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Why teach 'research as a conversation' in freshman composition courses?: A metaphor to help librarians and composition instructors develop a shared model.

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Abstract

Ongoing discussion between the Oregon State University libraries' former instruction coordinator and the former Assistant Composition Coordinator focuses on improving collaboration between our programs and more effectively integrating the research process into the English composition curriculum. We briefly describe a qualitative analysis of the problems with students' writing that led us to develop a new model for integrating the research and writing processes. We provide our rationale for selecting conversation as a metaphor for research and summarize suggested teaching strategies from the literature that are consistent with this metaphor and approach.

Why teach ‘research as a conversation’ in freshman composition courses?: A metaphor to help composition instructors and librarians develop a shared model.

1. Introduction

When the Oregon State University (OSU) the English Composition program began a collaboration with the libraries’ instruction program in the spring of 2001, we articulated the goals we shared: to establish a foundation for further development of research based writing skills in specific disciplines for their academic and work careers; to familiarize students with the wealth of resources that the library could offer beyond the internet; to provide them with concepts and skills to effectively integrate outside sources into evidence-based writing; and to help students overcome initial library anxiety. Two years into this joint venture, the Assistant Composition Coordinator and the acting instruction coordinator undertook an assessment of students’ ‘argument’ papers using a rubric developed at the University of New Mexico (UNM, Emmons and Martin). Our primarily qualitative analysis substantially replicated UNM’s quantitative results, but more importantly, launched us on an exploration of how we could better achieve our goals. Our research, and the accompanying dialogues, resulted in our proposal to use the metaphor of conversation to teach research writing. Based on this model, we drafted recommendations to the composition program coordinator, revamped the orientation to the library sessions for library and writing instructors, and changed our approach to integrating the research and writing process in our discussions and teaching. We will also be focusing on the metaconversation around the development of our proposed teaching model.

2. Initiating and assessing the composition – library collaboration

The impetus for collaboration between the composition program and library came from both parties. In the composition program there has been a longstanding observation that students are having problems evaluating and incorporating sources for their research, or, in most cases, are simply not using the library at all. The libraries' goal was to find a strategic place to begin building a foundation of information literacy skills. Plans to revamp the English composition curriculum coincided with an offer from the library instruction coordinator to provide sessions on more effective use of library resources (McMillen et al. 288-299). We utilized several assessment strategies to gauge the value of the new library sessions, including an evaluation rubric developed at the University of New Mexico and published by Emmons and Martin (545-560).

With the rubric developers' permission, we set out to do a similar but smaller scale study at OSU using a slightly adapted version¹. We gathered approximately 50 usable 'argument' papers and their attached bibliographies from several sections of OSU's English composition classes in the winter and spring terms of 2003. Because of our limited resources, we didn't feel that we could duplicate the design and rigor of the Emmons and Martin study, instead choosing to focus on what we could learn by using the rubric to evaluate the papers in a more qualitative way. This would allow us to compare their quantitative to our qualitative results.

One encouraging finding from our evaluation (admittedly subjective since we had no pre-library collaboration data) was that students were including more scholarly journals in their resources than they were before the library component was included in the composition curriculum. Our results indicated that students were using a variety of resources for their argument papers. Although web sources were the most common type

¹ The current authors would like to express our sincere appreciation to Mark Emmons and Wanda Martin for allowing us to use, and adapt, their evaluative rubric.

of resources used, students were also consulting books, as well as magazines, newspapers, and journals, in that order of frequency.

Applying the evaluation rubric helped to clarify where there were still significant problems and largely replicated the findings of Emmons and Martin. The concerns highlighted by our findings were:

- Students frequently cited only resources that supported their point of view, rather than considering multiple points of view— hence representativeness of the information sources used was a concern.
- There was a heavy reliance on popular publications, interest group and commercial web sites with no acknowledgement by the students of possible bias or limitations in such sources.
- There was almost no critical evaluation of the sources' authority to address the topic at hand.
- Few papers had any historical perspective incorporated into their discussion of issues... or even tried to put the discussion into a larger context.
- Analysis was minimal.
- There was nominal evidence of summarization or distillation of the main points of the works cited.
- Mastery of citation style, within the text and in the bibliography, was inconsistent at best, poor in most cases.

From both a composition and information literacy frame of reference, the results of our study made it clear that students had not actively and critically engaged their sources. Our findings suggested that we had fallen into the trap of teaching research and writing as discrete activities, a problem that Douglas Brent notes is all too common,

...instruction on the research process is typically silent on this issue; it deals with the beginning and the end of the process (using the library and writing the drafts) but it has a gaping hole in the middle where much of the real work of knowledge construction is performed. (Reading 105)

Barbara Fister agrees with this in principle, asserting that if librarians “fail to bear the rhetorical uses of information in mind, they risk teaching at cross purposes to the course instructors” (“Teaching” 213) since what instructors seek from students is the construction of knowledge. Another, somewhat humorous, view of this same concern is shared by Michael Kleine in this ‘nightmare’ version of a late-night visit to the library.

...students were everywhere...all writing RESEARCH PAPERS...they were transcribing sections of encyclopedia text into the text of their own writing...I knew they were writing research papers because they were not writing at all—merely copying. I imagined, then, that they saw their purpose as one of lifting and transporting textual substance from one location, the library, to another, their teachers’ briefcases. Not only were they not writing, but they were not reading: I detected no searching, analyzing, evaluating, synthesizing, selecting, rejecting, etc. No time for such reading in the heated bursts of copying that interrupted the conversations. (151)

This ‘nightmare’ vision seemed all too real when we read the student papers in our sample. Between ourselves we jokingly noted that the increased electronic access to the full text of resources meant that students were probably deprived of even the learning offered by the physical activity of transcribing text, since all they had to do was cut and paste.

The rubric assessment process sharply increased our awareness that the students didn’t appear to be learning what we thought we should be teaching, and like Brent, who acknowledges starting his own knowledge quest based on “a vague sense

that I did not know enough about teaching the research paper..." (Reading 35), we felt compelled to return to the literature about teaching research-based writing. We went seeking an improved schema for teaching the research process in the context of an English composition course, one which would support and enhance teaching and learning rather than being seen as an 'add-on' by either the instructors or the students.

