THE INFLUENCE OF COAUTHORING ON THE WRITING PROCESS

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In order to situate writing instruction in the social context of its use and prepare students for the frequent coauthoring which occurs in the workplace, more and more writing instructors are engaging students in coauthoring, a term I use here interchangeably with the term collaborative writing. When students compose together, the writing process itself is foregrounded because so much of the planning, revising, and negotiating occurs aloud. However, we do not yet know enough about the ways in which coauthoring influences the writing processes of students writing in school. To understand how collaborative writing socializes and impacts the writing process, I studied the discourse of ninth-grade coauthors, looking specifically at their planning and revising and at how such coauthoring negotiations were carried out.

Background Theory and Research

Theoretically, the study of coauthoring is grounded in both social constructionism and cognitive studies. The viewpoints of those who look at social contexts of composing and those who study individual writer's cognitive processes are sometimes seen as oppositional. But research in collaborative writing informs and is informed by both cognitive and social views of knowledge construction. Theory and research in both communities indicate that thought processes have their origin in social interaction. Students benefit by internalizing each other's cognitive processes, arrived at by communicating socially. Learning to write is a social act, "a process of identifying and reidentifying ourselves to and with others . . ." (Welch 42). For that reason, relationships in a writing classroom are not "peripheral" to the writing process; "they are central" (Tobin 6).

When students coauthor, they function as writers and readers, as authors and audience. These interactions teach cognitive *and* social aspects of writing.

While we know there is no one way to compose and that writers follow many writing processes, I will refer to "the writing process" throughout this article for simplicity's sake. Even without a stipulative definition, most teachers of writing could agree on the elements of the writing process referred to in this article: "the tasks of planning, retrieving information, creating new ideas, and producing and revising language . . ." (Flower and Hayes, "Dynamics" 32).

I focus on planning and revising because so much of the research on the writing process has addressed those elements. Planning, in particular, has been viewed as a critical factor in differentiating effective from ineffective writers. Even early research on the writing process testified to the fact that novice writers do not plan enough at any point in the writing process. While experienced writers have in mind a complex goal network about content, process, purpose, and audience (Flower & Hayes, "Cognitive" 378), novice college writers have been found to spend only between one and four minutes making decisions before they begin to write (Perl 328, Pianko 9). If college writers plan this little, we can assume that most younger writers plan even less. Having students write together is one way to emphasize planning for students because by its very nature coauthoring encourages it. In a group, writers do not just start composing. They articulate and discuss ideas before they draft specific text (Dale 68).

Revising is also a problem for many novice writers. Although many believe that inexperienced writers are too egocentric to be critical of what they have written (Perl 332), the problem may be, instead, in the way that clear, communicative text is produced. In order to revise, writers need to switch from generating text to reading critically. However, writing is so complex that the switch from one to the other is difficult. What students need is a "feedback system that allows evaluation to become part of the writing process . . ." (Bereiter and Scardamalia 37) so that they can evaluate text without losing track of their ideas. Collaborative writing may help students to revise by providing such a "feedback system." Coauthors are able to distribute some of the cognitive load of writing. For instance, a writer who might ordinarily block the flow of his

ideas with mechanical concerns could rely on a coauthor with stronger spelling or usage skills. A student who wants to reevaluate word choice or the use of a specific example can assume another writer is keeping track of the flow of ideas while she reconsiders what has already been written.

While there are not many studies of coauthoring in classrooms, those that have been done often include discussion of the writing process. Daiute, who worked with young children, found that coauthoring provided explicit experiences with talking about writing, particularly talking about writing processes (405). Working with older students, O'Donnell and her colleagues saw coauthoring groups as teaching "the cross modeling" (300) of writing strategies. Collaborative writing naturally emphasizes the writing process, as coauthors must decide on where to go before they start, and modify their text suggestions based on immediate feedback.

Context and Methodology

This study took place in a ninth-grade English class at a racially and socioeconomically diverse high school in the Midwest. Although the school "tracks" English classes, and this class was intended to be college preparatory, not all of the twenty-four students were academically motivated. For instance, two of the students dropped out of the regular school program after the first quarter. Data was collected over the first nine-week quarter of the year while I co-taught the course with Carol, a ninth-grade English teacher at the school who would remain their teacher the rest of the school year.

