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# Questioning in Writing Center Conferences

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## Questioning in Writing Center Conferences

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### Abstract

These researchers examine how questions function in a corpus of eleven writing center conferences conducted by experienced tutors. They analyze the 690 questions generated in these conferences: 81% (562) from tutors and 19% (128) from students. Using a coding scheme developed from prior research on questions in math, science, and other kinds of quantitative tutoring, they categorized tutors' and students' questions. The researchers found that questions in writing center conferences serve a number of instructional and conversational functions. Questions allow tutors and students to fill in their knowledge deficits and check each other's understanding. They also allow tutors (and occasionally students) to facilitate the dialogue of writing center conferences and attend to students' engagement. In addition, tutors use questions to help students clarify what they want to say, identify problems with what they have written, and brainstorm. Based on this analysis, the authors make some recommendations for tutor training.

## Introduction

To resist the role of teacher-surrogate in favor of the role of helpful peer or collaborator, to get students to do the talking, and generally to achieve a student-centered focus, tutors have been advised to use questions as primary tutoring strategies in writing center conferences (Brooks; Harris). In other words, tutors are supposed to use questions to indirectly guide students to improving their writing. In these often-idealistic conceptions of writing center conferences, questions are “real,” genuinely reflecting an interest in who the students are and what they want to say rather than leading students to a particular point of view. Moreover, students’ satisfaction with writing center conferences has been connected to their perceptions of having their questions answered (Thompson, Whyte, Shannon, Muse, Miller, Chappell, & Whigham; Thonus, “Tutor and Student Assessments”). Tutors are supposed to encourage students to ask questions freely, and it is assumed that students will ask more questions in writing center conferences than in the classroom (Harris). However, beyond encouraging students to talk and beyond directing tutors toward students’ areas of confusion, questions are important prompts for learning and for maintaining students’ engagement in writing center conferences.

Research about question asking and answering in the classroom has typically focused on how teachers can pose questions to enhance critical thinking for students. This research has shown that the dialogic Socratic method, with its back-and-forth questions and answers, is a more effective teaching strategy than didactic teacher talk (Rosé, Bhembé, Siler, Srivastava, & VanLehn; see also Kintsch; Tienken, Goldberg, & DiRocco). Today questioning is one of the most frequently used classroom teaching techniques, with elementary and high school teachers asking as many as 300 to 400 questions per day (Tienken, Goldberg, & DiRocco). Research suggests that if used effectively either in the classroom or in one-to-one tutorials, questions can enhance students’ learning in at least three ways. First, as shown in Socrates’s questioning of his student about the concept of justice, questions can direct students in their efforts to “construct and reconstruct knowledge and understanding” (Smith & Higgins 486). By discussing what they are thinking with a more expert tutor or teacher, students engage in self-explanation, a process shown to deepen their understanding (Chi; Chi, Bassok, Lewis, Reimann, & Glaser; Chi, De Leeuw, Chiu, & LaVancher; Rosé, Bhembé, Siler, Srivastava, & VanLehn). Second, questions can enhance students’ motivation, stimulate curiosity, and encourage active participation in learning (Lustick; Smith & Higgins).

Third, teachers' and tutors' questions may become models for self-questioning, important for students in regulating their own learning processes. Further, in both the classroom and in tutorials such as writing center conferences, learning typically occurs within a conversational context, and along with stimulating understanding, questions are vital linguistic components of an educational conversation. Besides helping tutors identify what students do not know, questions allow tutors to understand students' goals for coming to the writing center and to politely facilitate the flow of the tutorial conversation. We will consider all of these types of questions in this article.

We examined how questions function in a corpus of eleven writing center conferences conducted by experienced tutors. In these eleven conferences, we found a total of 690 questions, mostly asked by tutors but some asked by students as well. Incorporating research about questions in classroom teaching, we adapted a scheme for analyzing questions in tutorials that was developed by the psychologist and linguist Arthur C. Graesser and his associates. This scheme has been used to analyze questions in math, science, and other kinds of quantitative tutoring, with a range of students from elementary school to college (Golding, Graesser, & Millis; Graesser, Baggett, & Williams; Graesser, Bowers, Hacker, & Person; Graesser & Franklin; Graesser & McMahan; Graesser & Olde; Graesser & Person; Graesser, Person, & Huber; Graesser, Person, & Magliano; Graesser, Roberts, & Hackett-Renner; Person, Graesser, Magliano, & Kreuz). Through our analysis, we show how questions can function in writing center conferences so that we and our tutors can understand the potential impact of questions on students' learning and, subsequently, pose questions more consciously.

Previous research about questions in writing center conferences has focused on what questions reveal about tutors' roles and control over conferences. For example, Kevin M. Davis, Nancy Hayward, Kathleen R. Hunter, & David Wallace analyzed four types of "conversational moves" (47) teachers use in classroom discourse—structuring the interaction, soliciting responses, responding, and reacting—to determine the extent to which tutors took on teacher roles. According to Davis, Hayward, Hunter, & Wallace, tutors are usually in control of conferences, but sometimes they do assume less teacher-like and more conversant-like roles (see also Willa Wolcott's "Talking It Over: A Qualitative Study of Writing Center Conferencing"). Susan R. Blau, John Hall, & Tracy Strauss considered the nature of the collaboration that occurs in writing center conferences by analyzing "three recurring rhetorical strategies" (22) relating to tutors' directiveness—questioning, echoing, and using qualifiers. They found that in conferences considered satisfactory, tutors

demonstrated “informed flexibility” (38) in the strategies they used. Other studies have evaluated tutors’ use of mitigated and unmitigated interrogatives (Thonus, “Dominance in Academic Writing Tutorials”), “question–answer interrogation sequences” (Thonus, “What Are the Differences” 231), and leading versus open questions (Severino). A few studies have included questions in analyzing tutors’ politeness strategies (Bell & Youmans) and self-presentation (Murphy). These studies of writing center conferences tend to analyze questions as signals of assumed role and that role’s concomitant right to control the discourse as opposed to examining all the ways questions can function—including but not restricted to the ways they help construct role and maintain control.