3. Initial recommendations

As part of the English composition course, students are asked to write three types of essays: Explaining a Concept, Argument, and Analysis of a Text. The Explaining a Concept paper introduces students to writing skills such as summary and basic description of process or idea. In the Argument paper students are asked to explore a controversy and to use outside sources and their own rhetorical strategies to persuade a specific audience. The Critical Analysis of a Text paper asks them to perform a close reading of an essay or story and then to focus on a particular interpretation (using examples from the text to support this interpretation).

Prior to our assessment, the Argument essay was the only paper in which they were asked to do substantial research and citation. Our detailed review of argument papers from 5 sections revealed a tendency for students either to state their opinions without a substantial amount of support from outside sources, or to let the sources speak for them (rather than synthesizing these ideas into their own voice).

These tendencies, along with the substantial number of citation errors, led us to conclude that students were not conversant with conventions of research and citation. We believe that one essay out of three does not provide enough practice (particularly during the course of a ten week term) for students who are unfamiliar with the research process to get grounded in these skills. Many of the students claimed that they were never introduced to research and citation methods in high school. Whether or not this is

the case, the fact is that all three essays can offer a more holistic approach to the research process and could thus provide the students a scaffolded practice/ skill development opportunity. By introducing a research component into the three major writing assignments we can systematically build competence; the level of performance expected would then increase with each successive assignment.

Based upon this reasoning, we made the following recommendations:

Begin with the Critical Analysis paper since it provides the students with an anchor text from which to work; this gives them a familiar and potentially shared starting point.

Outside resources can inform the reading of the text. For example, students may find that other readers (either within the class or in print/electronic sources) have come to different conclusions about the same text. An exposure to interpretations other than their own increases their awareness that theirs is not the sole reading or analytical point of view; there are no “givens.” This in turn provides students with an opportunity to comment not only on the focus text, but also on what others have had to say about that text.

The class text offers questions (at the end of each text) that could guide initial investigations of outside resources. Possible resources include biographies, literary criticism, cultural events, language/ etymologies, etc. For example, one exemplary essay from a student, when analyzing the Wordsworth poem “She dwelt among untrodden ways”, looked at the etymological derivation of the word “dwelt” as well as looking at biographical information about the author.

In terms of the Concept paper, the examples from the chapter in their text all use outside resources. The assignment could thus logically be structured to include a small research component. Even if the students feel they know quite a bit about the topic, by encouraging them to seek outside sources we are in essence introducing them to the

academic convention of contextualizing ideas in the landscape of others' work. The students often gravitate to a concept or process with which he or she feels comfortable. Asking students to access other "experts" in this field promotes the process of "listening" to outside perspectives. By researching how others have written about this concept, students can enrich and even challenge their own understanding of it. Also, by using external resources they further develop skills in paraphrasing and summarizing, as well as synthesizing different perspectives. Some possibilities for outside resources might include encyclopedias, patents, dictionaries, images databanks (one could even start with an image or logo), sound files, or advertising.

The Argument paper builds on the previous assignments in that it incorporates previously used skills and also requires them to utilize a greater number of outside sources. Students need to carefully analyze these sources (as they did in the Analysis paper) and to summarize and synthesize these sources (as they did in the Concept paper). Requiring the use of a greater variety of sources also builds familiarity with different citation formats.

We also recommend having students begin by preparing annotated working bibliographies. There are several intended benefits. Students can practice their citation skills and begin critically evaluating sources for relevance, quality, and enhancement of their knowledge base. An additional benefit, based on students' reactions, was that the working bibliography gave them a head-start on writing the paper itself. This helped students work around the dreaded 'blank page syndrome' in that they had the words of others to serve as a response stimulus. Another benefit of the working bibliography is that it requires the students to show their work in progress, thereby discouraging plagiarism (inadvertent or not).

Because using the rubric to evaluate papers was so helpful for us, we decided that it might prove to be equally helpful for instructors and students to apply as a formalized set of criteria for evaluating the papers. Providing the students with the rubric also clarifies the expectations for performance and makes the process of assessment transparent.

4. Addressing the problem through conversation at two levels

One unintended outcome of our assessment process was that we soon realized that a scholarly collaboration could help us construct a teaching model. This process became the ‘metaconversation’ that formed the basis for showing students how to ‘converse’ with scholarly texts. In essence, then, there are two levels of conversation here. We will deliberately use the word ‘metaconversation’ to describe *reading/ thinking/ talking about* the process of teaching research writing and ‘conversation’ as the model we teach students for understanding the research process. The metaconversation taking place between library and composition instructors draws upon a conversational model of epistemology, articulated by Kenneth Burke, as a way to teach students the research process. While not all students have done extensive research, they have all had conversations. This quote from his seminal 1941 text, often referred to as the ‘Burkean parlor’, creates a vivid image of the process we’re suggesting that students use when conducting research.

Imagine that you enter a parlor. You come late. When you arrive, others have long preceded you, and they are engaged in a heated discussion, a discussion too heated for them to pause and tell you exactly what it is about. In fact, the discussion had already begun long before any of them got there, so that no one present is qualified to retrace for you all the steps that had gone before. You listen for a while, until you decide that you have caught the tenor of the

argument; then you put in your oar. Someone answers; you answer him; another comes to your defense; another aligns himself against you, to either the embarrassment or gratification of your opponent, depending upon the quality of your ally's assistance. However, the discussion is interminable. The hour grows late, you must depart. And you do depart, with the discussion still vigorously in progress. (Burke 110-111)

Since, as Burke indicates here, having a quality conversation requires careful listening/reading before speaking/writing, learning how to effectively research or tap into the conversation is essential. Once students understand the importance of listening well, they need a scheme for critically evaluating what they have heard and for effectively constructing their own responses. In the field of composition, students are asked to critically examine their resources by looking at any claims the source makes, the support for those claims (including citations), and any assumptions that may or may not be made regarding the stated information (Toulmin). In the library field, similar expectations are provided by the information literacy model (ACRL).

As mentioned above, our rubric-based review of student papers revealed to us that they were ill-equipped in terms of their research, evaluation and synthesis skills to enter into academic discourse. Much of this seemed to stem from their overzealous desire to comment on the topic they were arguing before carefully reviewing the literature. If we look at this in terms of the Burkean parlor, the problem could be likened to a breach of conversational etiquette. From a pedagogical stance, the Burkean parlor can be used to help students conceptualize research. From a metaconversational assessment stance, library and composition instructors can use this as a way to conceptualize the students' deficits. From this perspective, students were walking into Burke's lively conversational setting, overhearing a few passing remarks, and then moving to the center of the room and offering their opinion on the topic of their choice.