Forming Groups

Eight collaborative writing triads, maintained over the course of the quarter, were established in the first few weeks of the school year. I felt it was important to form the groups early, before students had developed firm notions of who among them was "smart": the strongest and most counterproductive force in groups is the status characteristic of initially perceived academic ability (Meeker and Weitzel-O'Neill 386). To create heterogeneity and balance in these writing groups, Carol and I considered gender, race, and verbal "outgoingness." Although we also considered students' writing performance, their writing did not play a large role in our decision making because they had only

written two brief assignments at the time Carol and I established groups. I did not assign roles within each group such as recorder or leader because I wanted to describe student discourse as it occurred naturally while coauthors negotiated responsibility and established their own ways of working and writing together.

Writing Task

The students wrote three essays together over the course of the quarter, and for each of these essays, they were given three class sessions. I chose argumentative topics for a number of reasons, namely, that such topics encourage individual contributions, promote cognitive conflict, and encourage the use of high-level composing strategies. Because a student's individual contributions and engagement become vitally important in collaboration (Myers 169), Carol and I modeled our coauthoring process, being sure to make explicit our disagreements and our path to what Trimbur calls "genuine" consensus (612). Our goal was to promote cognitive conflict, defined as a lack of agreement about the form and/or substance of the writing task. Because cognitive conflict is an important factor in successful coauthoring, I wanted to create a writing situation in which disagreement could play a positive role. Other studies of collaborative discourse, such as those by Burnett and Deering, have associated a lack of conflict with disappointing results. The most successful coauthors, on the other hand, engage in negotiation and cognitive conflict which lead to students offering alternative suggestions for text (Daiute and Dalton 259). When students write together on an argumentative topic, they must construct an explanation, understand and defend a position, and evaluate arguments, all high-level strategies.

The discourse of the third writing assignment became the data for this study. For that assignment the students wrote essays supporting their stand on whether minors should have access to birth control without parental consent, a topic chosen by students in a pilot study conducted during the previous semester. To promote interdependence, all students in the group received the same grade on the paper they produced. Grading coauthored papers is no different than evaluating any other written product. Where writing teachers differ is in the extent to which they differentiate among and grade students' individual contributions.

Data Collection and Analysis

To understand the influence of collaboration on the writing process, I audiotaped triads of novice writers as they coauthored. Although all tapes for all writing sessions were analyzed for broad themes, only the coauthoring discourse of the third writing assignment was transcribed and coded, using conversational turns as the unit of analysis. The coding scheme (see Appendix) was designed to analyze all interactions that might occur in collaborative writing. It highlights elements of the writing process, includes social interactions, and is sensitive to cognitive conflict which can prompt revision.

Data were collected from two other sources. One was a Likert-type questionnaire filled out by the entire class after the last coauthoring experience; it was designed to ascertain each student's views about coauthoring and to assess how well the process had worked in a student's particular group. I also conducted retrospective interviews twice, once immediately after the study to address aspects of collaborative writing that could not be well addressed by agreeing or disagreeing on a written questionnaire, and again seven months later to ask what students remembered learning from coauthoring.

Results and Discussion

The summary data highlight the function of coauthoring in promoting factors that are often seen as separating novice from expert writers. This study suggests that students writing collaboratively spend a far greater percent of their energies on planning and revising than solo authors do. In one sense that conclusion seems obvious. Coauthors cannot just begin; they must plan and negotiate. When students write alone, many tend to worry about whether they have enough to say rather than "doing the energetic, constructive planning" that experienced writers engage in (Wallace 48), but coauthoring engages students in the construction of meaning in a process which resembles the "energetic" and "constructive" composing style of more expert writers. In this study, coauthors wrote so recursively that it was often impossible to distinguish between planning and revising. However, the discussion of coauthoring discourse will be divided into planning and revising sections since the literature on the writing process so often follows those lines.