We analyzed questions to determine the extent to which experienced tutors ask questions that push students’ thinking, check their understanding, facilitate conversation, and model the types of questions students should ask of themselves in order to assess and develop their own writing. Simultaneously, we speculated on the relationships between questioning and students’ and tutors’ roles. After delineating the question types we found, we examined question–answer patterns according to initiation–response–evaluation (IRE) instructional dialogue (Mehan), a classroom discourse pattern largely unexamined in writing center research (for an exception, see Porter). We examined writing center variations on the IRE pattern, showing how experienced tutors used different types of leading and scaffolding questions in tandem with common-ground questions in a cycle of promoting students’ thinking and engagement and of checking students’ comprehension.

## Method

To understand how tutors and students use questions, particularly how certain types of tutor questions might promote student learning, it is important first to define “question,” both in terms of what a question accomplishes (i.e., its illocution) and in terms of its typical syntactic structure. With a question illocutionary speech act (i.e., what a person *does* with their words), a person invites some reply from another person. (Questioning is just one illocutionary act; other things we can do with words are asserting, directing, and promising, among others.) Usually, we equate the illocutionary act of questioning with an interrogative syntactic structure, which in English can take several forms: *wh*-questions (*Which heading style works best here?*), yes–no questions (*Do you want to put a heading here?*), and tag questions (*Headings really improve readability, you know?*).

Differentiating between question illocutions and interrogatives is important because tutors (and students as well) can perform other

illocutionary acts with interrogatives, such as making suggestions or requests, often for the sake of politeness. For example, a tutor who wants to see a student's assignment sheet might say *Why don't you show me your assignment sheet?* rather than *Show me your assignment sheet.* That illocutionary act is a directive, not a question, yet the illocutionary act is manifested in interrogative syntax. Conversely, although the illocutionary act of questioning is typically manifested in interrogative syntax, questions can also manifest themselves in noninterrogative syntax. A question like *I add a heading here then?* is a confirmation question that manifests itself in declarative syntactic form. The distinction between a question illocutionary act and interrogative syntax is what led Graesser, Person, & Huber to examine all question illocutionary acts, what they call "inquiries," as opposed to just interrogatives. Inquiries, they explain, may or may not take the form of interrogatives. For example, *The assignment asks you to do that?* is stated as a declarative, not an interrogative. Nevertheless, Graesser, Person, & Huber classify it as an inquiry—a question—because "the speaker is genuinely seeking information from the listener" (169). Graesser, Person, & Huber say that in their scheme, what counts as a question "may be an inquiry, or an interrogative expression, or both" (169). To investigate how tutors and students use questions, we follow Graesser, Person, & Huber in that we identified and coded all interrogatives and, more broadly, all question illocutionary acts.

We developed our coding scheme by modifying Graesser, Person, & Huber's analytical procedure based on what they call question-generation mechanisms. Question-generation mechanisms include four categories that are based on the speaker's goal, or in other words, the type of response the questioner wants: (1) to fill in the speaker's knowledge deficits, (2) to establish and monitor common ground with listeners, (3) to coordinate social actions with listeners, and (4) to control the flow of the conversation. We tested this four-item scheme on four transcribed conferences, modified it as we analyzed each conference, and talked through our disagreements about codes for participants' questions. Our process was recursive in that considering and reconsidering the coding scheme developed for analyzing tutoring in a situation quite different from ours gave insight into the dialogue of the eleven writing center conferences.

Our most substantial change to Graesser, Person, & Huber's scheme was that we added a category related to the goal of instructing: leading and scaffolding questions. Although Graesser, Person, & Huber classify some instructional questions in their four categories of question-

generation mechanisms, their scheme does not allow fine-grained analysis of tutors' instruction via questions.

Through multiple iterations of testing and revising, we established informative and reliable categories. Table 1 shows the coding categories, category definitions, and examples of each.

Table 1: Coding Categories and Definitions for Questions

Question Type	Definition and Examples T = Tutor S = Student
Knowledge deficit (T and S)	<b>Questions obtaining information that T or S genuinely does not know.</b> These questions aim to gain information or request clarification about a topic. <ul style="list-style-type: none"><li>• S asks a question to obtain a crucial piece of information and to ensure S's knowledge is correct: "What is a scholarly journal?"; "Is this answer correct?"; "Should I group all the pros together or organize by pro, con, pro, con?"</li><li>• T asks a question to gain information T does not already know about the topic and to ensure T's knowledge is correct: "What is the name of the company you worked for?"</li></ul>
Common ground (T and S)	<b>T questions ascertaining what S needs, wants, knows, and understands about an assignment:</b> <ul style="list-style-type: none"><li>• To assess what S knows about writing: "Do you know what a noun is?"</li><li>• To assess what S knows about the topic of S's writing: "What is the bubonic plague?"</li><li>• To assess what S knows about the assignment and/or S's stage in the composing process: "Do the articles you've chosen support your position?"; "Has your teacher commented on this draft?"</li><li>• To understand the assignment: "What did your teacher say are out-of-bounds topics for this paper?"</li></ul>
	<ul style="list-style-type: none"><li>• To understand what S wants to do in the conference (agenda setting): "And your goal is to have a thesis that is making sense, right?"; "So, do you want to go through this end part now?"</li><li>• To gauge whether S is understanding—nonformulaic: "Do you see where we are going with this argument?"</li><li>• To gauge whether S is understanding—formulaic: "So, you would put a comma here. You know?"; "Do you understand?"</li><li>• S (occasionally) asks common-ground questions to gauge whether T understands.</li></ul>