To further complicate the problem, the students lacked the 'language skills' to participate in the conversation. Like novice second language speakers, they were deficient in the basic grammar and vocabulary which, in turn, inhibited their ability to adequately evaluate, analyze and synthesize what they heard before they started participating in the conversation.

These observations re-emphasize the importance of the metaconversations between library and composition instructors. Research and composition instruction form a "natural alliance" (Kautzman 62). Indeed, for various reasons and to various degrees, library instruction and writing programs have often formed working relationships in institutions of higher education (Dixon et al; Emmons and Martin; Gauss; Kocour; McMillen, Miyagishima, and Maughan; Smith). These collaborations reflect pedagogical changes that have occurred in both fields. Composition instructors have moved from a product- to a process-oriented emphasis that has refocused teaching of the research paper from a "linear, goal-oriented approach to an exploratory, recursive method of gathering information" (Marino and Jacob 131). Similarly, librarians have shifted from the tools-based focus of bibliographic instruction to the emphasis on critical thinking embodied in 'information literacy'. With these changes, the goals of the two areas now overlap significantly.

Researchers in both fields [composition and library instruction] are finding that reading, writing, and research are recursive and mutually sustaining processes, and further are demonstrating that our efforts at teaching research in the writing classroom and in the library are inevitably connected whether we are working together deliberately or not. (Fister, "Connected" 46)

If our mutually desired outcomes and processes are so inextricably linked, it will benefit the students most if these are explicitly aligned.

5. Stating our assumptions

We would like to begin by articulating our underlying assumptions for the discussion to follow and thereby set out the framework for the metaconversation between the composition and library instruction programs.

- Writing instructors believe that writing, including evidence-based writing, is a recursive (non-linear) process of constructing knowledge, not just a product
- Writing instructors and librarians both believe that research is a recursive (non-linear) process closely interrelated with writing
- Writing instructors and librarians share the goal of helping students become more competent researchers/ writers as defined by being able to
 1. Locate and identify quality resources (not limited to format)
 2. Actively engage with those resources to understand, analyze and synthesize new information
 3. Articulate a position in the conversation that demonstrates their understanding, analysis, evaluation and synthesis
 4. Articulate a position in the conversation utilizing the conventions of scholarly writing within a given discipline

As Hutchins, Fister, and MacPherson suggest, the ultimate goal “is to create conditions that enable students to perceive themselves as active players in the production of knowledge and to understand how, in fact, knowledge is produced so that they can continue active participation in it beyond their college years” (15). We needed an approach that achieved our mutual goals of helping students integrate information into their writing through a process of critical evaluation and analysis. We wanted to convey an understanding of research writing as a rhetorical process where students are on the receiving end of others’ efforts to persuade them and they, in turn, are trying to

persuade. We needed a model that would engage the students and make sense to them. We wanted to find a framework that would allow for shared understanding by both English and library instructors, so we required terminology that was, or could easily be, incorporated into the working vocabulary of both disciplines. As conversations and research are often recursive in nature, so too was our search for a superior approach to teaching more effectively together. We began to explore what others had said about research papers in writing courses and about the research process in undergraduate education in general.

6. Other models: Inviting more sources into the metaconversation

As we explored, of particular interest were Brent's model of reading as rhetorical invention (Reading), Carol Kuhlthau's Information Seeking Process (Kuhlthau), Fister's rhetorical approach to teaching research ("Research," "Teaching"), and Allen Foster's nonlinear model of information-seeking behavior. Most of our sources shared the basic precept that reading is, or should be, as active a process as writing; that is, we need to be questioning what is being said and working with it to find the areas that fit (or don't) with our current understandings of the topic at hand. In other words, we construct meaning from what we encounter rather than passively taking it on as a package deal. Once again, Brent's perception perfectly mirrored our qualitative findings from reviewing the students' research based papers, "Novice research writers also need a sense of how to perform the intricate rhetorical dance...a sense of how to incorporate reading into a process that is both rhetorical and epistemic" (Reading 105). The shared goal, after all, is not just finding good resources, which is necessary but not sufficient, nor just writing a well-constructed paper, which is just the evidence of the process; rather, we want students to actively engage with the resources found by using them to develop, argue and support an idea or position, not to go out and find someone who agrees with you

and then write down their words instead of your own. Listening to these other participants in the metaconversation generated lively dialogue between us and eventually resulted in our proposed model.

7. A proposed model: Teaching research skills through the metaphor of conversation

There are seven assertions we make as justification of our proposed model: conversation is a familiar activity; learning to research is similar to learning how to converse in a 2nd language; conversation and research are both interactive processes; both are recursive processes; research and conversation are context sensitive and situated; we construct meaning from both activities; by using the model of conversation we can provide a common terminology to talk about research across disciplines. We'll present our interpretation of the alignment between conversation and research, bring in discussion from others on why these aspects of the research writing process are important and then offer some examples of successful teaching approaches from the literature that illustrate these aspects of the conversational metaphor for research. Since, as Kleine states, listening/researching/reading and writing/speaking are such 'rich,' 'sloppy,' and intertwined processes, assigning pedagogical tactics to a specific strand of this model becomes inherently arbitrary. Any given teaching activity will often address multiple aspects of the model. You'll see we've drawn heavily on the metaconversations in both library and composition literature to flesh out and support our assertions and to develop our recommendations of how to implement these tactics in a pedagogical context.

7.1 Begin with the familiar as a means of introducing the unfamiliar

It is, we believe, initially easier for novice researchers to understand the metaphor of conversation than the formal structure of academic discourse embodied in research. Everyone has conversations; certainly we can expect that college undergraduates have engaged in hundreds of conversations over their lifetimes. Conversations, then, provide a common experience upon which to build. Instructors could start by expanding students' construct of conversation to include the idea of conversing with someone not physically present. In some ways students are even more familiar with this version of conversation than most instructors, since many have participated in virtual conversations via electronic mailing lists, chat rooms, etc. for years. We can suggest to students that every time they listen to someone on TV, look at an Internet site, or read an article, they are participants in a conversation of sorts, a conversation that is not so much different than responding to a post in a bulletin board or blog.

