0.203 -0.460 0.403 Employing Sentence Structure to Convey Ideas Program Pre 1.57 0.715 4.0 0.302 0.092 -0.186 0.184 Post 1.83 0.715 4.0 0.231 0.092 -0.186 0.184 Comparison Pre 1.47 0.748 3.0 -0.456 0.203 -0.168 0.403 Employing Sentence Boundaries Post 1.33 0.735 3.0 -0.014 0.203 -0.168 0.403 Employing Sentence Boundaries Program Pre 1.68 0.726 4.0 0.072 0.092 -0.228 0.184 Comparison Pre 1.43 0.718 3.0 -0.533 0.203 -0.248 0.403 Using Grammatical Relations	Choosing Words										
Comparison Pre Post 1.40 0.747 0.654 3.0 -0.207 0.203 0.203 -0.278 0.403 0.403 Employing Sentence Structure to Convey Ideas Program Pre 1.57 0.715 0.715 0.000 4.0 0.302 0.092 0.092 0.086 0.184 0.184 Post 1.83 0.715 0.715 0.000 4.0 0.231 0.092 0.0447 0.184 0.184 0.043 0.092 0.0447 0.184 Comparison Pre 1.47 0.748 0.0 0.231 0.092 0.0447 0.184 0.0000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.0000 0.000 0.000 0.0000 0.000		Pre	1.55	0.723	4.0	0.423	0.092	-0.120	0.184		
Post 1.20 0.654 3.0 -0.038 0.203 -0.460 0.403	-	Post	1.79	0.746	4.0	0.330	0.092	-0.493	0.184		
Post 1.20 0.654 3.0 -0.038 0.203 -0.460 0.403	Comparison	Pre	1.40	0.747	3.0	-0.207	0.203	-0.278	0.403		
Program Pre Post 1.83 0.715 0.715 4.0 0.302 0.092 0.092 0.0447 0.184 0.184 Comparison Pre 1.47 0.748 0.0 0.231 0.092 0.0447 0.184 0.403 0.403 Comparison Pre 1.47 0.748 0.0 0.231 0.092 0.0168 0.403 Post 1.33 0.735 0.0 0.014 0.203 0.0443 0.403 Employing Sentence Boundaries Program Pre 1.68 0.726 0.072 0.092 0.092 0.0228 0.184 Post 1.90 0.722 0.072 0.092 0.092 0.028 0.184 Comparison 0.074 0.071 0.071 0.072 0.092 0.092 0.0248 0.403 Post 1.33 0.749 0.0087 0.203 0.087 0.203 0.088 0.403 Using Grammatical Relationships 0.092 0.092 0.092 0.038 0.093 0.092 0.038 Program 0.095	•	Post	1.20	0.654	3.0	-0.038	0.203	-0.460	0.403		
Post 1.83 0.715 4.0 0.231 0.092 -0.447 0.184											
Comparison Post Pre 1.47 0.748 3.0 -0.456 0.203 -0.168 0.403 0.4	Program	Pre	1.57	0.715	4.0	0.302	0.092	-0.186	0.184		
Post 1.33 0.735 3.0 -0.014 0.203 -0.443 0.403	-	Post	1.83	0.715	4.0	0.231	0.092	-0.447	0.184		
Program	Comparison	Pre	1.47	0.748	3.0	-0.456	0.203	-0.168	0.403		
Program Pre 1.68 0.726 4.0 0.072 0.092 -0.228 0.184 Comparison Post 1.90 0.722 4.0 0.168 0.092 -0.269 0.184 Comparison Pre 1.43 0.718 3.0 -0.533 0.203 -0.248 0.403 Using Grammatical Relationships Program Pre 1.66 0.695 4.0 0.012 0.092 -0.158 0.184 Comparison Pre 1.66 0.695 4.0 0.018 0.092 -0.158 0.184 Comparison Pre 1.44 0.714 3.0 -0.654 0.203 -0.285 0.403 Using Punctuation Program Pre 1.68 0.706 4.0 -0.033 0.092 -0.173 0.184 Comparison Pre 1.68 0.706 4.0 -0.033 0.092 -0.173 0.184 Comparison Pre 1.43 0.705 3.		Post	1.33	0.735	3.0	-0.014	0.203	-0.443	0.403		
Post 1.90 0.722 4.0 0.168 0.092 -0.269 0.184	Employing Sentend	ce Bound	aries								
Comparison Pre Post 1.43 0.718 0.749 3.0 0.087 0.203 0.203 0.203 -0.248 0.403 Using Grammatical Relationships Program Pre 1.66 0.695 0.696 4.0 0.012 0.092 0.092 0.0158 0.184 Post 1.89 0.696 0.696 0.096 4.0 0.018 0.092 0.033 0.184 Comparison 0.092 0.092 0.203 0.184 0.714 0.	Program	Pre	1.68	0.726	4.0	0.072	0.092	-0.228	0.184		
Post 1.33 0.749 3.0 0.087 0.203 -0.388 0.403	_	Post	1.90	0.722	4.0	0.168	0.092	-0.269	0.184		