Social coordination (T and S)	<p><b>Questions relating to the actions of S and T during the conference:</b></p> <ul style="list-style-type: none"> <li>• Indirect requests: “Would you read this sentence aloud?”</li> <li>• Indirect advice about improving the composing process: “Why don’t you go home, have lunch, and come back later?”; “Why don’t you put a check mark next to words you want to change?”</li> <li>• Permission: “Can I come back tomorrow?”</li> <li>• Negotiations: “If I come back tomorrow, will you work with me again?”</li> </ul>
Conversation control (T and S)	<p><b>Questions relating to the flow of the T-S dialogue and to their attention:</b></p> <ul style="list-style-type: none"> <li>• Greetings and closings: T says, “Hello, how’s it going?”; “Have I answered all your questions?”</li> <li>• Gripes: S says, “How am I ever going to get this work done by tomorrow?”</li> <li>• Questions intended to change the flow of the conversation: S says “My teacher doesn’t like me.” T replies, “Now how about looking at your thesis statement? Where is it?”</li> <li>• Replies to summons: T says, “Hello, Alice.”; S says “How long can we work together today?”</li> <li>• Rhetorical questions: T says, “What’s appropriate business dress? Well, it involves meeting the expectations of colleagues.”</li> </ul>
Leading and scaffolding (T only)	<p><b>Questions leading S to an answer, one that the T seems to have already in mind. Often the answer is “yes” or “no.”</b> S is writing a spatial description of the library, starting from the top floor and including each floor. T reads the description and finds that S stops at the second floor. T says, “Do you think you should write about going downstairs?” S answers, “Yes.”</p> <p><b>Questions pushing S forward in revising or brainstorming. The answer is not “yes” or “no,” but in some incidences T may have an answer in mind.</b> “What do you think?”; “How might you incorporate examples into this paragraph?”; “How do you argue that people should be informed?” Scaffolding occurs through pumping, prompting, referring to a previous discussion, providing alternatives, responding as a reader, and paraphrasing.</p>

The corpus analyzed for this study was selected from a larger corpus of 51 writing center conferences recorded from 2005 to 2008 at a large southeastern university, with data collection approved by our university’s Institutional Review Board. The writing center where the



data collection took place operated under a 30-minute guideline for conferences. The eleven transcribed tutor-student conferences examined in this study ranged from 17 to 40 minutes, totaling approximately six hours. Ten conferences constituted first-time meetings for the tutor and student; one of the conferences we believed to be a first-time meeting. Before we could verify, the writing center database was lost in an administrative transition. For most of the conferences, we collected retrospective interviews with the tutors. We conducted these interviews by playing back each recorded conference and asking the tutor why they used certain tutoring strategies. Five of the conferences were coded according to the revised analytical scheme by the two researchers, and the remaining six were coded by one of the researchers and a trained graduate research assistant. Along with another trained graduate student, we validated our coding scheme with a subset of 32 questions, achieving 93% agreement. Although Saldaña (2013) points out that “no standard or base percentage of agreement” exists,” he goes on to say that “the 80–90% range seems a minimal benchmark” (35). We were satisfied, then, with our percentage of agreement.

We selected these eleven conferences because each was evaluated as satisfactory or, more often, as highly satisfactory by its participants in postconference surveys. At the end of each conference, both the tutor and the student filled out surveys with matching items. The two final items on both surveys asked the conference participants to rate their perceptions of conference success on a six-point scale with 1 being “not successful” and 6 being “very successful” and then to rate their perceptions about the students’ willingness to incorporate the results of the conference into their papers, with 1 being “none” and 6 being “all.” On the matching items about the success of the conference, nine students assigned a 6 rating and two a 5 rating; five tutors rated the conferences at 6, four at 5, and one at 4. The responses to the matching items about the students’ uses of the results were equally positive, with nine students again assigning a 6 and two a 5 and with five tutors rating the item at 6 and five rating it at 5.

In addition, all of the tutors were experienced, with each in their second year or more of working in the writing center. The tutors had all completed a semester-long training practicum, and several were participating again as practicum leaders or mentor tutors. Seven of the tutors were graduate teaching assistants teaching the courses (but not the students) that generated the assignments in the conferences; three were advanced undergraduates, pursuing either English majors or English minors, with overall GPAs of at least 3.5. (Two conferences analyzed here were conducted by the same tutor, working with two

different students.) The graduate students worked in the writing center without being screened, but the undergraduates had been rigorously screened—nominated by an instructor, interviewed, and required to provide a satisfactory writing sample and pass a proofreading test. Therefore, all of the tutors can be considered accomplished writers (and students) and trained and experienced tutors. Seven tutors were male; three were female. Both the tutors and the students in the conferences were L1 American English speakers.

## Results

In keeping with what prior research (e.g., Graesser & Person) has shown consistently, tutors in our study asked most of the questions: 81% (562) of the total 690 questions, while students asked 19% (128). Tutors averaged 51.1 questions per conference, and students averaged 11.6 questions per conference. More interesting, however, is experienced tutors' overwhelming use of two types of questions: (1) questions to establish common ground with students, including questions tutors asked to be sure they understood the assignment and the students' conference goals and to evaluate the students' understanding, and (2) questions to lead and to provide scaffolds for students, aimed at moving students along in their brainstorming and revising. Of tutors' 562 questions, 82% (463)—over four-fifths of their questions—sought common ground and led to or provided scaffolds. Table 2 shows the frequencies of tutors' questions by type. As we describe and explain in more detail later, this finding suggests the possibility that experienced tutors formulate questions that help students think about their writing, that keep them engaged in the conferences, and that model the questions students need to ask themselves as they compose and revise on their own. And, after having formulated such questions, tutors check in with students to see whether they understand. Tutors thus create a cycle of moving students along in their thinking and then assessing the “distance” they have covered.