Class-based conversational exchanges can build on this familiar set of activities while facilitating engagement and better research-based writing. By using electronic mailing lists, blogs or discussion boards in course software, for example, students can post annotations, journal entries, questions, and ideas. Feedback can then come from other students as well as the instructor, fostering something like Kleine's classroom-based research community. The ACRL *Information Literacy Competency Standards* (ACRL) reinforce just such approaches, suggesting, for example, that information literate students will participate in classroom and other discussions (3.6.a) as well as in "class-sponsored electronic forums designed to encourage discourse on the topic" (3.6.b).

7.2 Research is like learning to converse in a second language (RSL)

It may help students if we draw parallels to and from developing conversational skill in a second language, which is also a common experience. Research-based

reading and writing are the predominant modes of conversation in higher education -- the 'lingua franca' of academia. As Peter Elbow explains, "This is what we academics do: carry on an unending conversation not just with colleagues but with the dead and unborn" (79). The language of research has different "dialects" from one discipline to the next, each with variant grammars and vocabularies. There are conventions for researching and writing somewhat like rules of grammar. Carmen Schmersahl suggests that these mechanical conventions we in academia so take for granted are still often "arcane mysteries" to students and, unfortunately, may become the focus of their efforts rather than the "recursive process of discovery" (232). Mike Rose asserts that although "quality of thought" is the most commonly cited criterion for evaluating student writing, instructors often unwittingly reinforce the misperception of students that mechanical competence is the primary objective (90).

In order for students to enter into the conversation of academic discourse, they need to hone certain conversational skills (such as careful listening), to master some basic vocabulary, and to learn certain 'grammatical' conventions (such as citation styles). Otherwise, their contributions will display the same deficits in nuanced understanding or communication that, for example, a second language speaker may display in a conversation with native speakers. As with mastering a second language, meaningful learning comes about as the result of using the basic 'vocabulary' and grammar of research in meaningful activities/phrases. One can participate in another culture in a meaningful way only after mastering an adequate vocabulary and grammatical competence just as one can support a meaningful evidence-based writing task only after mastering the technical skills of research. Both sets of skills must be built gradually through repeated practice, with feedback from those fluent in the language. Immersion, formal instruction (grammar/sentence structure), and a bilingual environment (written or spoken) are all approaches to learning a second language that could be

approximated in teaching research-based writing. Asking students to write a 'research paper', often for the first time, is like a badly implemented 'immersion' experience and is criticized by many as counter-productive (Larson; Tracey). Students are thrown into the new conversational milieu (with new vocabulary for *both* composition and research), without the compelling motivators to learn or the ubiquitous presence of the new language that would accompany a true language immersion experience in another country. Introducing one or two library sessions into a composition course can be compared to the person taking "beginning conversational Spanish", who learns to conjugate the verbs and memorizes a few key phrases. It's only a start. Ideally, the classroom would be a truly collaborative 'bilingual' experience where the languages of composition and research will be used side by side to help students experience the new meanings and make the appropriate connections. Students would gain skills and master conventions in a scaffolded fashion, with support from classmates and feedback from peers and knowledgeable others (instructor, librarian).

Three general approaches, frequently described in the literature, can help create this 'bilingual' learning experience for research-based writing: creating a classroom-based research community, integrating research into multiple genres of writing, and using a step-wise introduction of the vocabulary, skills, and conventions needed to master 'conversational research'. Classroom learning communities can be created through shared experiences such as starting with the same stimuli to generate discussion, questions, and responses. Kleine, in his investigation of how scholars research and write, finds universal acknowledgement that the impetus for research is generated from the discourse among colleagues (broadly speaking), making it critically important to create a research community within the writing classroom. We should de-emphasize ourselves (the instructors) as the audience, so that students will write/speak to their peers. He implies that the whole class should share a common area of

investigation. Discussion then serves as the means to discover gaps in the community's knowledge that need to be addressed (Kleine159) and subsequent researching/writing is seen not just as a communication process but also as a learning process (Kleine160). This approach supports another tenet of our model, discussed later, that research, like conversation, is a process of constructing meaning.

By expanding the definition and context of research, it can be incorporated in all kinds of writing assignments such as an analysis of a supplied text, or a concept paper. Larson defines research as "the seeking out of information new to the seeker, for a purpose..." (812) and goes on to assert that "research...can furnish substance to almost any discourse, except, possibly, one's personal reflections on one's own experience...Research can inform virtually any writing or speaking if the author wishes it to do so" (813). In fact, he believes that we do students a terrible disservice when we confine the use of outside resources to a single assignment or product, because we convey a mistaken notion of what research is or should be. By doing this we imply that only certain kinds of writing can/should be informed by research and, conversely, others need not. As he puts it,

students...should understand that in order to function as educated, informed men and women they have to engage in research, from the beginning of and throughout their work as writers...I think that they should be led to recognize that data from 'research' will affect their entire lives, and that they should know how to evaluate such data as well as to gather them. (816)

He concludes by saying that we serve students best if we require them to "recognize their continuing responsibility for looking attentively at their experiences; for seeking out, wherever it can be found, the information they need for the development of their ideas; and for putting such data at the service of every piece they write" (816). Including research in more genres of writing is wholly consistent with other goals for these writing

projects. If students are analyzing a text, for example, their analyses might include understanding the context in which it was written by looking at newspapers published at the time of writing, or at what writing contemporaries were producing. Biographical information or other critical commentary about the author can also send the student in search of outside sources to inform their analyses.

An example of a step-wise 'bilingual' approach is provided by Schmersahl's graduated skill building in library research. She always has students start with writing and/or talking about their own ideas (also reinforcing starting from the familiar), and defining their own information needs, before looking for outside information. Initially, they are responding to a provided stimulus, e.g., a photograph, a collection of advertisements, or an essay. This introductory activity, worked on as a class (again, a community learning experience) with a limited subset of information sources, fosters mutual support in the early stages of encountering the library (Schmersahl 235). Then students work in a small group, and finally they have an individual project. Even for the last project, the audience is a group of peers working on the same author/essay. Likewise, Karen Tracey also starts with small, low threat assignments to build basic skills in searching, writing, revising, researching, assessing source quality and citing. In the process, she also instantiates the recursive nature of the research process.