Using Grammatical Relationships Program Pre 1.66 0.695 4.0 0.012 0.092 -0.158 0.184 Post 1.89 0.696 4.0 0.018 0.092 -0.333 0.184 Comparison Pre 1.44 0.714 3.0 -0.654 0.203 -0.285 0.403 Using Punctuation Post 1.34 0.736 3.0 -0.049 0.203 -0.450 0.403 Using Punctuation Program Pre 1.68 0.706 4.0 -0.033 0.092 -0.173 0.184 Post 1.90 0.687 4.0 0.058 0.092 -0.123 0.184 Comparison Pre 1.43 0.705 3.0 -0.698 0.203 -0.348 0.403 Anticipating Readers' Needs Program Pre 1.61 0.687 4.0 0.110 0.092 0.047 0.184 Post 1.91	Comparison	Pre	1.43	0.718	3.0	-0.533	0.203	-0.248	0.403		
Program Pre 1.66 0.695 4.0 0.012 0.092 -0.158 0.184 Post 1.89 0.696 4.0 0.018 0.092 -0.333 0.184 Comparison Pre 1.44 0.714 3.0 -0.654 0.203 -0.285 0.403 Post 1.34 0.736 3.0 -0.049 0.203 -0.450 0.403 Using Punctuation Program Pre 1.68 0.706 4.0 -0.033 0.092 -0.173 0.184 Post 1.90 0.687 4.0 0.058 0.092 -0.123 0.184 Comparison Pre 1.43 0.705 3.0 -0.698 0.203 -0.348 0.403 Anticipating Readers' Needs Program Pre 1.61 0.687 4.0 0.110 0.092 0.047 0.184 Post 1.91 0.690 4.0 0.138 0.092 0.060	-	Post	1.33	0.749	3.0	0.087	0.203	-0.388	0.403		
Comparison Post Pre	Using Grammatica	l Relation	nships								
Comparison Pre Post 1.44 1.34 0.714 3.0 -0.654 0.203 -0.285 0.403 0.403 -0.450 0.403 0.403 Using Punctuation Program Pre	Program	Pre	1.66	0.695	4.0	0.012	0.092	-0.158	0.184		
Post 1.34 0.736 3.0 -0.049 0.203 -0.450 0.403	-	Post	1.89	0.696	4.0	0.018	0.092	-0.333	0.184		
Using Punctuation Program Pre Proposition 1.68 Post 1.90 Post 1.90 Post 1.90 Post 1.43 Post 1.34 Post 1.91 Post 1.49 Post	Comparison	Pre	1.44	0.714	3.0	-0.654	0.203	-0.285	0.403		
Program Pre Program 1.68 Post 1.90 0.706 0.687 4.0 0.058 0.092 0.092 -0.173 0.184 Comparison Pre Comparison Pre Program Program Post 1.34 Post 1.91 Post 1.91 0.690 0.702 0.704 0.203 0.203 0.203 0.203 -0.348 0.403 0.403 Anticipating Readers' Needs Program Pre Post 1.61 Post 1.91 0.690 0.690 0.110 0.092 0.047 0.184 0.092 0.047 0.184 0.092 0.060 0.184 0.092 Comparison Pre 1.49 0.774	•	Post	1.34	0.736	3.0	-0.049	0.203	-0.450	0.403		
Post 1.90 0.687 4.0 0.058 0.092 -0.123 0.184	Using Punctuation										
Comparison Pre Pre Post 1.43 1.34 0.705 0.705 3.0 0.698 0.203 0.203 0.203 0.203 -0.348 0.403 0.403 0.203 0.203 0.203 0.403 Anticipating Readers' Needs Program Pre 1.61 0.687 0.687 0.110 0.092 0.047 0.184 0.095 0.203 0.203 0.203 0.203 0.203 0.203 0.403 Comparison Pre 1.49 0.774 0.774 0.774 0.208 0.203 0.203 0.403	Program	Pre	1.68	0.706	4.0	-0.033	0.092	-0.173	0.184		
Post 1.34 0.702 3.0 -0.347 0.203 -0.667 0.403 Anticipating Readers' Needs Program Pre 1.61 0.687 4.0 0.110 0.092 0.047 0.184 Post 1.91 0.690 4.0 0.138 0.092 0.060 0.184 Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403	C	Post	1.90	0.687	4.0	0.058	0.092	-0.123	0.184		
Anticipating Readers' Needs Program Pre 1.61 0.687 4.0 0.110 0.092 0.047 0.184 Post 1.91 0.690 4.0 0.138 0.092 0.060 0.184 Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403	Comparison	Pre	1.43	0.705	3.0	-0.698	0.203	-0.348	0.403		
Program Pre 1.61 0.687 4.0 0.110 0.092 0.047 0.184 Post 1.91 0.690 4.0 0.138 0.092 0.060 0.184 Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403	•	Post	1.34	0.702	3.0	-0.347	0.203	-0.667	0.403		
Post 1.91 0.690 4.0 0.138 0.092 0.060 0.184 Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403	Anticipating Reade	ers' Needs	S								
Post 1.91 0.690 4.0 0.138 0.092 0.060 0.184 Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403				0.687	4.0	0.110	0.092	0.047	0.184		
Comparison Pre 1.49 0.774 3.0 -0.308 0.203 -0.180 0.403	J	Post	1.91	0.690	4.0	0.138	0.092	0.060	0.184		
	Comparison	Pre	1.49	0.774	3.0	-0.308	0.203	-0.180	0.403		
	•	Post	1.27	0.697	3.0	0.072	0.203	-0.081	0.403		

