

Teaching Writing in the Social Sciences: A Comparison and Critique of Three Models

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Abstract: This article describes and evaluates three approaches to teaching writing in the social sciences, particularly psychology: an English department-based course for all social science majors; a team-teaching model that embeds writing in core courses in psychology; and a stand-alone course dedicated to teaching writing in psychology, often taken concurrently with other core courses. Using Beaufort's (2007) five knowledge domains of expert writers as a lens through which we view each approach, we describe each model and appraise the success of each in providing what Ding (2008) and Collins, Brown, and Holum (1991) call a cognitive apprenticeship, i.e., an educational experience that makes the thinking and practices of a discipline visible and gives students tools and experiences to help them become insiders in a discourse community. Each of these approaches to teaching social science writing can provide some elements of a good cognitive apprenticeship, but the drawbacks to each make the goal of providing such an apprenticeship elusive because of the constant challenge of developing competent faculty, sustaining faculty commitment, and guaranteeing adequate department resources to support these efforts.

Writing-in-the-disciplines (WID) courses grew out of the perception that there is no monolithic, universal definition of "good writing" (see Faigley and Hansen, 1985). By the 1990s, writing teachers everywhere had increasingly begun to acknowledge that what counts as "good" depends a great deal on context, so to be successful, instruction in writing must account for many varied situations. A "one size fits all" approach to designing writing courses becomes increasingly problematic in light of arguments like Russell's (1997), which held that the presumed goal of "general writing skills" courses—to inculcate knowledge and abilities that are supposedly transferable to all future situations—is nothing more than a chimera. Writing is not "a single, generalizable skill learned once and for all at an early age; rather it [is] a complex and continuously developing response to specialized text-based discourse communities, highly embedded in the differentiated practices of those communities" (Russell, 2002, p. 5). If students are to succeed in the writing of a particular discipline, they need to understand its "essential rhetorical structures: specialized lines of argument, vocabulary, and organizational conventions, the tacit understandings about what must be stated and what assumed" (Russell, 2002, p. 18). Ding (2008) argued that, to learn to write effectively, students must enter into a "cognitive apprenticeship" in which they are introduced to the "disciplinary contexts surrounding the specific strategies" used in the field and are enculturated in the "disciplinary practices and ways of thinking" that will "facilitate their acquisition of genre conventions," thus preparing them to write as an insider in the discipline (p. 6).

While we accept Russell's and Ding's premises and their aims for effective instruction in writing in the disciplines, enacting those aims requires careful thinking about curriculum design, teacher selection, and

Across the Disciplines
A Journal of Language, Learning and Academic Writing

wac.colostate.edu/atd
ISSN 554-8244

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teacher development to create conditions that will help students experience a cognitive apprenticeship leading to mastery of a discipline's discourse. One possible guide in thinking about these matters is Beaufort's (2007) conceptual model of writing expertise, which postulates that proficient writers draw on five knowledge domains when composing: (1) knowledge of writing processes, (2) knowledge of rhetoric, (3) knowledge of subject matter, (4) knowledge of genre, and (5) knowledge of the discourse community they are operating in—a domain that encompasses the other four. We believe Beaufort's model offers a way not only of assessing how competent a given writer is but also of thinking about curriculum and education for writing teachers. But questions of curriculum design and teacher preparation always entail two related questions that have been debated for the last 20 years: first, where should WID courses or modules of instruction be located—in writing programs housed in English departments or in the departments students are majoring in? Second, who should teach them—writing teachers whose background is generally in English (though often not in rhetoric and composition) or members of the discipline whose discourse is being taught? These questions have not been definitively answered, and they remain critical because a cognitive apprenticeship seems to imply that students will be apprenticed to professors in their disciplines, people who have knowledge of the subject matter and are members of the discourse community, two essential parts of Beaufort's formula for expertise. Yet professors in the disciplines often lack explicit knowledge of writing processes and rhetoric; and though they know how to use the genres of their field, perhaps they don't know how to teach them effectively. Can students experience an adequate cognitive apprenticeship if all five of Beaufort's knowledge domains are not fully activated or addressed?

At Brigham Young University (BYU) where our WID program has been developing since 1976—much longer than at most universities—we have tried three different models of teaching writing in the social science disciplines, particularly in psychology. In this article we describe and appraise what we have attempted to do in each, using Beaufort's five domains of expertise as a lens for reviewing our relative success in developing students' writing expertise. It's important to note at the outset that we did not know Beaufort's work when we implemented any of the pedagogical designs we describe here; but after encountering her model in 2007, we found in it a fruitful theory for reading and assessing what we have done. We want to share the following comparison and critique of our three models with others who are working to develop effective WAC and WID programs. We first contextualize our analysis by reviewing relevant literature related to Beaufort's five domains; then we briefly sketch the history that produced the three models of instruction we describe and appraise. Next, we examine each pedagogical design with particular attention to the way it does or does not enact a strong cognitive apprenticeship and develop students' writing expertise in all of Beaufort's domains. Finally, we suggest that, although each design can contribute some elements of a cognitive apprenticeship, none of them is perfect; thus the goal of offering a genuine cognitive apprenticeship remains elusive because of the constant challenges of developing teachers, sustaining faculty commitment, and finding adequate department and college resources for these efforts.

Review of Literature Related to Beaufort's Domains

When we think of expertise in a given discipline, we are often prone to believe that such expertise begins and ends with acquiring a great deal of subject matter knowledge, the first of Beaufort's five domains that we will discuss. Beaufort herself has little to say about subject matter knowledge, noting only that experts draw on "background knowledge" and do "the critical thinking necessary for the creation of 'new' or 'transformed' knowledge that is interactive with and influenced by the discourse community." She adds that this critical thinking includes knowing the questions to ask and how to answer them, suggesting that the most important part of subject matter expertise is simply knowing what to do with knowledge (Beaufort, 2007, p. 19). Parker (2002) likewise posits that what students must learn are processes of knowledge production, ones that are distinctive for each discipline; he discounts the view that acquiring disciplinary knowledge means merely learning and managing a static body of facts. Geisler's (1994) research into the nature of expertise also supports the view that experts not only know abstract concepts but possess

experiential knowledge, problem-solving techniques, ways of reasoning, and operations that let them adapt knowledge to specific cases. As novices work to become experts, they acquire experiential reasoning and knowledge of methods that help them eventually make a rhetorically persuasive case for the best way to solve a problem.