**Table 2. Distribution of Tutors’ Questions across Question Types**

Question Type	Number of Tutor Questions	% of Tutor Questions (n = 562)	% of Same-Type Questions	% Total Questions (n = 690)
Knowledge deficit	60	11.7	33.3	8.7
Common ground	232	41.3	98.3	33.6
Social coordination	19	3.4	95.0	2.8
Conversation control	20	3.6	87.0	2.8
Leading and Scaffolding	231	41.1	100.0	33.5
Total	562	101.1*	---	81.4*

**\* Results due to rounding.**

Students’ question types reflect their role in the interaction: 94% of students’ questions were knowledge deficit. According to Person, Graesser, Magliano, & Kreuz, students’ knowledge-deficit questions demonstrate their ability to self-regulate their learning, although in their study of tutoring related to quantitative problem solving, the highest achievers did not ask the most knowledge-deficit questions. Students used these questions to elicit tutors’ opinions about writing in general (e.g., *You can’t start a link with “because” can you?*) and about their papers in particular (e.g., *Would that make it better, or do you think I just don’t need to change it?*). Table 3 shows the frequencies of students’ questions by type.

**Table 3: Distribution of Students’ Questions across Question Types**

Question Type	Number of Student Questions	% of Student Questions (n = 128)	% of Same-Type Questions	% Total Questions (n = 690)
Knowledge deficit	120	94.0	66.7	17.4
Common ground	4	3.1	1.7	0.6
Social coordination	1	0.8	5.0	0.1
Conversation control	3	2.3	13.3	0.4
Leading and Scaffolding	n/a	n/a	n/a	n/a
Total	128	100.2*	---	18.5*

**\* Results due to rounding.**

Like Graesser & Person, we found that questions related to social coordination and conversation control occur infrequently. According to Graesser & Person, social-coordination questions tend to occur in contexts where people have worked together for a time, while conversation-control questions tend to occur in situations with more than two participants interacting socially and attempting to distribute the talk among individuals. Neither of these contexts is the case in the conferences that comprise our corpus.

Findings related to each type of question are discussed below.

### Knowledge-Deficit Questions

Fewer than 12% (60) of the questions asked by tutors were intended to gain unknown information or to clarify information about which they were unsure. Because the assignments were from freshman composition or sophomore literature classes, the tutors were likely familiar with many of the texts and the everyday experiences the students were writing about. However, they occasionally needed students' help with unfamiliar texts. For example, in one conference, the student began by asking the tutor if she had read "Notes from the Underground" and "The Fate of the Cockroach." When the tutor responded negatively, the student summarized the plots of both short stories. Likely based on her knowledge of literary analysis and of typical assignments requiring students to write about literature and on the student's plot summary, the tutor was able to lead the brainstorming and help the student develop a thesis by asking only a few knowledge-deficit questions, probably to clarify information she assumed about the stories. Not having the benefit of a plot summary, another tutor asked questions that went beyond clarification to gain knowledge about the text the student was reading (e.g., *Now, is this being one who kind of dictates every little thing in the universe, or does he create it and then sit back and say "whatever, do your thing"?*). The most knowledge-deficit questions from a tutor in a single conference was 11. In that conference, the student was writing a personal experience essay. In her retrospective interview, the tutor said she questioned the student about the changes in her life so the tutor herself could figure out a possible focus for the draft—a focus the student would be willing to stick to and spend time developing.

Along with supplying unknown information about a topic, knowledge-deficit questions augment the set of relevant knowledge the tutor and student share. For example, in a conference we excerpt later, the tutor had just asked the student a series of scaffolding questions about what the readers of *Cosmo Girl* magazine have in common. The

student responded that they are popular and have money. The tutor clarified with *Okay, so it's upper class?* With this question, the tutor sought information to confirm a shared understanding of the topic with the student.

Whether tutors working with unfamiliar topics, such as topics covered in writing assigned in upper-division courses, would ask more knowledge-deficit questions than the tutors in our conferences remains to be seen. In such conferences, tutors would need to clarify content to offer sound composing suggestions at either a micro or macro level. Since their tutor role does not wield as much authority as an instructor role, tutors might be willing to reveal deficits in their knowledge and ask questions to fill those deficits.

Students' institutional role promotes knowledge-deficit questions. In our data, students got the information they needed by posing clarification questions.

(Excerpt 1)

- 1 Student: This one, I'm reading it right now, and is that confusing, as far
- 2 as like, who's playing and who's walking?
- 3 Tutor: Yeah, a little bit. So, "As he played, a man walked by and said"
- 4 Student: [overlaps] Could I change
- 5 it to "As John played," or something?
- 6 Tutor: Yeah, I think that would solve the problem

In similar exchanges, students sought answers, and tutors readily supplied those answers—particularly when those questions and answers related to sentence-level issues, which tend to have straightforward, even yes or no, answers.

### Common-Ground Questions

As we noted before, 41% (232) of tutors' questions established common ground. These questions occurred most frequently to check that students understood or to ensure that the tutor had provided the support students wanted or needed. Tutors' comprehension or assurance checks came in two forms: formulaic questions (e.g., *Do you see what I mean?*) and nonformulaic questions constructed for individual situations (e.g., *And then, do you see that would be a little bit easier to relate back to the thesis statement? Do you feel like you—you've got some insight into comma usage?*). Most of tutors' checking questions appeared to be formulaic (136 out of 154). In addition, our data contained an outlier: 63 of the 136 formulaic

checks occurred in a single 31-minute conference. In his retrospective interview, the tutor said that working with the student was particularly challenging because the student had some negative feelings about her instructor. Coincidentally, our corpus contains two conferences with this tutor. In the other conference—a conference in which the tutor and student appeared to establish a rapport—the tutor asked only 8 formulaic questions, a frequency on par with that of the other tutors (average = 7.2) and far fewer than 63. Such frequent comprehension checks may constitute a way that tutors demonstrate concern for students and thus try to enhance their motivation (see Mackiewicz & Thompson).