Appendix P

Levene's Test for homogeneity of variance for Student Writing as Assessed on California Writing Project Analytical Writing Improvement Continuum (Program N=706, Comparison N=143)

oject Analytical Writing Imp	F	df	df_2	significance
Responding to Identified Topic			<u></u>	2-6
Pre	0.027	1	845	0.869
Post	0.228	1	845	0.633
Addressing the Demands of the E				
Pre	2.797	1	845	0.095
Post	2.118	1	845	0.146
Understanding and Use of Text				
Pre	0.019	1	845	0.891
Post	1.271	1	845	0.260
Summarizing & Recapitulating				
Pre	3.564	1	846	0.059
Post	35.403	1	846	0.000
Making Own Claim or Assertion				
Pre	1.341	1	845	0.247
Post	4.748	1	845	0.030
Developing Examples	.,, .,			*****
Pre	0.196	1	846	0.658
Post	6.842	1	846	0.009
Reasoning	0.0.2	-	0.0	0.009
Pre	0.179	1	844	0.672
Post	2.632	1	844	0.105
Using Textual Support	2.032	•	011	0.102
Pre	4.322	1	845	0.038
Post	38.306	1	845	0.000
Structuring & Organizing	30.300	1	0.13	0.000
Pre	1.648	1	846	0.200
Post	0.343	1	846	0.558
ntroducing the Essay	0.545	1	040	0.550
Pre	1.822	1	845	0.177
Post	6.033	1	845	0.014
Using Paragraphs and Transitions		1	0-13	0.014
Pre	0.215	1	844	0.643
Post	1.561	1	844	0.212
Concluding the Essay	1.501	1	044	0.212
Pre	0.240	1	840	0.624
Post	18.581	1	840	0.000
Choosing Words	10.301	1	040	0.000
Pre	0.005	1	845	0.941
Post	4.752	1 1	845	0.030
		1	043	0.030
Employing Sentence Structure to	0.049	1	846	0.826
Pre		1		
Post	1.208	1	846	0.272
Employing Sentence Boundaries	0.002	1	0.46	0.065
Pre	0.002	1	846	0.965
Post	2.960	1	846	0.086
Using Grammatical Relationships		1	0.45	0.571
Pre	0.321	1	845	0.571
Post	4.504	1	845	0.034
Using Punctuation	0.101	1	0.45	0.662
Pre	0.191	1	845	0.662