These theories of subject matter knowledge imply that facts and concepts alone would be quite inert without additional knowledge from Beaufort's other four domains, particularly the largest and most encompassing domain of these four, discourse community. Swales (1990) was among the first to develop the concept of a discourse community when he suggested that "sociorhetorical networks" form that "tend to separate people into occupational or specialty-interest groups" so that they can "work towards sets of common goals" (p. 9). Beaufort (1997) suggested that the term "discourse community" first appeared as a way of identifying and understanding those "community-based norms that influence writing" (p. 488). Beaufort (2007) defined a discourse community as a "particular community of writers who dialogue across texts, argue, and build on each other's work" (p. 18). Distinguishing one discourse community from another allows us to understand what constrains writing in a particular situation (Beaufort, 1997). Herzberg (1986) declared that the way a group uses language is "a form of social behavior" and that this language is "a means of maintaining and extending the group's knowledge and of initiating new members into the group." He further argued that any community's discourse is "epistemic," i.e., that it essentially constitutes the knowledge of that community. Bawarshi (2003) says that a discourse community is thus built on "the premise that what we know and do is connected to the language we use" (p. 549).

Beaufort's next domain, genre knowledge, is, as Bazerman (1997) says, a key to entering a discourse community. Without genre knowledge a person can't effectively participate in the conversation of the community, even if that person has a great deal of subject matter knowledge. Miller's germinal article "Genre as Social Action" (1984) helped explain how discourse communities establish themselves and function by defining genres as "typified rhetorical ways of acting in recurring situations" (p. 159). More recently, Devitt et al. (2003) add that genres not only "represent their communities, they effect and make consequential the communities' interests" (p. 543). Bawarshi (2000) expands genre to include the way texts are shaped, the contexts, and the communicants. Berkenkotter and Huckin (1993) note that because genre conventions "signal a discourse community's norms, epistemology, ideology, and social ontology," the study of genres provides important information about "the textual dynamics of discourse communities" (p. 497). They add that being a member of a discourse community enables us to have conversations with others because we have "the linguistic and rhetorical repertoires to choose our comments *artfully* in light of our reading of the occasion and of our relation to our interlocutor" (pp. 500-501, emphasis in original). Bazerman (1997) asserts that "genres are not just forms" but "forms of life, ways of being. They are frames for social action ... locations within which meaning is constructed" (p. 19). According to Beaufort (1997), a discourse community requires both oral and written genres for communication, "norms for texts with regard to genre features," and specific writing tasks and roles for writers and speakers (p. 489). Informed knowledge of genres is required for full participation in disciplinary and professional cultures, the discourse communities we seek to immerse our students in. However, Wardle (2009) has recently warned that when teachers are not really members of a particular discourse community, their efforts to teach students the genres of that community will likely fail, as the teachers will often assign "mutt genres," rather than purebred ones. She questions whether first-year writing courses can realistically teach writing in disciplinary genres, but adds that "perhaps such practice could be meaningfully accomplished by the junior year, when students are engaged in the work of a discipline" (p. 782).

Producing a discourse community's authentic genres constitutes probably the largest part of learning the rhetoric of that community. Knowledge of rhetoric is the fourth domain Beaufort identifies as critical for writing expertise. The social context of a discourse community affects one's understanding of how to apply general rhetorical knowledge about such things as the writer's role, the audience, and the purpose of communicating. Beaufort (2007) says that "writers must address the specific, immediate rhetorical situation

of individual communicative acts" by "considering the specific audience and purpose for a particular text and how best to communicate rhetorically in that instance" (p. 20). When students are immersed in a cognitive apprenticeship, they can learn more accurately to take an appropriate rhetorical stance in a discourse community. A cognitive apprenticeship is a "model of instruction that works to make thinking visible" (Collins, Brown, & Holum, 1991). Cognitive apprenticeships derive their characteristics from being embedded in a subculture, or discourse community, in which "most, if not all, members are participants in the target skills" (Collins, Brown, & Holum, 1991). The challenge in creating a cognitive apprenticeship is to "situate the abstract tasks of the school curriculum in contexts that make sense to students" and "deliberately bring the thinking to the surface, to make it visible" (Collins, Brown, & Holum, 1991).

Helping students gain proficiency in Beaufort's fifth domain—process knowledge—is a matter of helping them accomplish any given task by teaching them such things as how to start and finish a given writing task. In our opinion, the process knowledge integrates the other four domains, which overlap and interact anyway, as Beaufort says. We believe that the most effective way to make thinking visible is to engage students in an iterative process of creating generically appropriate documents. In other words, we think standard writing process pedagogy—asking students to plan, draft, revise, and edit papers according to the norms of a discipline's composing practices—will help them both understand and produce genres that are acceptable in the discourse community. Process pedagogy conducted in the right environment by teachers who adequately understand the discipline should help to bring about the expertise in general rhetorical knowledge, genre knowledge, and discourse community knowledge that, according to Beaufort, must accompany subject matter knowledge if students are to become genuinely proficient writers in that discipline.

Historical Context of the Three Models

At BYU we began dimly groping as early as 1976 toward the realization that writing varies by discipline and that writing in disciplinary genres might better serve students than a one-size-fits-all approach. At that time the English Department abandoned the traditional two-semester first-year writing course and implemented a "vertical" curriculum: a one-semester first-year course followed in the junior year by an advanced writing course. The new advanced course was offered in three variants: technical writing, critical and interpretive writing, and advanced expository writing. Multiple sections of these three courses were offered to broad groupings of majors: technical writing was for students in engineering, life and physical sciences, nursing, math, and statistics; critical and interpretive writing was offered to students in the arts and humanities; and advanced expository writing was for all the majors that were left. When Kristine Hansen joined the English faculty at BYU in 1987, she was soon asked to become the coordinator of "Advanced Expository Writing." Noticing that most students enrolling in this course were social science majors, Hansen proposed changing the content and the name to "Writing in the Social Sciences," a proposal that was adopted in 1989; Hansen has been the impetus behind the further development of the course for about twenty years.