Planning

Coauthoring by its nature emphasizes planning because when students write together, they must articulate their ideas and explain the choices they make. Whereas many ninth-graders might write down the first thought that comes to mind, the coauthors in this study had to negotiate text-in-process, thus focusing attention on complete writing processes. The organization of their essays, for instance, grew out of group discussion as these students narrowed general ideas.

The results of this study showed coauthors spending a considerable amount of time on planning. On average, the writing triads spent 14 percent of their conversational turns—which correlate very closely with percent of time—on task representation, a category which includes the requirements and difficulty of the assignment, audience, purpose, and genre. An additional 25 percent of students' conversational turns were devoted to planning and/or revising, which occurred recursively over the course of the three days devoted to coauthoring one essay. It is unusual for any student writer to devote such a high percentage of time, in this case 39 percent, to elements of the writing process that are not directly related to composing.

Many students indicated on the questionnaire and in interviews that prior to coauthoring they had never before really planned a paper. About one quarter of the time spent on planning was spent on discussing the structure of the paper both globally and locally. Considerations of global structure were not neatly discussed at the beginning, as one might have expected, but rather such talk of the overall structure occurred on and off over the course of the three days. One group, after planning a narrative introduction which they referred to as a "story" on the first day, began the second day with a discussion of how the whole paper on birth control would play out.

1. Michael: Do you want to start off with the story or with an introduction that says, "Here is an example of ... "
2. Teresa: ". . . what could happen?"
3. Rasheeta: Yeah, let's do that.
4. Teresa: How many paragraphs do we need for this?
5. Michael: A lot
6. Rasheeta: As many as we need.

Discussing the local structure often occurred as students moved from one point to another throughout the three days of writing. Often this discussion was prompted by what students perceived to be the "correct" length of a paragraph.

1. Gina: Wait. That's like only two sentences there. Let's see if we can prolong that.
2. Allison: Maybe we can have one short paragraph, 'cause look at how long the other ones are.

Discussions of structure inevitably blend into those of content since students cannot discuss organization without focusing on what is being organized. A majority of the planning discourse, about 60 percent, focused on planning both global and local content. Generally, the more conversational turns a group had, the more developed the content of the text. However, some groups which did a lot of planning and were highly interactive did not write down much of what they discussed, and so the richness of their discourse simply did not find its way onto paper. In the future I would make a point of telling students to make notes on all of their coauthoring conversations so that when they develop their points, they have many suggestions from which to choose.

The ninth-graders whom I surveyed and interviewed indicated that what they most remember learning from collaborative writing was that there are different ways to plan. Over 60 percent of these students said they spent more time planning when coauthoring than when writing alone. When I looked back at the coauthoring transcripts, I could see the patterns of influence the students spoke of. It was from Kelly that both Jenny and Frank learned to brainstorm before writing. Jenny explained, "The group helped me to brainstorm better. Before I didn't plan much. Now I might be more open to ideas and that'll help me think better. I'll spend more time on it." Frank, too, learned to plan by coauthoring with Kelly. He said, "I learned about writing down your ideas before you write. I never did that before. Now I'd do that to get organized. It's better than making it up as you go along."

Other students also learned to plan from each other. Dave learned "how others work on a writing assignment. I'd be more likely to plan more in the future before writing." He used a wonderful metaphor, a "spider web of ideas" to describe what

can be seen when "you put down your ideas" on paper. In another group, Ron and Andy learned about the value of planning from Samantha. Ron expressed the planning process in an interesting way; he said he "learned to slow down. Usually, I'd just write. Now I'll brainstorm and organize." Andy saw planning as more of an investment. "It pays off."

Seven months after I had worked with this group of ninth-graders, I returned to ask students what they remembered learning, if anything, from coauthoring. Seventy-three percent of the students mentioned planning or brainstorming as something they learned about writing by writing together. Coauthoring allows students to observe alternative cognitive processes unfold on a shared topic. In modeling a variety of strategies for each other, coauthors perform a valuable function. As writing teachers, we often tell students to *show*, not tell. Coauthors do just that. Rather than the instructor explaining planning strategies, students experience them.