California Writing Project APPENDIX P

Post Anticipating Readers' Needs	5.017	1	845	0.025
Anticipating Readers Treeds				
Pre	2.779	1	844	0.096
Post	0.723	1	844	0.395

Appendix QResults of Wilks' Lambda analysis of each 2008 NWP Repeated Measures ANOVA model

Feature		Wilks' Lambda Value	F Ratio	Hypothesis df	Error df	p-value
Holistic	Occasion (pre/post)	0.918	28.283	1	317	0.000
	Interaction (Group x Occasion)	0.986	4.592	1	317	0.033
Content	Occasion (pre/post)	0.922	26.944	1	317	0.000
	Interaction (Group x Occasion)	0.992	2.620	1	317	0.107
Structure	Occasion (pre/post)	0.942	19.550	1	317	0.000
	Interaction (Group x Occasion)	0.987	4.119	1	317	0.043
Stance	Occasion (pre/post)	0.908	32.202	1	317	0.000
	Interaction (Group x Occasion)	0.971	9.605	1	317	0.002
Sentence	Occasion (pre/post)	0.918	28.424	1	317	0.000
Fluency	Interaction (Group x Occasion)	0.986	4.586	1	317	0.033
Diction	Occasion (pre/post)	0.930	23.993	1	317	0.000
	Interaction (Group x Occasion)	0.988	3.864	1	317	0.050
Conventions	Occasion (pre/post)	0.927	24.918	1	317	0.000
	Interaction (Group x Occasion)	0.986	4.382	1	317	0.037

Appendix R

Results of Wilks' Lambda analysis of each 2008 ISAW Repeated Measures ANOVA model

Feature	Lambua unaiysis of each 2000	Wilks' Lambda	F Ratio	Hypothesis df	Error df	p-value
		Value				
Responding to	Occasion (pre/post)	0.967	25.454	1	747	0.000
Identified Topic	Interaction (Group x Occasion)	0.986	10.613	1	747	0.001
Addressing the	Occasion (pre/post)	0.967	25.119	1	747	0.000
Demands of the Essay	Interaction (Group x Occasion)	0.979	16.157	1	747	0.000
Understanding and	Occasion (pre/post)	0.975	18.828	1	747	0.000
Use of Text	Interaction (Group x Occasion)	0.985	11.446	1	747	0.001
Summarizing &	Occasion (pre/post)	0.985	11.526	1	747	0.001
Recapitulating	Interaction (Group x Occasion)	0.983	12.731	1	747	0.000
Making Own Claim	Occasion (pre/post)	0.974	19.585	1	747	0.000
or Assertion	Interaction (Group x Occasion)	0.982	5.379	1	297	0.021
Developing	Occasion (pre/post)	0.963	28.879	1	747	0.000
Examples	Interaction (Group x Occasion)	0.974	19.918	1	747	0.000
Reasoning	Occasion (pre/post)	0.963	28.841	1	747	0.000
-	Interaction (Group x Occasion)	0.970	22.995	1	747	0.000
Using Textual	Occasion (pre/post)	0.991	6.788	1	747	0.009
Support	Interaction (Group x Occasion)	0.986	10.255	1	747	0.001
Structuring &	Occasion (pre/post)	0.974	20.147	1	747	0.000
Organizing	Interaction (Group x Occasion)	0.971	22.660	1	747	0.000
Introducing the	Occasion (pre/post)	0.965	27.181	1	747	0.000
Essay	Interaction (Group x Occasion)	0.977	17.551	1	747	0.000
Using Paragraphs	Occasion (pre/post)	0.961	30.245	1	747	0.000
and Transitions	Interaction (Group x Occasion)	0.982	13.965	1	747	0.000
Concluding the	Occasion (pre/post)	0.977	17.753	1	747	0.000
Essay	Interaction (Group x Occasion)	0.975	18.972	1	747	0.000
Choosing Words	Occasion (pre/post)	0.984	12.234	1	747	0.000
	Interaction (Group x Occasion)	0.983	12.870	1	747	0.017
Employing	Occasion (pre/post)	0.974	19.573	1	747	0.000
Sentence Structure to Convey Ideas	Interaction (Group x Occasion)	0.987	9.592	1	747	0.002
Employing	Occasion (pre/post)	0.975	18.775	1	747	0.000
Sentence Boundaries	Interaction (Group x Occasion)	0.993	5.084	1	747	0.024
Using Grammatical	Occasion (pre/post)	0.986	10.486	1	747	0.001
Relationships	Interaction (Group x Occasion)	0.988	8.831	1	747	0.003
Using Punctuation	Occasion (pre/post)	0.980	15.299	1	747	0.000
	Interaction (Group x Occasion)	0.988	9.367	1	747	0.002