Between 1989 and 2007, the course grew to become one of the largest in a group of 18 advanced writing courses now offered at BYU. Every student must take one of these courses to fulfill a general education requirement for graduation. Six of these courses are offered in the English Department and one in the School of Management to students who are grouped by similarity of majors. The other eleven are taught only for majors in the following individual departments or programs: art history, chemistry, geology, German, history, honors, international and area studies, philosophy, physics, political science, and recreation management and youth leadership. (For more about these courses, see Hansen, 1998.) The History Department and the Political Science Department opted out of the English Department's Writing in the Social Sciences course in 1996 and began offering their own advanced writing instruction to their majors. In both of these departments students earn the advanced writing credit in a two-step process: First, they take a 200-level introductory course in which they learn the basics of research and writing in the major, including its style, conventional formats, and documentation styles; second, they take a small capstone

course in which they write a long paper under the tutelage of a professor (not an adjunct or graduate student). In between, of course, students also do a good deal of writing. Until recently no other social science departments have accepted the challenge of creating their own advanced writing course; but in 2002 the Psychology Department, one of the three biggest on campus, began searching for a different way to deliver advanced writing instruction to its majors—a way that might complement its new curriculum for psychology majors.

At the recommendation of Hansen, who was then serving as the university's WAC director, the Psychology Department in 2002 enlisted an experienced part-time faculty member for an experiment in team-teaching writing with psychology professors in the new core courses that introduced students to the major. This part-time teacher (hereafter to be called "the writing teacher") held a PhD in composition and rhetoric and had a developed interest in teaching writing in the social sciences, having taught the English Department writing course for several years. From 2002 through 2006, the writing teacher was involved in teaching experimental sections of psychology core courses that included writing. Then, in 2006, the dean of the College of Family, Home, and Social Sciences determined that the approach the writing teacher had designed was simply not scalable and something new was needed. At that time, the dean hired Joyce Adams as a college writing specialist to develop stand-alone writing courses to complement major courses in the college and to prepare teachers for those courses. Hansen and Adams were both educated as writing teachers in English departments and identify primarily with the field of rhetoric and composition, but each of us has now invested considerable thought and energy in attempting to understand the rhetorical practices of social scientists so that we can teach students who major in those disciplines. In what follows, we use Beaufort's model as a lens for describing and then appraising the comprehensiveness and quality of the three pedagogical models that have now been tried at BYU, and we show how each approach helps or fails to facilitate the ideal of writing as a cognitive apprenticeship.

English 315: Writing in the Social Sciences

The English department course, Writing in the Social Sciences, currently serves about 1000 students a year who are majoring in anthropology, economics, psychology, social work, and sociology as well as other disciplines that are cousins to the traditional social sciences: communications, geography, linguistics, secondary education (in all subjects), and area studies (e.g., Asian Studies and Latin American Studies). The goal of this English course might be characterized as "cultural assimilation," rather than cognitive apprenticeship. All of the students come from the homogeneous "territories" of their various disciplines, knowing a little of the scholarly "dialect" used there. In the course, they merge into a more heterogeneous culture known as the social sciences. In this polyglot culture, teachers attempt to identify the common features of the social science disciplines—their values, research methods, genres, and other discourse practices—and teach students about writing in the social sciences in general. While the course is not quite "one size fits all," it is "one size fits all social sciences." Perhaps the heterogeneous population benefits students through interaction with peers not from their major; there is sometimes inter-disciplinary collaboration on a paper, and learning what is going on in other disciplines may widen the horizons of students who are perhaps too narrowly circumscribed by their own interests and values.

The teachers of this course are not "native speakers" of any social science. For historical and budgetary reasons, BYU, like most other universities, does not staff very many of its writing courses with PhDs educated in the theory and practice of teaching writing. Each semester only three or four of the 18-20 sections of this course are taught by three English professors who have a PhD in rhetoric and composition; two of them take turns coordinating the course. The other sections are staffed largely by a stable group of about a dozen part-time faculty, some of them with 15-20 years of experience, and one or two temporary full-time lecturers, who have short-term appointments. Also in any given semester, one or two English MA students may be teaching a section of the course after having completed a semester-long internship with one of the part-time or full-time faculty. This model allows for centralized course oversight and teacher

development. The faculty member supervising the course conducts two or three staff meetings a year and offers professional development workshops about every other year to the part-time faculty.

The course's pedagogy includes the now commonplace practice of teaching students writing processes and having them prepare all papers in drafts, with peer review, teacher conferences, and Writing Center support available to help students revise and produce the best papers possible. The text currently used in all sections, Hansen's *Writing in the Social Sciences: A Rhetoric with Readings* (2007), focuses on writing processes as well as on library and Internet research methods that are a part of all fields. It pays particular attention to the rhetorical style of the social sciences, including their documentation styles and how these reflect disciplinary assumptions. To teach students about the rhetorical invention of the social sciences, the book focuses on the qualitative and quantitative methods that social scientists use to create knowledge, discussing—albeit not in great detail—research methods such as content analysis, interviewing, observing, surveying, and experimenting. Finally, the book focuses on the genres that social scientists use to propose and disseminate their research. Genres students are taught to write come from both academic and professional realms and include a research paper prospectus; a proposal to conduct empirical research with human participants suitable for submission to an Institutional Review Board (IRB); a research report, including an abstract, tables, graphs, and other visuals; a book review and formal peer reviews; and a resume and letter applying for a job or admission to graduate school. In addition to these written genres, students learn to present information orally in a formal, conference-like setting. So, with respect to Beaufort's model, the pedagogical practices and the book aim to instill in students knowledge about writing processes, rhetoric, and genres.