The experienced tutors appeared to use common-ground questions for a variety of other purposes as well—all related to gaining a shared understanding with students at some level. They used them to establish a shared understanding of the assignment so that they could help students determine the best course of action in planning or revising. Gaining an understanding of the assignment, tutors asked questions like *Is this supposed to be, you know, research-based or is it from your own observations?* Tutors also used common-ground questions to determine what students wanted to accomplish during the conference: *Okay, so do you want to go through this end part now and pick out some places that you could expand?* Such common-ground questions often occurred early on as the tutor and student set the conference's agenda. However, common-ground questions to determine what a student knew about an assignment or a topic occurred throughout the conferences. After the student in the previously mentioned conference had summarized "Notes from the Underground" and "Fate of the Cockroach," the tutor asked the student, *So, in your class did you talk about the human condition, like, have you?* The student's affirmative reply seems to inform the tutor's following questions and comments.

In keeping with the institutional roles designated in a tutoring session, students rarely assessed tutors' understanding with common-ground questions. Our corpus contained just 4 common-ground questions from students. For example, a student explained to the tutor that it is "weird" to end his narrative with an analysis because *it's so personal. You know?*

Through their extensive use of common-ground questions, tutors seemed to be trying to move the conferences toward success by building a shared understanding of the experience, including a shared assessment of the student's understanding of the discussion at hand and the tutor's advice. At the end of this article, we describe how tutors used common-ground questions with leading and scaffolding questions

in tandem to generate a question cycle for advancing and monitoring students' learning.

### Social-Coordination Questions

Social coordination relates to tutor and student actions within the conference—what should happen next and how the conference should proceed. With questions such as *Why don't you read the sentence out loud?* tutors are not looking for an answer; they are directing the student to carry out some action. Such directive illocutionary acts are polite because they are softened with interrogative syntax. Several studies on tutoring discourse have shown that writing center tutors use a variety of politeness strategies to mitigate directives and other illocutionary acts that threaten students' face, or self-image (e.g., Mackiewicz; Thonus, "Dominance in Academic Writing Tutorials").

That said, social coordination of the interaction is the one clear domain of institutional authority for the tutor (see Agar; He), and because tutors have institutional authority, they are sanctioned and even expected to make suggestions (and state evaluations such as criticisms). Tutors' institutional authority has the potential, then, to manifest itself in directives related to conference procedure—whether at a micro level (e.g., that the student make a note on paper of what the tutor just said, such as *You might want to write that down*) or at a macro level (e.g., that the conference should proceed in a particular way, such as *Let's read through the paper first and then focus on main points*).

Excerpt 2 shows a tutor's attempts at helping a student focus her essay on a single topic.

(Excerpt 2)

- |   |          |   |
|---|----------|---|
| 1 | Tutor:   | Why don't you put a check next to that? [points to the paper;     |
| 2 |          | student writes on draft] Because now since you're going to focus  |
| 3 |          | on (2 seconds) a single change in your life. So if we put a check |
| 4 |          | mark next to the things that are not related as much              |
| 5 | Student: | O. K.   |
| 6 | Tutor:   | then maybe that will help you when you go back and try to         |
| 7 |          | take those things out. So let's see. Now, see what you're doing   |
| 8 |          | here? [Reads for 60 seconds]                                      |
| 9 | Student: | O. K.   |

- 10 Tutor: “The first year of private school has been a drastic change for  
11 me.” So we think when we read that is what you’re talking  
12 about this change. (2 seconds) Does that make sense?  
13 Student: Uh-huh.

The tutor used a social-coordination question when she offered the strategy of marking sentences unrelated to the difference between life in private school and life in college. By using interrogative syntax rather than an imperative (for example, *Put a check next to that.*), the tutor exercised her institutional control politely. When the student did not take up the strategy on her own, the tutor provided a second example and asked a common-ground question (line 12: *Does that make sense?*).

As previously stated, we found a low frequency of social-coordination questions. Only 19 of tutors’ questions (3%) fell into this category. While the tutors in our study in fact softened their suggestions and other face-threatening speech acts with a variety of politeness strategies, they did not do so (except in a few cases) with interrogative syntax. This finding may arise from the risk of misunderstanding generated from using interrogative syntax to convey a directive. This finding suggests that using interrogatives to soften suggestions and other directive illocutionary acts is not necessary in terms of fostering successful tutoring interactions.

### Conversation-Control Questions

In contrast to social-coordination questions, which attempt to influence participants’ actions, conversation-control questions relate to the flow of the tutor’s and the student’s contributions to the interaction—their turns at talk. Conversation-control questions also occurred infrequently in our corpus—4% (20) of tutor’s questions and 2% (3) of students’ questions. Conversation-control questions include conversation openings (e.g., *How are you doing?*) and closings (e.g., *Have I answered all of your questions?*). They also include rhetorical questions, which allow a speaker to maintain their conversational turn at talk.

Tutors in our study seemed to use conversation-control questions in two ways. All of the tutors used at least one to bring the conference to a close. With these conversation-control questions, tutors seemed to use interrogative syntax as a politeness strategy, indirectly conveying that it was time for the tutorial discussion to end. For example, one tutor used an interrogative in addition to asserting that the session time had run out (e.g., *Any other questions at this point? Because I think our*



time's pretty much up.). Similarly, another tutor asked, *So do you have any more questions?* Thus, while tutors mainly avoided using interrogatives to convey suggestions and other threatening illocutionary acts indirectly, they did employ questions to politely manage the duration of the conference and thus to uphold writing center procedure and policy.