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Anticipating	Occasion (pre/post)	0.974	20.183	1	747	0.000
Reader's Needs	Interaction (Group x Occasion)	0.977	17.966	1	747	0.000

Appendix S

Results of Wilks' Lambda analysis of each 2009 NWP Repeated Measures ANOVA model

Feature		Wilks' Lambda Value	F Ratio	Hypothesis df	Error df	p-value
Holistic	Occasion (pre/post)	0.000	0.006	1	297	0.940
	Interaction (Group x Occasion)	0.982	5.379	1	297	0.021
Content	Occasion (pre/post)	0.996	1.065	1	297	0.303
	Interaction (Group x Occasion)	0.959	12.563	1	297	0.000
Structure	Occasion (pre/post)	0.972	8.518	1	296	0.004
	Interaction (Group x Occasion)	0.945	17.186	1	296	0.000
Stance	Occasion (pre/post)	0.998	0.573	1	295	0.450
	Interaction (Group x Occasion)	0.974	7.852	1	295	0.005
Sentence	Occasion (pre/post)	0.963	11.433	1	295	0.001
Fluency	Interaction (Group x Occasion)	0.965	10.550	1	195	0.001
Diction	Occasion (pre/post)	0.996	1.253	1	296	0.264
	Interaction (Group x Occasion)	0.983	5.134	1	296	0.024
Conventions	Occasion (pre/post)	0.985	4.513	1	295	0.034
	Interaction (Group x Occasion)	0.956	13.462	1	295	0.000