Revision

Initially, I intended to look at revision separately from planning. But in analyzing the coauthoring discourse, it was impossible—and almost beside the point—to try to tease out the planning discourse from the revising discourse. Revising became an inherent part of the writing process rather than a frustrating experience in which "students often sabotage their own best interests . . ." (Sommers, "Between" 26). When students coauthor, they must pay attention to planning and revising because ideas are evaluated as they are spoken and before they are written down. In fact, it is this immediate evaluation that collapses revision into planning when students coauthor. And because students have an immediate audience for writing in process, they learn to take audience into consideration. Suggestions for text are discussed, giving students immediate feedback as they talk through the writing. Confusions, because they are verbalized, become apparent, so students must revise on the spot.

The coauthoring groups that functioned most effectively in this study often constructed text together in such a way that ideas and phrasing were examined as they were articulated. In the following dialogue about the availability of birth control for minors, the coauthors worked on a narrative introduction about "Jill." Although they had only begun to write this section, they

were also clearly revising in process. Michael had agreed to write that day, so he was trying to put on paper the phrasing agreed upon by the group. Rasheeta often challenged the other two, and by doing so, she prompted the group to reexamine their choices.

1. Rasheeta: One night Jill finally saw the . . .
2. Teresa: One night Jill felt the pressure very heavily.
3. Rasheeta: We should say something like Jill was *really* depressed because she *really* liked Tim.
4. Teresa: Jill really liked him and they
5. Rasheeta: He got her drunk and she said OK (laughing)
6. Michael: So one night Jill felt the pressure
7. Teresa: very heavily
8. Rasheeta: No, that doesn't sound right.
9. Teresa: Well, she'd been subjected to pressure. Well, she, she'd been feeling the pressure for . . .
10. Rasheeta: That doesn't mean she was depressed from it.
11. Michael: Jill felt the pressure . . .
12. Teresa: No, no, no. I'm just saying she felt the pressure a lot that night, more than she had ever felt it before.
13. Michael: Anyway, one night Jill felt the pressure. How did you say that now?
14. Teresa: Jill one night . . .
15. Rasheeta: It doesn't sound right, "felt the pressure heavily." It's like drinking heavily.
16. Teresa: One night Jill felt the pressure more than she had ever felt it before.
17. Rasheeta: Right.
18. Teresa: Write that.

This excerpt of coauthoring dialogue clearly shows students revising even while they are planning and composing. Concepts and phrasing are open to evaluation before they are committed to paper. It is this aspect of coauthoring that takes so much time. But because students are experiencing both planning and revision, it is time well spent.

Coauthors keep each other aware of higher order rhetorical concerns such as audience, purpose, and word choice. For instance, many of the groups reminded each other that they

could not assume the audience agreed with their stance on the availability of birth control—that an audience needed convincing.

1. Sally: So who should our audience be? I think it should be the parents.
2. Karen: Parents would be the hardest to convince.
3. Justin: Let's do . . . um . . . I think the parents also.
4. Sally: Yeah, 'cause they're the most important.
5. Justin: Yeah, 'cause it's their say. I mean if they weren't the ones against this, then it would probably be in schools already.

Other groups reminded each other of the rhetorical purpose of their writing. One group of students was writing about the effect that available birth control would have on sexually transmitted diseases (STDs) and debating whether to include a point that the opposition might make: that in some places it is illegal for teenagers to have sexual intercourse.

1. Kelly: It has to do with all the STDs
2. Frank: And to counterargue that we're going to have, uh, it is illegal for minors.
3. Jenny: Are we going to put that in there?
4. Kelly: No.
5. Jenny: I don't think we should. It's too strong on the other side.
6. Frank: So?
7. Kelly: So we're trying to get them to get over to our side.

While we tend to consider discussions of purpose as the mark of expert writers, coauthors often remind each other of such concerns. Word choice is another element in writing that can be rhetorically driven. The same group had a discussion of what to call teenagers in their paper about birth control.

1. Jenny: If kids *do* end up having to ask their parents
2. Kelly: Yeah
3. Jenny: for birth control
4. Kelly: Kids?
5. Jenny: Should I put kids or should I change it?