In addition, both the tutors and the students occasionally asked rhetorical questions. When tutors used rhetorical questions, a reply from the student seemed to be beside the point. Instead, through these questions, tutors modeled the reflective, critical process conducive to success in writing. For example, a tutor asked a rhetorical question when she articulated what the student should ask herself later on, after the conference.

(Excerpt 3)

- 1 Tutor: And then, look at your next subject. Does that relate to the
- 2 noise level? And if it does relate to the noise level, then go
- 3 ahead and keep that in the same paragraph.
- 4 Student: O. K. See, because these guys don't relate to noise level, they
- 5 relate to the stress. So I can expand on the noise level and then
- 6 leave the stress in by itself.
- 7 Tutor: Exactly.
- 8 Student: O. K.

The student appeared to be following the thought process the tutor laid out in her rhetorical question. The tutor confirmed the accuracy of the student's thinking.

Students' rhetorical questions also seemed to function without the necessity of responses. Rather than depend on tutors to lead, students took charge of their learning by self-questioning with rhetorical questions. In Excerpt 4, the student pushed her own thinking along about creation myths.

(Excerpt 4)

- 1 Student: I think it is easier to believe that we came from another person.
- 2 Like, could have,
- 3 Tutor: Uh-huh
- 4 Student: um, evolution come from some type of animal? So basically
- 5 we have to come from something. We can't just appear.

Unlike the conversation-control questions that tutors used to end the tutoring sessions, tutors' rhetorical questions did not seem to be intended to generate politeness through indirectness. Instead, rather like the leading and scaffolding questions we discuss next, they modeled the self-questioning necessary to write and revise. That students occasionally generated rhetorical questions may show they were beginning to master tutors' models.

### Leading and Scaffolding Questions

Like common-ground questions, leading and scaffolding questions occurred very frequently in our corpus, composing 41% (231) of the questions tutors asked. As defined by their role as experts, only tutors can ask leading and scaffolding questions. Researchers have considered the effects of these two types of questions on students' learning, discussing them under a variety of names and describing them according to teachers' goals for students' responses. Examples include "open" questions, which facilitate extensive and constructive responses, as opposed to "closed" questions, which allow only curtailed responses (see Smith & Higgins); "productive" questions, whose responses require higher-order cognitive operations such as analysis and synthesis, as opposed to "reproductive" questions, whose responses allow lower-order cognition (see Tienken, Goldberg, & DiRocco); and "authentic" questions, which, like open questions, open up conversation for students, as opposed to "test" questions, which, even more restrictive than closed questions, ask students to display their knowledge (Nystrand, Wu, Gamoran, Zeiser, & Long). Because names like "authentic question" are somewhat value laden after years of use and debate in the literature, we chose to describe our leading and scaffolding questions as "negotiatory," which intend to elicit "substantive student contributions" and invite "a variety of perspectives," and as "known-information," which typically aim for a single or limited range of responses known to the teacher (Nassaji & Wells 400). These names have also been used in research about extended classroom dialogue, but we hope they avoid some of the connotations the other names carry.

Typically classified as known-information questions, leading questions often take a yes/no form (e.g., *Isn't this change in topic a good spot for a paragraph break?*). They sometimes allow questioners to "push their beliefs and views on to hearers" by conveying their "expectation of and preference for a given answer" (Piazza 510; see also Swann, Giuliano, & Wegner). For example, a tutor provided wording for the student she was working with by asking, *How about "Using race as a factor in decision*

*making even if it's not the only factor being used?"* Leading questions mitigate tutors' directiveness, and when they push their ideas on students, tutors may help them move over the rough spots in their thinking.

In Excerpt 5, according to her retrospective interview, a tutor used leading questions to help this confused student identify ideas for her paper. In this conference, the student talked a great deal about her past and present problems, including her difficult transfer from a public to a private high school. She finally decided to focus on this change in her paper. In this exchange, which occurred late in the conference, the tutor overlapped the student's talk and asked leading questions to help the student identify relevant information for her paper. After the student's response, the tutor explained her question and how the suggestion might improve the student's draft.

(Excerpt 5)

- 1 Student: I didn't care anymore, and I quit like working out and  
2 everything I love, even dancing, and I never thought I would  
3 quit that.  
4 Tutor: Yeah, yeah, I hate to cut you off quickly, but do you focus on  
5 that? Dancing, and you quit doing the things that you love?  
6 Student: I'm not sure I focused on that.  
7 Tutor: Well, if you didn't, I think that is important though, because  
8 it's a part of this. It's not who you are a part [student writes  
9 on the draft]. Because you know it's not all about the negative  
10 things. It's about like when you kind of gave up on . . .

According to analyses of student satisfaction (Clark; Thompson, Whyte, Shannon, Muse, Miller, Chappell, & Whigham; Thonus, "Tutor and Student Assessments"), as long as students control the agenda for the conference (Thonus, "Tutor and Student Assessments"), students expect tutors to be directive. They expect to leave writing center conferences with their questions answered (Thompson, Whyte, Shannon, Muse, Miller, Chappell, & Whigham) and with ideas—such as the ones that tutors' leading questions can provide—about how to move forward in their writing.

Like leading questions, scaffolding questions can also elicit known information, with tutors often asking questions for which they appear to have answers in mind. However, unlike leading questions, scaffolding questions vary in their directiveness (and concomitantly vary in their syntactic form) and may elicit negotiatory responses. With scaffolding questions, tutors can pump, prompt, paraphrase, and present alternatives

to assist students' thinking (e.g., Cromley & Azevedo). For example, though scaffolding allows tutors to present alternatives to students, it also constrains, and therefore directs, their possible responses: *What part of speech is this—noun or adjective?* The tutor asked this known-information question with a correct answer in mind. Scaffolding through pumping may range from known-information questions with one correct answer, such as *Where would the comma go in this sentence?*, to negotiatory questions with many answers, such as *What does this poem mean to you?* For example, one tutor asked a scaffolding question that pumped the student's thinking about the central argument of the paper (*What do you think the main point is here that you're making?*). With this question, the tutor required the student to consider and then to articulate the main message she was trying to convey. Numerous answers were possible, some of which the tutor would likely anticipate and others she would not. Similarly, in a conference focused on writing about the short stories mentioned previously, a tutor required the student to consider the central message that connected two stories: *What, what are the, kind of, what's sort of the moral of each of the stories, do you think?*

Sometimes tutors provided partial answers and asked known-information questions likely to help students develop answers to previous negotiatory questions, as shown in Excerpt 6.