Appendix T

Results of Wilks' Lambda analysis of each 2009 CWP Repeated Measures ANOVA model

Feature	Lambaa anaiysis of each 2002	Wilks' Lambda Value	F Ratio	Hypothesis df	Error df	p-value
Responding to	Occasion (pre/post)	0.986	12.212	1	845	0.000
Identified Topic	Interaction (Group x Occasion)	0.906	88.162	1	845	0.000
Addressing the	Occasion (pre/post)	0.991	7.942	1	845	0.005
Demands of the Essay	Interaction (Group x Occasion)	0.896	97.749	1	845	0.000
Understanding and	Occasion (pre/post)	0.988	10.157	1	845	0.001
Use of Text	Interaction (Group x Occasion)	0.920	73.910	1	845	0.000
Summarizing &	Occasion (pre/post)	0.989	9.839	1	846	0.002
Recapitulating	Interaction (Group x Occasion)	0.934	59.304	1	846	0.000
Making Own Claim	Occasion (pre/post)	0.990	8.238	1	845	0.004
or Assertion	Interaction (Group x Occasion)	0.928	65.136	1	845	0.000
Developing	Occasion (pre/post)	0.991	8.097	1	846	0.005
Examples	Interaction (Group x Occasion)	0.944	50.189	1	846	0.000
Reasoning	Occasion (pre/post)	0.986	12.190	1	844	0.001
J	Interaction (Group x Occasion)	0.938	55.356	1	844	0.000
Using Textual	Occasion (pre/post)	0.986	12.203	1	845	0.001
Support	Interaction (Group x Occasion)	0.924	69.024	1	845	0.000
Structuring &	Occasion (pre/post)	0.993	5.618	1	846	0.018
Organizing	Interaction (Group x Occasion)	0.914	80.081	1	846	0.000
Introducing the	Occasion (pre/post)	0.985	13.048	1	845	0.000
Essay	Interaction (Group x Occasion)	0.925	68.373	1	845	0.000
Using Paragraphs	Occasion (pre/post)	0.991	7.270	1	844	0.007
and Transitions	Interaction (Group x Occasion)	0.927	66.626	1	844	0.000
Concluding the	Occasion (pre/post)	0.991	7.203	1	840	0.007
Essay	Interaction (Group x Occasion)	0.924	68.960	1	840	0.000
Choosing Word	Occasion (pre/post)	0.999	0.713	1	845	0.399
-	Interaction (Group x Occasion)	0.933	62.141	1	845	0.000
Employing	Occasion (pre/post)	0.995	4.637	1	846	0.032
Sentence Structure to Convey Ideas	Interaction (Group x Occasion)	0.939	54.786	1	846	0.000
Employing	Occasion (pre/post)	0.994	5.406	1	846	0.020
Sentence Boundaries	Interaction (Group x Occasion)	0.959	35.850	1	846	0.000
Using Grammatical	Occasion (pre/post)	0.993	5.612	1	845	0.018
Relationships	Interaction (Group x Occasion)	0.954	40.692	1	845	0.000
Using Punctuation	Occasion (pre/post)	0.992	6.641	1	845	0.010
	Interaction (Group x Occasion)	0.959	35.730	1	845	0.000

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Anticipating	Occasion (pre/post)	0.997	2.356	1	844	0.125
Reader's Needs	Interaction (Group x Occasion)	0.911	82.283	1	844	0.000

Individual Interview Protocol (ISAW Participant):

The purpose of this interview is to learn a little bit about what you have learned from your participation in ISAW this past year, as well as some of the ways you've implemented what you have learned. But as you know from the Consent form you signed, you are free to not answer any guestion you choose.

Additionally, if you would like to stop the interview at any time, you are free to do so.

I also want to make sure you know that, although I am affiliated with ISAW, the point of this interview is to get an authentic picture of your impressions and what your experience has been. Therefore I want to just assure you that you are free to be completely honest in your responses.

Before we get started, do you have any questions for me?

Context:

- Can you tell me a little bit about the school where you teach?
 - How would you describe your students? How would you describe the other teachers in your department? How would you describe your administration? How would you describe your district?
- Do you feel like you have a lot of flexibility in what you teach? Why or why not?
- Have their been any significant changes in you students/department/school/district in the last few years? If so, what are these changes? How have these impacted your teaching?

Teaching philosophy and practices prior to participation, especially with regards to writing Thinking back to before you participated in ISAW:

- How did you define academic writing?
- Can you give me an example of a lesson or a unit that you used to teach academic writing that reflects this approach? How did you develop this approach? Who/what helped you to develop this approach? Would you say this approach reflected your overall philosophy about teaching and students? Why or why not?
- Were there any key resources or key people you went to for help when you were stuck with how to teach academic writing? Why this person/this resource?

Participation in ISAW:

- How did you come to participate in ISAW? How did you hear about it? Did your school support vour participation?
 - o If no, why did you think it would be worth your time and money?
- What were you expecting the experience to be like? Is there anything in particular you were hoping to gain? If so, what?
- How would you describe your experience as an ISAW participant?
 - o Would you say it met your expectations? Why or why not?
 - o Was there something you were hoping to learn that you did not learn? If so, what?
 - o Is there something that you did learn that you weren't expecting? What? How did that affect your overall experience?
 - o Is there anything that happened that you weren't expecting? What? How did that affect your overall experience?
- If you were to describe ISAW to another teacher who knew nothing about it, what would you say? Would you recommend they attend? Why or why not?