We have to be careful not to limit our students' understanding to our particular 'dialect' of the research language and conversation. Kleine found discipline-specific variations between humanities and science scholars in their self-report of the research writing process. Although in a secondary round of discussions, some of these differences diminished, it still seems inevitable that the way scholars see and talk about the process will vary across disciplines. One could conjecture from his findings that students' exposure to articulated models of research and writing within particular disciplines, especially sciences, may lead them to believe that research and writing are

separate activities and/ or sequentially conducted, and students should be alerted to the possibility of needing to adjust their basic understanding to subject specific conversations.

7.3 Conversation and research writing are interactive processes

Research as a conversation implies participation and engagement with others who are also interested in the same issues. Inherent in the concept of conversation is the idea of exchange and interaction (Bechtel). Computer-based tools supplied by libraries, like catalogs and databases, are just ways to tap into ongoing conversations where people offer “new ideas, argue for new interpretations of old ideas, draw connections, point out contrasts, inquire into meaning, and interpret the signifiers of cultures in ways that construct meaning” (Fister, “Teaching” 215). Different tools tap into different participants’ conversations, with different levels of expertise, bias, documentation, and vocabulary.

As with any conversation in which students might participate, they should question their sources when something isn’t clear, weigh and synthesize the distinct voices, and finally determine what is of value and worth integrating into their worldview. Schmersahl believes that students must be able to “read analytically, identifying a piece’s major points and sources of support or development, at the very least” (234). Fister describes this as a rhetorical response to the readings; students should “interrogate” their sources to determine their merit and utility, as well as the “implied audience, the argument, and above all the evidence used to support the argument...” (“Teaching” 217). Richard Larson states that students should “be held accountable for their opinions and should be required to say, from evidence, why they believe what they assert” (816). In scholarly discourse, the speakers/writers provide evidence for their claims via research results, supporting or disputing, but always citing, prior conversants.

Actively listening to the written conversation in these ways clearly requires more than casual eavesdropping.

Fister's 1992 study of the most successful student researchers found they engaged their resources by: looking at the language of the piece (what they looked for depended on the level of work required and their familiarity with the vocabulary of the discipline); by tracking how often particular authors were cited by others; and by looking at the quality of the evidence cited by an individual author (Fister, "Research" 166). This interactive process, in written form-- not transferring verbatim text—was the students' way of responding to the conversation. In a subsequent article she notes that students should be encouraged to think of themselves as active participants in the conversation, to recognize that their responses to their sources become part of the conversation for those that come after them (Fister, "Teaching").

A somewhat different approach proposed by Brent encourages students to try and reconstruct the context within which written works are created and to know more about the person who created them. This 'Rogerian' style of argument calls on the student to engage in "empathetic listening" to find a common ground (Brent, "Rogerian"). This may seem counterintuitive to those students who view argument as adversarial, but this also may be the very approach that invites the type of complexity these students need to carefully examine the credibility of their sources. This fits very well with our model of research as conversation, for they need to know who is talking and what beliefs and values shape their views in order to fully evaluate their contribution.

Still another approach starts with a given text to which students respond by formulating questions, thus promoting a spirit of inquiry and initiating a dialogue with their sources (Tracey). Williams also has her students interact with one another, expanding the conversation about what they are finding. Students present an oral progress report on their research, which generates feedback and further questions.

The classic questions of journalistic writing, 'who, what, when, where, and why' are easily adapted to a conversational and rhetorical framework in which students can be asked both to engage and challenge their sources before they integrate them into a written conversation. 'Who would you expect to be talking about this issue (who's interested)?' 'What kinds of things will they be saying (what kinds of information, what terminology might they use)?' 'When do you think this conversation might have started? or stopped?' 'Where will these conversations be taking place and/or where do you need to look for these conversations?' 'Why would someone be talking about this topic?' 'Does that give you information about their possible perspective or bias?' These are questions we ask ourselves implicitly in daily interactions, so connecting them to the information gathering process via a conversational metaphor would probably make sense to students. To take a specific example, let's say the topic is intellectual property, specifically downloading music off the Internet. The question of 'who would you expect to be talking about this issue (who's interested)' can lead to brainstorming ideas concerning audience and 'sides' of the issue (e.g. musicians who make a living off their music, buyers who don't want to pay \$15 for a cd, record companies who have a vested interest, etc.) Questions like 'What kinds of things will they be saying?' and 'what terminology might be used?' raise the possibility of students expanding potential source materials just to establish some definitions of jargon (such as "intellectual property" and "fair use"). 'When do you think this conversation might have started?' can serve as a place to point out that this is hardly a new issue, dating back in some respect to the 15th Century and the invention of the printing press (and folks like Shakespeare and Marlowe who wanted to guard their livelihoods). This conversational approach to information gathering illustrates to students how recursive and expansive the process promises to be if the student can go beyond the immediate sources. Each source invites another voice in.

7.4 Conversation, like research, is situated in context

Conceptualizing conversation that spans time and distance can help students expand the chronological and geographic context of an issue. Moreover, information must be retrieved from text in most cases and so the *context* of its creation will “cling” to it (Fister, “Teaching”) if students know where and how to interpret the clues. Libraries historically have been charged with preserving critical conversations of the past (records preservation) and, in that role, with ensuring others’ ability to build upon and continue those conversations. Asking students to see research conversations as extending across time and geography should not be a big stretch since most are already familiar with the ubiquitous ‘electronic conversations’ that often span the globe. This view of research as a conversation stretched out over time can be used to enlarge the time horizon for consideration of the ‘current issues’ that students often choose to write about. As Joan Bechtel so expansively states, students can be

invited to discover and participate in discussions that span the globe and the centuries...students in the [21st century] can enter a dialogue with Plato, Machiavelli, and Gandhi on the relationship of the individual to the state. They can participate in conversations on world hunger, euthanasia, and drug abuse...library materials, understood in their original and proper relationship to each other, represent the opinions and arguments in the ongoing conversations on these issues. The aim of instruction becomes one of enabling students to be active and critical in the encounter with other minds. (Bechtel 222-223)

The Burkean parlor metaphor is particularly apt here. Even though an issue is being prominently discussed in the local news media this week, it is likely that people have been talking about it, or about related ideas, for some time already, or at some other period in time or some other place, and that people will continue to discuss it probably

long after the individual student has left the conversation, i.e., completed the assignment. We implicitly make judgments about conversational contributions based on the context, whether it's electronic or in person. If we're talking to someone, we have opinions about how knowledgeable he/she is, what the situational demands in play might be, what other pieces of conversation are swirling around. In electronic communication we likewise know something about the focus of the particular forum (e.g., listserv, bulletin board) and historically what the level of contributions have been – whether they are rants or personal opinion or information based on experience, etc.