(Excerpt 6)

- 1 Tutor: Yeah, and how might you bring in racial profiling for a crime
- 2 back into this?
- 3 Student: Um, racial profiling, um (9 seconds)
- 4 Tutor: Maybe as a clause in one of these sentences, so it doesn't
- 5 actually have to be a new sentence, but how could you add it
- 6 in there?
- 7 Student: (5 seconds) Should I say "Race should not be an effect on the
- 8 decisions that are made but should be on a person's personality
- 9 scales or actions" like make those two one sentence?
- 10 Tutor: Yeah, but then you'd still, think about, because your main
- 11 topic is racial profiling with law enforcement, right? So, how
- 12 can you show that this is discrimination?

First, the tutor used a pumping question to ask the student to consider ways to raise the issue. When the student hesitated in responding, the tutor followed up with a partial answer and a more directive pumping question that asked the student to think of a clause. Even though this second question was not entirely constrained in

the possible responses, it limited the scope of necessary response and thus likely took some of the pressure to respond off the student. The student's response is sophisticated in that it includes a solution (in which she connects two clauses into one sentence) to the tutor's scaffolding questions. In these cases and in others, tutors' scaffolding questions seemed to lead students to think about what they wanted to write and to reconsider what they had already written.

### **Leading and Scaffolding Questions and Common-Ground Questions in Tandem**

While coding the questions in our corpus of writing center conferences, we noted that tutors seemed to pair leading and scaffolding questions with common-ground questions, creating a questioning cycle that—especially at first glance—recalls the well-known initiation-response-evaluation (IRE) classroom discourse pattern (Mehan). In the IRE pattern and also the initiation-response-follow up (IRF) pattern (see Haneda; Nassaji & Wells; Wells), teachers carry out the first and third steps, and students carry out the second step.

Critics of IRE assume that the exchange is limited to three steps and that the initiation step consists of a known-information question, constraining the student's response to a single answer the teacher subsequently evaluates as correct or incorrect. IRE has been attacked for its focus on what is already known, its constraints on students' thinking, and its concentration of discourse power in the teacher's voice (e.g., Nassaji & Wells; Wells). However, as Courtney Cazden points out, criticisms of IRE are "oversimplified and they miss important points" (46). In our conferences, we found three reasons to support Cazden's view about the learning potential of this tutor-driven dialogue. First, as Graesser, Person, & Magliano found, the IRE sequences in our corpus often extended beyond three steps. Second, as Mehan explains in the study that identified the IRE sequence, initiating questions do not always have single answers. Like Lee and others, we found tutors' questioning sequences—even those beginning with single-answer questions—may build resources for students rather than simply testing their knowledge of certain information. Third, in the third step of the IRE pattern, teachers may evaluate students' responses, but they may also avoid evaluation altogether as they extend students' responses, pump students to move forward in their thinking, make requests, or provide other forms of "uptake" (Nystrand, Wu, Gamoran, Zeiser, & Long 45) that invite further participation and generate a more conversational discourse pattern (Haneda; Nassaji & Wells).

In what follows, we examine a typical IRE pattern (Excerpts 7 and 8) to show how leading and scaffolding questions complicate critiques of discourse that on its surface resembles typical teacher-controlled classroom discourse. We also examine (in Excerpt 9) examples that vary from the IRE pattern in which tutors replaced the evaluation step in the IRE pattern and used common-ground questions in tandem with leading and scaffolding questions to check that a common understanding of the progress was taking place.

Excerpt 7 shows what critics consider the typical IRE pattern. The tutor asked a known-information question to lead the student to identify the confusion in her draft. The problem was that *they* refers to *people*, and *people* could include both the police and the citizens who are depending on the police for protection.

(Excerpt 7)

- 1 Tutor: O. K. What does that “they” refer to?
- 2 Student: (4 seconds) The people. Oh, wait, wait, wait a second.
- 3 Tutor: The people are lazy? Exactly. That’s the confusing part.

In this excerpt, even though it is a known-information question, the tutor’s first question—*What does that “they” refer to?*—was not really a test question. Instead the tutor’s question led the student to identify a lack of clarity in her draft. In step 3 of the IRE sequence, the tutor evaluated the student’s response and verbalized what the student is likely realizing (line 3).

But, even “typical” IRE patterns are more complex than they seem at first glance. In the turn following Excerpt 7, the student responded to the tutor’s evaluation with information-deficit questions. Rather than supply answers, the tutor responded with a scaffolding question that is negotiatory and might lead to an extended response from the student. It also required the student to take responsibility for the revision herself.

(Excerpt 8)

- 1 Student: O. K. The people in law enforcement because um. Should
- 2 I say it different though? The people in law enforcement
- 3 because police?
- 4 Tutor: How else can you say it?

Excerpt 8 shows that typical IRE patterns can have pedagogical value: they can posit a topic that requires student thinking—in this case

about rewording an unclear sentence—and thus provide a foundation for negotiatory questions to come.