Implementation of what learned:

- Can you describe something you do in your classroom now that you attribute to your participation in ISAW? Why did you choose to implement this? Did you make any changes to this approach? Why did you decide to make these changes? How did your students react to this lesson/approach?
- Were there things you learned in ISAW that you wanted to implement but couldn't? What were these? What kept you from implementing them?
- Is there anything in particular that you think made it easier for you to implement what you learned than for others to do so? What? Why do you think this made it easier for you?
- Is there anything that you think made it more difficult for you to implement what you learned than for others to do so? What? Why do you think this made it more difficult for you?
- Have you tried to implement what you've learned in all of your classes or just your study class?
 - (If yes) Have you noticed differences in how students respond depending on their grade level? What sorts of differences?

Thinking now:

- How do you define academic writing now?
- How would you describe the approach you use to teach academic writing? Would you say the approach you use now to teach academic writing reflects your overall philosophy about teaching and students? Why or why not? Would you say your teaching philosophy has changed in the past year? If yes, why? How?
- Are there any key resources—people, books, etc.—that you turn to now for help when you are stuck? Why this person/this resource?

Final thoughts:

- What suggestions would you have for individuals participating in ISAW next year?
- What suggestions or recommendations do you have for changes to ISAW?

REFLECTIONS ON ISAW

Your Current Teaching Assignment
Length of time in your current position?
A. DEFINING ANALYTICAL WRITING If you were defining analytical writing to a group of new teachers, what important features would you identify?
•
•
B. ILLUSTRATING INSTRUCTION OF ANALYTICAL WRITING ILLUSTRATING: Give some examples of how you have used what you learned in ISAW to teach analytical writing in your classroom this past year.
•
•

ASSESSING: Give some examples of how you have used the ISAW Improvement rubric to inform your teaching of writing.

ISAW: LSRI FINAL REPORT
•
C. CHALLENGES AND SUPPORTS IN DEVELOPING STUDENTS' ANALYTICAL WRITING CHALLENGES: What are some particular challenges you have faced in teaching analytical writing?
•
•
•
•
•
 CHALLENGES: What are some particular challenges your students face when writing analytically?
 CHALLENGES: What are some particular challenges your students face when writing analytically?

This survey was adapted from a survey developed for and used at the Academic Literacy Summit sponsored by the UC Davis School of Education, Feb. 6, 2008.

writing?

SUPPORTS: What supports and other resources has ISAW provided to help foster your understanding of how to teach analytical

ISAW: LSRI FINAL REPORT
•
•
SUPPORTS NEEDED: What supports and other resources do you still need to help further your understanding of how to teach analytical writing?
•
•
D. DEVELOPMENT/CHANGES IN YOUR THINKING ABOUT ANALYTICAL WRITING Please describe any ways your thinking about analytical writing has evolved due to your participation in ISAW.
I used to know or think:
I now know or think:
What in ISAW prompted my developed/revised understanding/thinking and how:
That in 15.11 prompted my developed revised and order and mining and new.
I used to know or think:
I USCU IU NIUW UI (IIIIIK.
This survey was adapted from a survey developed for and used at the Academic Literacy Summit sponsored by the UC Davis School of Education, Feb. 6, 2008.

ISAW: LSRI FINAL REPORT	California Writing Project APPENDIX V
I now know or think:	
What in ISAW prompted my developed/revised understanding/thinking and	nd how:

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California Writing Project APPENDIX V

ISAW Year-End Reflection 2007-2008

Overall, what has been the impact of ISAW on your teaching of writing? (Either in classroom practice, your own thought process, attitude, etc.)

What ideas about teaching, learning, writing, and/or reading did you learn or expand upon?

What impact, if any, did your work with ISAW have on your students' writing and/or attitude about writing?

What went well for you in our work together?

What do you want more time for and/or what would you like to see come out of next year's work?

Feel free to write additional comments on the back.

Area 3 Writing Project • ISAW	
Reflection on one assignment:	
Name:	School Site:
Assignment Title:	
Please describe this assignment in a few sentences: what is it you were asking students to do? If you would rather e-mail a copy of the assignment, please write your e-mail here and I will contact you:	
Why did you choose to have your studer	nts do this assignment?
What happened when you gave your stu	idents this assignment?