However, the book and the pedagogy cannot overcome some of the deficiencies of the English department model. The academic background of nearly all the part-time or temporary teachers tends to be in American and British literature, so they have come by their knowledge of composition theory and pedagogy mostly through on-the-job training and brief workshops. The teachers develop understanding of composition theory and pedagogy, but typically have no more than superficial knowledge of any particular discipline in the social sciences. Because the textbook has to be as useful as possible to a diverse group of majors and has to be something that generalist teachers can understand, it must discuss the subject matter of the social sciences at a fairly general level; all illustrations and examples must speak to students majoring in any discipline. For that reason, the text also encourages uniform assignments, and teachers and students may not realize how to adapt assignments to suit particular disciplinary norms. So when the course is measured with Beaufort's yardstick of inculcating subject matter knowledge, it falls short.

Compounding this problem is that the English Department cannot control when students enroll in the course (and the university administration has consistently failed to respond to pleas to require more timely enrollment). The course is intended for students just beginning their third year of college, since the goal is to give students a solid experience in using processes of research and writing that will help them perform better in all writing assignments as they finish college. By their junior year students will have chosen a major and taken several courses in it so that they have a good understanding of the foundational knowledge of their discipline and of its questions and concerns. Ideally, students will take this course while also taking a course in their major that requires a major research project so that they can kill two birds with one stone; in fact, teachers of the course are told to encourage students to write about an important issue that they are studying in one of their major courses.

That's the ideal. In reality, over 70 percent of students wait to take this course until they are seniors about to graduate. By that time, most students have, of necessity, already developed their own individual practices of writing and researching. Some have not been taught how to avoid plagiarism. (It is important to note here that between one-third and one-half of them did not take a first-year writing course at BYU, because they were excused from it by virtue of AP credit, so they did not get library research instruction as freshmen.) When they finally enroll in this advanced writing course, students are either pleasantly surprised by how helpful the course is and sorry they did not take the opportunity to develop better writing practices

earlier, or they are resistant to doing writing tasks that they may never encounter again. The only assignment students universally appreciate is the resume and the letter applying for a job or admission to graduate school. In their final semester the assignment usually coincides with a real need they have to be employed or get an advanced degree. However, many students treat other assignments in the course as they do most school work—as a hurdle to jump on the way to a grade.

One assignment in particular has proven to be a challenge for both teachers and students: the IRB proposal to do empirical research with human participants. Because this assignment typifies problems with basing a WID course in the English Department, it will be discussed in some detail. Usually the assignment comes in the second month of the semester after students have learned about research methods and have read (or not, since some teachers may not assign these readings) models of professional texts that were created from data gathered by content analysis, interview, observation, survey, or experiment. The goal of the assignment is not only to have students write a professional genre they may have occasion to use again but also to help them follow the ethical and methodological standards that social scientists must comply with. Most teachers give students the option of completing this assignment in small groups of two to four. Students are to define a research question that would qualify for exempt review from the university's IRB and design a way of collecting data to answer the question. (Exempt review is the easiest and fastest level of review, given to proposals that do not focus on topics of a private nature or involve vulnerable participants or therapeutic measures.) For example, a group might ask, "Do students use recycling bins on campus and recycle newspapers, cans, and paper? If so, why? If not, why not?" Then the group would design a brief survey that would elicit answers to these questions. In filling out the parts of the IRB application, they should demonstrate that they can design a survey instrument competently and observe the ethical standards of offering informed consent, confidentiality and respect to anyone who participates in their study.

In the mid-1990s, students were routinely expected to carry out the research they outlined in their IRB proposals and then write about it. However, since 2003, carrying out the research has become optional, and the assignment has been scaled back to just having students complete the proposal. A major reason for scaling back the assignment is simply the logistics of getting 250-350 proposals approved every semester before the students could conduct the research. Even when the IRB office approved a system of letting teachers review each other's students' proposals, the time and energy it took was a drain on their good will. And when proposals had flaws and had to be revised, that drain was multiplied and the delays disrupted schedules. But another reason was that some of the research students proposed was just poorly designed: The questions were too trivial, too vague, too big, or too intrusive on participants' privacy; and the methods proposed demonstrated the students did not really know how to elicit the information they wanted. In some cases, it was clear the research would be a waste of participants' time or the study would yield confusing results. In other cases, students would need the help of a statistician to really get at the issue they wanted to investigate. Scaling back the assignment has helped, but even when teachers are cautioned to keep this assignment simple and when they are given training, checklists, models, and feedback, many of them simply do not have the background knowledge needed to help students identify an interesting and sufficiently narrowed research question and then design a methodologically appropriate way of answering the question.

We continue to use the assignment, however, because the proposal is a genre students are assigned in some of their major courses and because it is the primary genre that requires students to demonstrate knowledge of empirical research methods. But we find we must constantly work with teachers to help them guide their students to write something that approximates a "real" IRB proposal. To be fair, some teachers and students do very well with this assignment, since every semester a handful of students submit their proposals for IRB approval, carry out the research, and write about the results for their research paper in the course or for an honors thesis or senior seminar paper. Some students have submitted IRB proposals they wrote in English 315 to win undergraduate research grants from the university's Office of Research and Creative Activities. Most of these students have likely been engaged in research with a professor in their discipline, so they have been mentored in choosing a significant research project and have been taught how to think through the

difficulties of studying it. However, such students are the exception, not the rule. And given other requirements, the teachers of this English course simply cannot devote enough time to the IRB proposal to have every student experience the same level of success that the few exceptional students do.

In short, the IRB proposal is emblematic of why this English Department course is, in our judgment, less than satisfactory in introducing students to their own field's discourse community: The teachers' lack of disciplinary knowledge, the general nature of the course content, and the students' procrastination in taking the course all militate against its serving as a strong cognitive apprenticeship for students learning the discourse practices of the discipline they are majoring in.

Team-Teaching in Psychology Core Courses

In early 2002, the Psychology Department was preparing to implement a new core curriculum that required students to pass a group of three foundational courses at the start of the major: Statistics, Research Methods, and Psychological Testing. Concerned about the writing skills of psychology majors, the department also implemented a requirement that students had to take first-year writing on campus and could not bypass the course as a result of AP credit or other high school experiences. Some faculty members in the department inquired about the possibility of offering advanced writing instruction in tandem with the new core courses. As noted above, Hansen, then director of the university's WAC program, recommended that the department experiment with integrating writing directly into one or more of the required core courses. She further recommended hiring an expert in writing to team-teach one or more of the courses with psychology professors. This suggestion addressed one of the department's primary concerns: Because there were over 1,200 students in the major, the faculty did not believe they could incorporate advanced writing instruction in department courses, as the history and political science departments had done, without some form of additional teaching assistance.