One activity Davidson and Crateau utilize is to introduce their honors writing students to the conversation of their chosen discipline by browsing journals in the subject area, thereby developing a sense of the speakers, issues and perspectives. Alternatively, Marino and Jacob suggest familiarizing students with the context of the discourse community in which they will be researching and writing by looking at how those outside the discipline write about the field. Those journalistic questions we discussed in the previous section also help students situate a particular thread of conversation in time and place. Barbara Fister (“Teaching”) offers specific clues to look at within citation records to understand the intended audience as well as the purpose and point of view of the speaker, e.g. is the title short or long, catchy or informative? What kind of publication is it in? Within the text, the level of the language, the format and length of the material, the affiliations of the author, the evidence provided through references, could all be understood as contextual information to help make sense of a particular conversation. An additional benefit of examining the citations, particularly for key sources, is that they provide links to other conversants on the issues, perhaps more effectively than by doing the usual search in databases. Fister’s (“Research”) successful undergraduate researchers found this a very productive approach that also helped them identify who the credible speakers were.

7.5 Conversation is a recursive process

The metaphor of conversation fosters a process orientation instead of a task or product orientation to research writing, and conversation, like research writing, is usually not a straightforward process. 'Participate in this conversation in this way' is much more consistent with what faculty really expect from students than 'find 6 articles from 5 kinds of resources on your topic.' That is, faculty who give writing assignments expect students, ideally, to engage in the scholarly discourse of a particular field, not just to regurgitate facts or quote others.

The focus is on the process of scholarly dialogue, not on the organization of the library or the production of term papers...the structure of conversation is open-ended. There is always a great deal more to do, there is much more to say and many more voices to be heard. (Bechtel 223-224)

Moreover, this process is anything but linear. The very word 're-search' implies a cyclical process, not something completed with one pass through the library or the literature. Kleine reminds us that "academic and professional writing is a complex, recursive process that includes both research...and reading from start to finish..." (152).

In Kleine's interviews with faculty researchers, they all described research/writing as a struggle with a "sloppy" yet "rich" process that involved constant rethinking and revising. One interviewee described it as "a dialectical process" (156). His subjects in fact raised concerns about any attempt to impose a sequential or categorical model on their process, saying that they repeatedly moved back and forth between the steps. In spite of his initial goal to define the steps of the research/writing process, Kleine had to finally conclude that research/writing is best characterized by an "absence of a direct and linear route" (160). Foster's research with multi-disciplinary search behaviors concludes categorically that information seeking is "nonlinear, dynamic, holistic and

flowing” (235), and should lead us to new models of teaching information literacy and library skills. Even when the composition handbooks outline a linear, step-wise process for research, student researchers don’t proceed in this fashion (Fister “Research”; Quantic). What better metaphor than conversation to characterize the give and take that epitomizes the research/writing process?

Fister’s undergraduate researchers revealed important ways in which they re-engaged their resources (“Research”). When asked about how they dealt with encountering positions opposed to their own, several suggested that this was useful because it helped them refine their arguments (in counterpoint) and better marshal their evidence to refute them. These reported behaviors are perfect examples of what Kleine observes, “research/writing is a form of discourse that includes both epistemology and rhetoric: its ultimate goal is not only the private discovery of new knowledge, but also the effective transmission of that knowledge to a community of interested others” (153). Students clarify and expand their knowledge by responding actively to the written conversation with writing of their own.

One reason that critics find the traditional approach to teaching the research paper in freshman composition courses counterproductive is that it is often taught with “an artificial linearity [that] erases the necessary synthesis between the research process and the writing process” (Marino and Jacob 131). Certainly, our own experience shows that, when using the traditional model, the resources are often tacked on at the end rather than being part of the ‘ongoing conversation’ as evidenced, for example, by appearing in early writing drafts. One of the most commonly discussed approaches to counteract this product mentality is to infuse research into every aspect of the class or assignment in some fashion. Building in regular checkpoints with instructors and librarians, with feedback offered, also fosters this process approach and offers opportunities for learning as well. Other conversational tools can be used like online

research journaling or course software discussion areas so that feedback and questions can come from peers. Smith finds the research journal particularly helpful because students can more clearly see the recursive nature of their own research. Pre-writing in journals, before actually searching for resources, is an excellent way to promote research planning and a rhetorical approach. Such activities foster a critical approach to the student's engagement with the outside resources, whatever the format.

7.6 We construct meaning from our conversations

A conversational metaphor is consistent with a constructivist model of learning. We don't get new ideas all at once. We can more immediately integrate that information which is consistent with our existing worldview, whereas new or even conflicting information requires more time to reshape our mental models. Our construction of meaning is not just a cognitive process but is also driven by physical and emotional factors (Kuhlthau, Ch.2). Most students have had the experience of eventually being convinced to a new point of view after hearing (or reading) from a particularly compelling speaker. Helping students understand this often unconscious process of evaluating speakers and their arguments in the construction of meaning will allow them to use the criteria that those in academia implicitly rely upon for determining the legitimacy of a particular speaker in disciplinary discourse.

An NCTE Commission on Composition report puts forth as their first assumption, "when people articulate connections between new information and what they already know, they learn and understand that new information better" (Fulwiler). The composition literature takes as a given that writing is learning and, as Kleine notes, some even posit that writing is research.

Writers develop a sense of rhetorical purpose as the process unfolds, not strictly before the acts of researching and writing. Thus writing that includes research of

any kind must be seen as being both 'strategic' and 'heuristic.' Not only do researchers/writers need to collect data and write with an established and focused sense of their goal (strategic work), but they also need to accommodate and consider unexpected data and insights that are *discovered* during the process (heuristic work). (152)

This is easily translated to the metaphor of conversation; for example, it's a frequent experience to gain clarity about our own ideas or about an issue as we talk with others. Brent tells us that you can never read the same article twice (Reading). Once you've read it, your frame of reference is changed so that the second reading will convey different information; you will construct meaning from it using a different base of understanding than you did the first time through. In conversation, as in research, this allows us to re-engage, maybe by asking questions or reading more, from a more informed position. Brent advises us to share our experience with students,

that the questions they are asking of a source will mature and shift as they read, and will develop further when they begin writing and rewriting their papers. Questions they never thought to ask the first time will drive them back into their material and into new material...with a different set of eyes that will evoke a new virtual work from them. This is more than the typical 'narrowing' of a subject to make it more 'manageable'. (Reading 109-110)

In other words we should remind students that our state of knowledge is not static and that part of the research writing process is to clarify and expand our knowledge as well as to share it.