6. Frank: No. Just put young adults. Why say "kids"?
7. Jenny: Kids sounds bad with sex and stuff.
8. Frank: My point exactly.
9. Kelly: If young people . . .

"Kids" does, in fact, "sound bad" with regard to sex if the object is to convince parents that minors should have access to birth control. As coauthors wrote and revised the text-in-process, they often considered higher level issues than they might have considered if writing alone.

The students in the study were rarely aware that they were revising as they wrote. Revision was embedded throughout the writing process to such an extent that when the students were interviewed, they thought they had not revised at all. In fact, they revised each time one student challenged another's choice of organization, wording, or example. For coauthors in this study, revising was a recursive process of negotiation and evaluation.

That recursiveness very well may be prompted by the immediacy of audience which impacts on students' writing processes. Coauthoring gives students a real experience with audience, often for the first time. Novice writers composing alone often tend to produce "writer-based" prose (Flower 1979); they lose their readers by not giving them all of the information needed to follow the text. Since novice writers know what they mean, they cannot imagine that anyone else does not know. "[W]riters always confront the puzzle of the absent interlocutor. Learning to write means, in large part, learning to solve this puzzle." (Sperling 64). Coauthoring can help to "solve" the "puzzle" because coauthors get built-in feedback from their peers. Suggestions for content, organization, and word choice are often negotiated taking into account the reactions of an audience that is immediate—the other coauthors.

Conclusion

Students who write together can learn first-hand about the social contexts of writing. In doing so, they do not distinguish between cognitive and social elements despite the familiar dichotomy. Because of the interactions necessary for coauthoring, students must give specific and analytical attention to their own writing processes as well as those of others.

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This study suggests that ninth-grade coauthors' writing processes tend to resemble those of more expert writers. That is, for coauthors, planning, composing, and revising collapse into one another and become all but indistinguishable in processes that are truly recursive. It is possible that coauthoring's need for consensus encourages a more recursive revising process than most novice writers would adopt when writing alone. Sommers has pointed out that unlike student writers, experienced writers assume a reader who is a "critical and productive collaborator" ("Revision" 385) and that is what prompts them to compose recursively. Perhaps coauthoring encourages a more sophisticated revision process because that "critical and productive collaborator" is a present reality.

While writing teachers rarely have the time to untangle individual writing processes, coauthors are in a position to focus on each other's writing and model alternative composing strategies. As teachers, we can learn much about our students as writers by watching and listening to coauthoring groups. Because students writing together open up their writing and thinking strategies, the time we spend observing coauthoring groups can let us know our students' capabilities and help us assess how best to focus our writing instruction. When we observe students writing together, "we become more sensitive to where students are in their learning rather than concentrating on where we think they *should* be" (Morgan et al. 25).

Since we know that attention to planning and revision are weaknesses for novice writers, coauthoring, with its natural emphasis on process, can be one effective way of learning to write. As they collaborate, students become engaged in a variety of writing processes and strategies. Because writing together provides an audience, coauthors learn to anticipate a reader's response and thus learn to function like more experienced writers. Coauthoring allows students to discuss writing in a social context and to experience how meaningful writing is composed.

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APPENDIX

CODING

Composing

CR	requesting text content
CT	literal suggesting of text
CW	suggestions at word level
CM	mechanics
CC	clarification

Strategic Thinking About Process

Task Representation

STD	difficulty
STA	audience
STP	purpose
STR	requirements
STG	genre
STW	metawriting talk

Planning

SPCG	content-global
SPCL	content-local
SPSG	structural-global

| SPSL | structural-local |
| SPR | requesting ideas |

Revising

SRCG	content-global
SRCL	content-local
SRSG	structural-global
SRSL	structural-local

Procedural Suggestions

PL	division of labor
PD	directives
PT	time management

Rereading Text

| RR | rereading what is written |

Affective Elements

AA	personal associations
AP	positive
AN	negative

Miscellaneous

OT	off task
U	unclear
INC	incomplete
SRT	study-related talk
WP	word play

Tag-On Codes Used Throughout

/A	alternative idea/phrasing
/E	elaboration
/EV	evaluation
+	positive
-	negative
?	uncertain