The experiment was first undertaken in the fall of 2002, when the writing teacher, a PhD in rhetoric and composition who had taught English 315, was hired to team-teach the research methods course with a professor in psychology who specialized in teaching research methods. From fall 2002 to summer 2004, the two of them taught nine sections of the research methods course on a trial basis. In the pilot program, they sought to determine whether team-teaching was a viable alternative to more traditional writing courses taught by a single teacher and whether an adequate curriculum could be developed that improved upon the instruction in the English Department course. At the end of the second year of the pilot, the University Writing Committee gave its approval to fully implement the program and award students advanced writing credit for taking the requisite courses. With this approval, the program was expanded so that the writing teacher team-taught all five sections of the research methods course offered in the fall and winter as well as three sections offered in the summer. The writing teacher eventually team-taught the methods course with five other professors and a Ph.D. student. Enrollment for each section was capped at 30 students with the formal understanding that the writing teacher would be responsible for one-third of the instruction provided in each four-credit course.

In the research methods course, the students learned about research design and worked in groups of three to five in order to plan, conduct, and report a psychological experiment. All the course assignments were related, in some way, to completing this experiment. Students first wrote several critiques of journal articles. Then, to get approval to carry out an experiment, each group wrote an IRB proposal. Next, they conducted an in-class experiment. Using the data collected in the experiment, each student wrote the methods and results sections of a research report; this writing served as first drafts for writing the final version of these sections in their group article. They reported their results not only in an APA-style journal article but also a conference-like oral presentation. One professor also required the groups in his sections to create a poster, and class time was set aside so students could present their results as they would at a conference poster session.

The focus was never exclusively on writing in the methods course. Rather, writing was understood to be a means of developing and demonstrating disciplinary-appropriate ways of thinking. Viewing writing in this way enabled the professors to work with an expanded notion of writing instruction. Thus, the process of teaching students how to write a hypothesis was not reduced simply to a concern of ordering words to indicate the proper relationship between independent variables and dependent variables. Instead, it meant learning to ask disciplinary-appropriate questions, learning to search the literature effectively, learning to synthesize previous research findings, and learning about research design. Unlike some team-teaching arrangements involving writing instructors and faculty in other departments, no distinction was made between writing and content. The writing teacher was not limited to teaching writing and the other professors were also encouraged to teach writing. The division of teaching responsibilities was made based on which professor would be responsible for each section in the empirical article. The writing teacher was assigned to provide all the content and writing instruction required for the introduction and discussion sections, and he responded to all student drafts of these sections. The instruction for the methods and results sections was provided by each psychology professor, and they responded to the drafts of these sections. This method of team-teaching explicitly recognized how "ways of writing [are] embedded in larger literacy tasks—how to formulate a problem, how to get information, how to analyze that information" (Carroll, 2002, p. 116).

Applying Beaufort's criteria, we believe that these students gained not only subject matter knowledge but also genre, rhetorical, and process knowledge through facing authentic rhetorical situations and using effective writing processes to produce the kinds of documents that psychologists write. This approach did not divorce writing from the day-to-day practices of the discourse community or assume that writing is something that can be taught in a sort of vacuum, with knowledge stored up for students to transfer and apply later, whenever a moment of need should arise. The success of this approach is evident in the fact that some psychology students in the team-taught course won awards at college research conferences and presented their research at national and regional psychology conferences. In that respect, we believe more of them were being initiated into the discourse community of psychology to an extent greater than the majority of students in English 315 because students were learning how writing advances the work of their discourse community and why its genres and style are what they are.

In addition to teaching the Research Methods course, the writing teacher contributed to another core course, Psychological Testing, in which students attended a lecture once a week given by the professor who oversaw the course, as well as a lab section with approximately 30 students taught by a graduate student. Rather than serve as an instructor in this course, the writing teacher oversaw the writing instruction provided by the graduate instructors and helped revise course assignments. In collaboration with one of the Ph.D. students, he revised existing course materials into a new 60-page course manual that outlined the writing requirements and detailed the procedural knowledge requisite for completing the main project, an assignment that required students to use psychometric principles to evaluate a psychological test. Students were required to research, review, and critique a selected test, and then write the final paper in the form of a review article. The semester-long project, which was completed by teams of four to five students, was broken down into a series of sequenced smaller assignments that, when completed, enabled students to write an effective literature review and make a professional oral presentation.

Although there were challenges in the first attempts at team teaching— on-the-job learning, integrating teaching styles, and working to keep student perceptions positive, to name the most significant—the writing teacher and psychology co-teachers felt good about the success of their efforts. They believed they were able to teach principles in greater depth than either had done previously working alone and also that they provided more and better feedback to students. However, they realized that the single most important advantage of embedding writing instruction in the course was that students were learning just in time about the kinds of writing psychologists do, i.e., at the point when they most needed the instruction. Unlike English 315 students, who wrote an IRB proposal late in their senior year with no particular rhetorical

exigence requiring them to write in that genre and no expert guidance in methods from their English teachers, the psychology students in the methods course wrote the IRB proposal genre as they learned about contextualizing research questions, creating hypotheses, research design, controlling variables, statistical analysis, writing conventions, and effective teamwork—and they were learning all this under the guidance of professionals in both psychology and writing. This just-in-time teaching led those students to see how writing is situated in a discourse community and how it advances the values and goals of that community. The students were able to see how even the stylistic conventions of writing in psychology are not merely arbitrary, but a result of shared values and epistemology, as noted by Madigan et al. (1995).