Fister's undergraduate interviewees also found that research and writing are ongoing and interactive parts of this recursive process. In fact, one student spoke of discovering what he wanted to say as he wrote ("Research" 167) and another noted that he had run across things early in his research that later proved to be critical pieces, only

he “didn’t realize it yet because I wasn’t familiar enough with it” (“Research” 166). “There is no such thing as knowledge that is dissociated from discourse,” asserts one of Kleine’s respondents (161). The writing process helps us create knowledge, not just share what we’ve found. Tracey, Schmersahl and Williams all have students start their research by generating questions about a shared stimulus (e.g., a picture, a famous person) to help build the research community. These collective interchanges help students determine what’s meaningful and what’s still unknown. This approach, Tracey believes, also helps steer students away from using what’s easily available or what will support a pre-determined position. Research logs, annotated bibliographic pieces and free writes can all be used to encourage and determine whether or not students are making sense of their findings. Such regular communication allows the instructor/librarian to find out with whom students are ‘conversing’ in the literature and offer clarification or guidance. Williams offers a particularly challenging test of meaning construction by having students submit their first draft of a paper as a free write using no notes, requiring students to use their own words and synthesize what they have gleaned from the overheard conversations (readings) so far.

7.7 Conversational metaphor is easily shared across disciplines

Research as conversation offers a common translator for the shared concepts that often use different terminology in the fields of information literacy and rhetoric. Intended audience, purpose of communication, appeal to the logic and emotions, credibility/character of the speaker are concepts frequently used in the discipline of composition that easily translate into a conversational metaphor. Likewise these concepts share intellectual space, if not always vocabulary, with libraries’ goals for teaching information literacy. Students in composition classes typically are asked to consider the credibility of the author/speaker, which is similar to the evaluations we

promote in library instruction regarding the authority of a source (e.g., ACRL Standard 3, “The information literate student evaluates information and its sources critically...”). Further, composition students are asked to consider the merits of an argument, which has parallels in information literacy criteria like Std. 3, indicator 2.b (“analyzes the structure and logic of supporting arguments...”). Finally, composition students consider the emotional elements of a communication, and this mirrors the information literacy criterion of objectivity or bias (e.g., Std. 3, indicator 2.c “recognizes prejudice, deception, or manipulation”). All of these criteria for evaluation can be reframed as ways to engage the participants/sources in a conversation. We ask students: How are this author and his/her claims validated, that is, what evidence is provided to back up the claims (citations, etc)? What can you know about him/her from the clues you have surrounding the written piece of conversation, such as the level of vocabulary, the place the conversation is happening, etc? What is this person’s agenda in talking to you (the reader) and what emotional appeals are employed, if any? What, in short, makes this speaker believable or, conversely, why does he/she fail to persuade you? Most of us, including our students, implicitly employ these benchmarks when carrying on a conversation, both for evaluating the other and for formulating our own participation.

8. Conclusion

In its earliest meanings conversation meant ‘living or having one’s being in a place or among persons... Conversation was and is an essential activity of human beings and one that informs, critically evaluates, and provides energy and renewal for their life together...Conversation can be of utmost seriousness...Conversation can be purely playful, recreation...conversation, the most general and inclusive activity of human connectedness. (Bechtel 221)

In keeping with this spirit of conversation, we've suggested some ways to use the conversational metaphor in our instructional role, specifically to teach the research process within the English composition (or any writing intensive) curriculum.

We started from the assumption that research is as much an iterative process as is writing; numerous speakers in both the composition and the library instruction fields passionately agree. Therefore, it would be unrealistic to expect that instructors could teach research skills effectively in a single session anymore than they could teach someone to write in one class. We agree with those who advocate placing the conversational skills needed for research facility consistently alongside the development of writing skills, what we characterize as a 'bilingual' composition class. In order for students to see themselves as participants in the Burkean parlor of academic discourse, they need to understand that each writing assignment is their contribution to an "ongoing, written conversation" (qtd in Brent, Reading). Moreover, we must help them realize that the resources they consider for inclusion in their writing are "repositories of alternative ways of knowing, repositories which must be actively interrogated and whose meaning must be constructed, not simply extracted (Brent, Reading 105).

Brent's rhetorical reading model articulates one approach to achieve this desired outcome. He encourages us to teach students to actively participate in the "'textual economy' of producing and consuming texts in pursuit of answers to questions" as a way to help them "use their current structures of knowledge as bridges to newer and richer structures of more specifically disciplinary knowledge" (Reading 107). This rhetorical approach to research is consistent with constructivist theories of learning and easily translates into our conversational metaphor for teaching research in the writing classroom. Likewise, we agree with Brent that there are some important things we, as seasoned academics, can **tell** students about research-based writing that will illuminate

the process for them. Among these are the importance of spotting potential bias through evaluation and comparison of sources, using 'gut reactions' to sources as a starting point for exploration, and that the recursive nature of research and writing will change the students' original questions and perspectives, sending them back for more research (Reading 108). From an implementation standpoint, these understandings can provide the substance for lectures, or more usefully, for written and oral feedback to the students. In addition, constructive acts support skill and concept building, so we must help shape assignments that conform to the 'research is recursive' motif, fostering better integration of research as a process into the writing process. An instructor who

sets a research assignment well in advance, encourages students to record the progress of their ideas as they develop, and meets with them individually before they hand in their final drafts will have the opportunity to sound out their research strategies and motivate them to go back to their sources if the direction of their inquiry seems to be changing. (Reading 113)

The ongoing conversations with instructors stimulated by work in progress provides a diagnostic for the research process, in the same way that writing drafts elucidate progress in compositional facility.