Eventually, approximately 140 students a semester were learning to write IRB proposals and research reports in the methods course, and an additional 140 were producing literature reviews in the testing course. However, the heavy work load in this model meant that the writing teacher had to rely on teaching assistants to keep up. As a result, some students were frustrated with having several different opinions on their papers. For example, one semester, students worked with a writing fellow (a peer tutor assigned by a university-wide service) in addition to their professor, so they received at least two different opinions on their writing. (And a few possibly received even more feedback if they had their papers reviewed by undergraduate or graduate students in the learning lab and/or the university writing center.) Because of the number of people involved in reviewing student work, turn-around time of graded student writing also increased, with understandable frustration for students who wanted faster feedback. Another problem resulted from the fact that the writing teacher was the only writing specialist at work in the Psychology Department, and although he made heroic efforts, he could spread himself and his talents only so far. While those sections of the courses that he was actively involved in teaching were getting good writing instruction, it was discovered that students in other sections were not always receiving significant writing instruction, yet they were still getting credit for the university's general education requirement in advanced writing. This disparity led the dean to believe that it is unwise to build a writing program around one person because it becomes difficult to scale up the scope of the program or even to continue it if that person leaves the scene for any reason. And such a loss is all the more significant because of the time and training invested in bringing that person to the initially required level of expertise in the subject matter. All of these factors led the dean to decide this approach was not scalable for the whole college. So in 2006 the team-teaching approach to writing in psychology was halted in favor of an approach focusing on stand-alone courses. These courses were to be administered and taught by a college writing specialist, whose efforts would be focused on more departments than just psychology.

Writing in Psychology: A Stand-Alone College Course

Since the College of Family, Home, and Social Sciences (FHSS) at BYU was committed to strengthening students' skills in writing, the dean created a college-wide writing specialist position for a professional tenure-track faculty member. As noted, the college already had two departments, history and political science, in which the faculty had assumed responsibility for improving the writing of their majors. With this new position, the college embarked on a quest to strengthen writing instruction in its nine other departments. Hired as the FHSS Writing Specialist, Adams, although not formally trained in the social sciences, has a PhD in Instructional Psychology and Technology and 17 years experience teaching composition courses. This background helps her understand writing in these disciplines.

Adams was charged first with creating a discipline-specific course on writing in psychology, part of the college's effort to socialize students into the discourse communities of their disciplines. The new course, Writing in Psychology, is the third in a sequence of four core courses that psychology majors take as they begin their study. The writing course can be taken immediately after or concurrently with the second core course, Psychological Research Design and Analysis, in which students must design, conduct, and report a psychological investigation. It may also be taken concurrently with the fourth core course, Psychological Testing, which also requires discipline-specific writing. Thus, the Writing in Psychology course is intended

to be an integral part of students' introduction to a dynamic field of study because it locates—both physically and intellectually—student learning about writing within the discipline of psychology. The core courses should be completed before students register for advanced courses in the psychology major. Unlike the team-teaching model which embedded writing instruction in the core courses and which taught writing principles just in time, the stand-alone course does presume that students will have to transfer knowledge from other courses to complete writing tasks; however, the time between previous instruction and the need to transfer that knowledge in order to write about it is meant to be minimal and easily facilitated.

With the implementation of the new Writing in Psychology course, the IRB proposal assignment was shifted to the Research Design core course, which can be taken prior to or concurrently with the writing course. In the research course, students are under the tutelage of professors well-versed in the submission of IRB applications: how to design and propose research, carry it out, analyze the results, and appropriately write up the results. We have not yet gathered data to assess the quality of the IRB proposals written by students in this course compared to those written by students in the other courses. Nevertheless, we assume that because of good mentoring the student writers are successful in designing and conducting research that genuinely acculturates them in the discipline of psychology. With the understanding that students have already completed IRB proposals, the writing course instructors are then free to concentrate on helping students with other matters, such as improving the introduction and discussion sections of empirical research articles.

The major focus of the Writing in Psychology course is on students creating literature reviews. In preparation to write these reviews, students learn the processes of analyzing texts, summarizing scholarly research, applying APA documentation conventions, using the format for reporting scientific research, creating figures and tables, and reviewing others' texts. Students use the APA manual as a guide to the culture, not just an informative reference tool. APA style communicates the way the assumptions, values, and methods of the discipline are embodied in its rhetorical practices (Bazerman, 1988; Bem, 1987; Madigan, Johnson, & Linton, 1995). Using the APA manual, students analyze the way the scientific method is reflected in the standard four-part organization of a scientific article (introduction, methods, results, and discussion), thus learning about the intimate connection between subject matter knowledge and genre. Students also learn how to locate the key journals and the authorities in the discipline; in this effort, the teachers are aided by university librarians, who teach students how to research psychological literature in specialized databases. Students find up-to-date and reliable information and they learn how to model their own research and writing on the techniques used in psychology journal articles. They are able—in fact, they are encouraged—to use the data they gathered in the Research Design course for one of their papers in the writing course. If students take the Research Design course concurrently with the Writing in Psychology course, there are obvious benefits in being able to immediately use their knowledge and data.

After Adams taught two pilot versions of the new writing course, she hired three graduate students working on PhDs in psychology to teach additional sections of the course. In addition to having published in their field, two of these three part-time instructors have served in the university's Writing Fellows Program and/or in the university writing center and have had extensive experience in helping students with papers. Adams also works constantly with them to enhance their knowledge of writing pedagogy. Despite their qualifications and training, we recognize that these teachers are not quite ideal. If psychology professors would teach their majors' writing courses as history and political science professors do, we think students would have the best guides into the discourse community of psychology. Although psychology professors are willing to teach the Research Design and Psychological Testing courses, most seem hesitant to teach a course with "writing" in the title. The likely impact on their time may be one reason. Unlike professors in history and political science, many of the psychology faculty are heavily involved in graduate education, and they legitimately fear the extra work load of preparing lessons, and reading and grading many written assignments in undergraduate courses. They may also feel unequal to the task of teaching disciplinary writing because they have received no training in teaching writing (McGovern & Hogshead, 1990).

Professors' own writing strategies may be internalized and tacit, so it may be difficult for them to express what they know to help students understand. So having the courses taught by graduate students in psychology, because of their own recent and ongoing acculturation to the discourse norms of the field, seems the next best choice for guiding young psychology majors into the discourse community.

To assist students in their efforts to learn writing in their discipline, the College of FHSS was also willing to establish a writing lab, where knowledgeable tutors could respond to students' discipline-specific writing assignments one-on-one. Peer tutors, who are majoring in the social sciences and may have already taken the core courses, receive training in how to respond to assignments they will likely encounter, and they provide individual attention to students, a process that helps both student writers and tutors improve. The Writing Lab becomes a microcosm of the discourse community that allows students to enrich their cognitive apprenticeship in the discipline. Students who use the writing lab learn to read their own work more critically and acquire strategies that can be used to focus and organize their papers. Tutors have subject matter knowledge as well as rhetorical and genre knowledge they can bring to bear as they counsel students on the processes of drafting, revision, and editing. These tutors have the background knowledge of the discipline and necessary critical thinking skills to create "new" or "transformed" knowledge within a discourse community. This includes knowing what questions to ask, and how to frame and investigate the questions (Beaufort, 2007, p. 19). Writing tutors can also help students link their ideas to those of others who have written on the topic (Beaufort, 2000, p. 96). Having a peer tutor help escort students into the discourse community may ease the transition for students in the discipline. But the writing lab is not a perfect solution: The peer tutors are limited by being about the same age and only slightly more knowledgeable than the students they tutor, and they do not always have the specialized knowledge of a particular course. In general, however, the writing lab complements the stand-alone course, which is the main way that students add process, rhetorical, and genre knowledge to their growing subject matter knowledge and prepare to enter the discourse community of psychology.

Conclusion

Our descriptions of the three different models of teaching writing in the social sciences are summarized in Table 1. As a result of our comparison of these pedagogical approaches, we believe the ideal of a cognitive apprenticeship in disciplinary writing can merely be approximated in an English Department writing course. Using Beaufort's model as a lens to appraise the success of English 315, we would judge that it adequately gives students knowledge about two of her five domains: writing processes and rhetoric. To some extent, the course is also successful in teaching students about a third domain, the genres students will need to write in the social sciences, but this learning may be rather superficial for some genres, such as the IRB proposal. While the IRB proposals produced by most students in this course are not exactly instances of a "mutt genre," to use Wardle's term, they are rather rough approximations of the professional genre. The problematic nature of the assignment to write an IRB proposal brings into sharp relief two drawbacks of the English Department's course: First, the teachers are not specialists in the social sciences. Although they have some knowledge of how writing practices interact with disciplinary assumptions and methods, their knowledge is rather superficial, probably limited to what they have picked up from reading the textbook and popular literature. To be sure, over a period of years, these teachers come to know what the issues are in a given field and even to understand better how a field's assumptions and values are embodied in its written forms and styles. But they will probably never be as good at judging the quality of a hypothesis or an argument in psychology as a professional psychologist would be. Second, the content of the course is pitched at a fairly general level that attempts to encompass what all the social sciences have in common, resulting in the need to standardize assignments to a great extent and ignore disciplinary differences; thus, students' ability to transfer their learning to specific writing tasks they have to perform in their major courses may be meager at best. Because students fail to take the course when it would likely help them the most—when they are just moving into their junior year—they may view many of the assignments

as too late to be beneficial, or as artificial and arbitrary, so they do not invest themselves deeply in the tasks. (This drawback is, of course, not inherent in the curriculum, but it does exacerbate the other problems.)

Table 1: A Comparison of the Three Models

Approach	Writing in the Social Sciences	Team Teaching Course	Stand-Alone Course
Location	English Department	Psychology Department	College of Family, Home and Social Sciences
Length of Existence	1989-Present (based on earlier course established in 1976)	2002-2006	2006-Present
Number of Students Served Annually	Approximately 1000 in roughly 40 sections; about 200-250 are psychology majors	Approximately 250 psychology majors	Approximately 250 psychology majors when program is fully operational
Student Demographics	Students from all social sciences, related fields <ul style="list-style-type: none"> • 70% seniors • 25% juniors • 4% other 	Psychology majors, typically sophomores in the methods course; 10-20% seniors in testing course	Psychology majors, typically sophomores
Nature of Course	Cultural assimilation of individual disciplines into the general discourse of the social sciences	Writing embedded in research methods course and psychology testing course	Stand-alone writing course in core sequence of courses for psychology majors
Teachers	English personnel with little or no academic background in social sciences <ul style="list-style-type: none"> • 3 tenure-track professors with PhD in composition • 12-14 adjuncts with MA in English • 1-2 full-time temporary lecturers • 1-2 English MA students 	English and psychology faculty and graduate students <ul style="list-style-type: none"> • 1 PhD in composition • 4 assistant professors in psychology • 2 full professors • 1 visiting instructor • 5 graduate students 	Teacher/Administrator and psychology faculty <ul style="list-style-type: none"> • 1 full-time tenure-track professional faculty with background in English & instructional design • 3 PhD students with training in teaching writing • 1 full professor of psychology
Faculty Development	<ul style="list-style-type: none"> • Apprenticeship • Biannual workshops lasting 8-10 hours 	<ul style="list-style-type: none"> • Degrees in relevant fields • Experiential learning 	<ul style="list-style-type: none"> • Degrees in relevant fields • Weekly in-service meetings

	<ul style="list-style-type: none"> • 2-3 annual staff meetings 	<ul style="list-style-type: none"> • Collaboration and conversation 	
Course Content	<p>General, standardized assignments for all students, all sections:</p> <ul style="list-style-type: none"> • Proposals • Research report • Abstract • Reviews • Letter and resume • Oral presentation 	<p>Assignments embedded in course content:</p> <ul style="list-style-type: none"> • IRB Proposal • Empirical article • Review articles • Oral Presentations 	<p>Assignments tailored to linked courses:</p> <ul style="list-style-type: none"> • Grant proposal • Empirical article • Literature review • Peer reviews • Letter and resume • Oral presentation • Poster • Tables and graphs
Theories Reflected in Practice	<p>Genres and skills taught will transfer later to other unspecified contexts</p>	<p>Writing is always embedded in a context that calls for specific genres and skills</p>	<p>Genres and skills taught should transfer almost immediately to a concurrent course</p>
Support for Writing Instruction	<ul style="list-style-type: none"> • University writing center • Teacher conferences • Classmate peer review 	<ul style="list-style-type: none"> • Department peer-tutoring program embedded in courses • Teacher conferences 	<ul style="list-style-type: none"> • College writing lab • Teacher conferences • Classmate peer review • University writing center