Marino and Jacob express confidence that true dialogue can bring practitioners of different disciplines together. We believe that the conversational metaphor for research can provide one tool to help overcome the "tension, misunderstanding, and, at worst, suspicion" (139) that arise when we work across disciplines to facilitate students' achievement of mutually desirable goals. They claim that

Traditionally, both the composition teacher and the reference librarian have valorized the answer of the question over the question itself; yet the activities in the composition classroom now tend to center on the questions that formulate the process of discovery through research... the librarian can validate the

questions informing the student's expressed need...and a dialogue based on questions rather than answers can repair the communicative triangle between the composition teacher and the reference librarian." (139-140)

Likewise, Schmersahl asserts that our objective "should not be to teach students to write a research paper. Rather, we want them to adopt the spirit of inquiry that makes doing research an indispensable part of many writing projects" (238). This iterative process of constructing meaning is wholly consistent with the tenets of our conversational metaphor.

Our own process for writing this paper illustrates the complexity of the task we set students when we assign research-based writing. Our original understanding of what was needed to teach our students has been altered by listening to and engaging in multiple conversations: with the students in the classrooms and hallways, and again by reviewing their papers through an analytical tool; with colleagues in disciplines with which we were familiar and those we weren't, at conferences, through electronic mailing lists, and by reading their written conversations; and significantly through our conversations with each other –written and oral – where we endeavored to construct new ideas (at least to us) from the conversations to which we had listened. There are compelling reasons, in our own experience and in the experience of those we have read and heard, to find better ways to align the teaching of research and writing if we are to truly equip our students with foundational concepts and skills for a successful academic journey. Our conversational metaphor for teaching the research process provides the means to do this because it: starts with an activity familiar to students, restores contextual considerations, embodies the iterative recursive nature of the research process, offers a scaffolded skill building approach, helps students construct meaning and easily translates the key concepts in both composition and information literacy. Ultimately, the purpose of our metaconversation is to stimulate and facilitate ongoing

collaboration between library and composition instructors in order to more successfully teach students to participate in the discourse of their disciplines.

References

- American Library Association, Association of College and Research Libraries (ACRL). Information literacy competency standards for higher education. Chicago: The Association, 2000.
- Bechtel, Joan M. "Conversation, a new paradigm for librarianship?" College & Research Libraries 47.3 (1986): 219-224.
- Brent, Douglas. "Rogerian rhetoric: An alternative to traditional rhetoric." Argument revisited, argument redefined: negotiating meaning in the composition classroom. Ed. B. Emmel. Thousand Oaks: Sage, 1996. 73-96.
- Reading as Rhetorical Invention: Knowledge, Persuasion, and the Teaching of Research-Based Writing. Urbana, IL: National Council of Teachers of English, 1992.
- Burke, Kenneth. The Philosophy of Literary Form; Studies in Symbolic Action. Baton Rouge, LA: Louisiana State University Press. 1941. 110-111.
- Davidson, Jeanne and Carole A. Crateau. "Intersections: Teaching research through a rhetorical lens." Research Strategies, 16 (4), (1998): 245-257.
- Dixon, Lana, Marie Garrett, Rita Smith and Alan Wallace. "Building library skills: Computer-assisted instruction for undergraduates." Research Strategies, 13 (4), (1995): 196-208.
- Elbow, Peter. "Being a writer vs. being an academic: A conflict in goals." College Composition and Communication, 46 (1), (1995): 72-83.

- Emmons, Mark and Wanda Martin. "Engaging conversation: Evaluating the contribution of library instruction to the quality of student research." College and Research Libraries, 63 (6), (2002): 545-560.
- Fister, Barbara. "The research processes of undergraduate students." The Journal of Academic Librarianship, 18(3) (1992): 163-169.
- "Teaching the rhetorical dimensions of research." Research Strategies, 11 (4) (1993): 211-219.
- "Connected communities: Encouraging dialogue between composition and bibliographic instruction." In J. Sheridan (Ed.). Writing-across-the-curriculum and the academic library. Westport, CT: Greenwood Press, 1995. 33-51.
- Foster, Allen. "A nonlinear model of information-seeking behavior." Journal of the American Society for Information Science & Technology, 55 (3) (2004): 228-237.
- Fulwiler, T. "Guidelines for using journals in school settings. Approved by the NCTE Commission on Composition. ERIC document ED282232, 3 p. (1987).
- Hutchins, Elizabeth O., Barbara Fister and Kris MacPherson. "Changing landscapes, enduring values: Making the transition from bibliographic instruction to information literacy." Journal of Library Administration, 36 (1/2) (2002): 3-19.
- Kautzman, Amy M. "Teaching critical thinking: The alliance of composition studies and research instruction." Reference Services Review Fall 1996: 61-65.
- Kleine, Michael. "What is it we do when we write articles like this one—or how can we get students to join us?" The Writing Instructor Spring/Summer (1987): 151-161.
- Kocour, Bruce G. "Using web-based tutorials to enhance library instruction." College & Undergraduate Libraries (2000): 45-54.
- Kuhlthau, Carol C. Seeking meaning: A process approach to library and information service. 2nd ed. Westport: Libraries Unlimited, 2004.

Larson, Richard L. "The 'research paper' in the writing course: A non-form of writing."

College English December (1982): 811-816.

Marino, Sarah R, and Elin K Jacob. "Questions and answers: The dialogue between composition teachers and reference librarians." Reference Librarian 37.92

(1992): 129-142.

McMillen, Paula S., Bryan Miyagishima, and Laurel S. Maughan. "Lessons learning about developing and coordinating an instruction program with freshman composition." Reference Services Review 30.4 (2002): 288-299.

Quantic, Diane D. "Insights into the research process from student logs." Journal of teaching writing 5.2 (1986): 2111-255.

Rose, Mike . "Teaching university discourse." Teaching, Writing, Learning. Ed. Ian Pringle, and Aviva Freedman. Ottawa: Canadian Council of Teachers of English, 1981. 89-100.

Schmersahl, Carmen B. "Teaching library research: Process, not product." Journal of teaching writing. 6.2 (1987): 231-238.

Smith, Trixie G. "Keeping track: Librarians, composition instructors, and student writers use the research journal." Research Strategies 18.1 (2001): 21-28.

Toulmin, Stephen E. The uses of argument. Updated ed. Cambridge: Cambridge University Press, 2003.

Tracey, Karen. "Teaching freshmen to understand research as a process of inquiry." ERIC Document (1997):1-12. ED414596.

Williams, Nancy. "Research as a process: A transactional approach." Journal of teaching writing 7.2 (1988): 193-204.