For some students, the English 315 course may help develop expertise in Beaufort's subject matter domain, but when it does, it is likely because students themselves use the writing assignments as a way of deepening their understanding of their fields. Since the English Department teachers lack the knowledge of insiders in the discipline, it would be difficult for them to help foster such expertise. Proficiency in Beaufort's fifth and all-encompassing domain—knowledge of the discourse community—thus remains elusive because the curriculum and the teachers in the English course cannot adequately acculturate students in all four of the other domains. Despite these criticisms, we are reluctant to say that this WID course based in an English department has no value. We believe that the Writing in the Social Sciences course is better than a general writing skills class and certainly far better than nothing. Nevertheless, the two models that have been tried in psychology seem to us to be more authentic cognitive apprenticeships when viewed through the lens of Beaufort's five requirements.

We consider the team-teaching enterprise, despite its relatively short life, to have exhibited some strong indications of success. It gave students knowledge of and practice in the domains of writing processes and rhetoric. However, one drawback in students' development of skill in these two domains may be that they did not hone their individual writing processes to an optimum level because they produced mainly collaborative papers. While learning to write collaboratively is an absolute must for psychology majors, it may be an ability they can develop more readily once their individual skills are better developed. When students only write collaboratively, they get less feedback on their individual strengths and weaknesses. Despite the limitations of collaborative writing, we believe that what students learned in the team-taught courses about genres and subject matter was valuable, especially when compared to students in the English

315 course. As this analysis has shown, the team teachers helped psychology students write strong IRB proposals not only by teaching them how to follow the proposal format but also how to create credible and interesting hypotheses about important issues, choose and follow the right research methods, and then carry out the research. This final step—execution of the research design—would show students better than anything where the strengths and the flaws were in their proposals.

Students who experienced the team-teaching approach were working closely with teachers who are masters of both writing and of the discipline, so the course met the definition of a cognitive apprenticeship: a model of instruction that works to make thinking visible. Achieving proficiency in Beaufort's all-encompassing domain—knowledge of the psychology discourse community—was therefore more successful because the teachers were insiders and the curriculum was carefully designed to acculturate students in all four of the other domains. Still, there were serious drawbacks to the team-teaching model that have already been noted above. The final decision was that this approach depended too much on the talents and energy of one person, and it simply was not scalable.

The stand-alone writing course in psychology has overcome some of the deficiencies of the team-teaching model and is also quite successful as a cognitive apprenticeship. One reason is that the course is taught by PhD candidates who specialize in the discipline of psychology and know its genres intimately from their own efforts to write and publish in their fields. They are thus already familiar with APA documentation style and the discipline's genres since they are actual members of the discourse community. Moreover, the instructors have learned to be writing teachers through the additional training provided by Adams. More such teachers can be hired as needed to teach the number of sections needed to accommodate the 250 students expected to take the course each year. These sections will be taught by part-time psychology faculty, PhD candidates in psychology, and, occasionally, tenured psychology professors. Using faculty who are well-versed in the discipline saves costs for training these teachers to learn more about content, audience, format, genres, and style. And because the classes are small, there are no teaching assistants serving as intermediaries. Students can get one-on-one attention from their teachers, and they can get relatively quick feedback on their writing. In addition to the wellqualified teachers, the college's establishment of a writing lab has no doubt improved students' mastery of all five domains of knowledge in Beaufort's model of expertise.

The issue of timing for the third model is something of a problem since students are typically sophomores when they take the course, and some may not be as committed to learning writing as might be hoped. The history and political science departments have solved the timing problem by requiring a two-course sequence for fulfilling advanced writing requirements: first, a sophomore core class that prepares students to write well in intermediate courses, and, second, a senior capstone course in which they produce a polished article suitable for publication. The entire sequence makes for an effective cognitive apprenticeship. However, the new psychology course attempts to serve as both the beginning and the end of a cognitive apprenticeship in writing. Ideally, writing would be required in all of the courses in the psychology major, and there would be a culminating capstone course requiring a substantial research and writing project, rather than having most writing instruction and practice take place in a single sophomore-level course.

A final concern is administrative. Although it saves the Psychology Department money to have the writing course funded by the FHSS College, it also presents some concerns. Withdrawal of funding is always a possibility if budgets become tight. Having the writing course administered from the dean's office, rather than the department chair's, may also limit psychology faculty's influence on the content and quality of the course. Because the writing course is under the auspices of the college, not the department, the psychology faculty may feel that they have less responsibility for helping their students improve their writing skills.

Despite their drawbacks, we believe that the team-teaching and stand-alone models offer students a higher chance of experiencing a genuine cognitive apprenticeship that develops integrated abilities in all five of

Beaufort's domains than does the general English department course in writing in the social sciences. Nevertheless, the goal of creating a real cognitive apprenticeship remains elusive because it requires significant and constant commitments of faculty effort and college and department resources. Yet we believe the pursuit of this goal is a worthy one, and we are committed to continuing our efforts to develop the most nearly ideal form of writing instruction for students in the social sciences. We offer these three models as possible approaches that other institutions might also take or adapt as they consider how best to configure WID courses on their own campuses.

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Notes

[1] We thank Matt Haslam, Beth Hedengren, and Danette Paul for their helpful readings of early drafts. We also thank Elaine Maimon, Nick Carbone, and Michael Pemberton for their insightful advice on how to revise the manuscript.

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Complete APA Citation

Hansen, Kristine, & Adams, Joyce. (2010, February 28). Teaching writing in the social sciences: A comparison and critique of three models. *Across the Disciplines*, 7. Retrieved from https://wac.colostate.edu/docs/atd/articles/hansen_adams2010.pdf