Excerpt 9 illustrates our observation of a cycle of latching a scaffolding question (or as in this case, multiple scaffolding questions) to a common-ground question. Here, the tutor fired a series of scaffolding questions at the student—a discourse pattern Deborah Tannen calls machine-gun questioning—and in doing so showed strong engagement in the conversation. In addition, by asking questions one right after the other, the tutor provided the student a range of options for responding and likely expanded the student's thinking about the topic—in this case, the creation myth—by pumping her to consider the myth's imagery in terms of other readers' responses to it. This tutor followed her scaffolding questions with a common-ground question that checked the student's understanding of those scaffolding questions and suggested that she did not expect the student to answer the questions immediately. After the student's response, the tutor slowed down and asked the single question that seemed to summarize the three she asked previously. Her use of a plural pronoun (*us* in *let's*), a signal of social coordination, indicated that she planned to help the student answer the question. She was also taking notes for the student.

(Excerpt 9)

- 1 Tutor: Because this is, it says, [points to assignment sheet] “the topic
- 2 does not primarily involve why the story is strange to you.”
- 3 You know, obviously being cut up is strange. But, why have
- 4 they included the strange, strange imagery? What kind of
- 5 effects did that have on the reader? And why is it important to
- 6 a creation myth? You kind of see what I'm saying?
- 7 Student: Mm-hmm.
- 8 Tutor: O. K.? O. K.
- 9 Student: It makes a whole lot of sense.
- 10 Tutor: O. K., good. [writing notes for the student] Why is, um, the
- 11 strange imagery important? So. Let's list a couple of them.
- 12 Call it more important. [laughs] Let's list a couple of reasons.
- 13 So why, why do you think it's, it's effective?

Besides allowing the student some leeway in responding and thus likely helping to make the student more comfortable, the multiple, syncopated questions showed the tutor's engagement and interest in the interaction and displayed the enthusiastic, active participation tutors

want to inspire in students. The more relaxed follow-up showed the tutor's concern to support the student in answering the questions.

Excerpt 10 shows how leading, scaffolding, and common-ground questions work together in what at first seems like a typical IRE pattern throughout an extended series of turns in a brainstorming conference. The student was analyzing a magazine, *Cosmo Girl*, according to its readership. In his retrospective interview, the tutor, a male graduate student, acknowledged his familiarity with *Cosmo* magazine, although he had not seen *Cosmo Girl*. We chose this excerpt because the tutor mixed scaffolding questions to guide the student's thinking with models of questions appropriate for analyzing texts of many kinds. Often the same question served both purposes. Also, although at times the tutor asked common-ground questions, at other times he just acknowledged the student's responses without clearly evaluating their correctness.

(Excerpt 10)

- 1 Tutor: O. K., so if we were to talk about those in our advertisement
- 2 and things like that, what you have is (2 seconds) with
- 3 exercising, it's very body-conscious, very fashion-conscious,
- 4 very money-conscious. Umm, those things seem to be very,
- 5 the magazine, again not you, but the magazine kind of
- 6 promotes this outward focus on outward appearance. Would
- 7 you agree?
- 8 Student: I would. It's not very, yeah. Like, when you mention that,
- 9 it's not really like "How to Boost Your Self-Esteem." It's like
- 10 "How to Look Like a Celebrity."
- 11 Tutor: Yeah.
- 12 Student: Umm. "Macy's Bag 20% Off."
- 13 Tutor: O. K.
- 14 Student: That kind of stuff.
- 15 Tutor: All right. And then so coming back to this question, now I
- 16 realize we're focused on this, but some of these kind of go
- 17 hand in hand. You know like what kind of lifestyle does that?
- 18 Student: I would go with preppy.
- 19 Tutor: O. K.
- 20 Student: Very preppy, hip, trendy.
- 21 Tutor: O. K. and here it [refers to assignment sheet] asks you what is
- 22 visible, what is invisible. And you can talk about self-esteem
- 23 issues that are invisible, right?



In lines 1–7, the tutor gave his sense of the magazine based likely on what he knew about *Cosmo* and what he seemed to have deduced so far from the conversation. At the end of his description, he confirmed that the student agreed with his characterization (lines 6–7: *Would you agree?*). After the student confirmed the accuracy of his description, the tutor pushed her about the connections among observations discussed previously about the magazine’s content and advertisements. His question modeled the ones the student should ask herself—particularly when she needs to interpret observations and other data—and moved along her thinking for this writing assignment at the same time. In regard to the assignment, the tutor (in lines 21–23) brought the student’s attention back and ended with a common-ground question (*right?*), this time likely checking that the student understood the relationship between the “invisible”—the implicit values the magazine promoted—versus the “visible” magazine content.

Once the student seemed to have a sense of how to articulate the magazine’s target audience (via analysis of its content), the tutor posed one more scaffolding question—one that pumped the student to articulate what she intended.

(Excerpt 11)

- 1 Tutor: So if you were to, you know, if you were to say “*Cosmo Girl*
- 2 targets. . .” what?
- 3 Student: So, targets the superficial young teenager?
- 4 Tutor: Sure, yeah.
- 5 Student: Superficial young teenager. I need to argue that (3 seconds)
- 6 targets the superficial young teenager because the magazine
- 7 focuses on how to be pretty on the inside but not on the
- 8 inside, I mean, be pretty on the outside.

In lines 5–8, the student appeared to have moved to self-explanation. Her response included not only an answer to the tutor’s question (line 5: *Superficial young teenager*), but also the student’s own assessment of what she now needs to focus on in revising, given her newly articulated focus (lines 5–8: *I need to argue that . . . because the magazine focuses on how to be pretty on the inside but not on the inside, I mean, be pretty on the outside*). With this assessment of what she yet needs to accomplish, the student might move toward self-regulation of her own learning and thus her ability to compose with more facility.

In sum, these excerpts show how tutors in writing center conferences can use leading and scaffolding questions—both known-

information and negotiatory—and common-ground questions to move students along in their thinking, to ensure that they understand the students' agendas and their goals and ideas, and to check and evaluate students' understanding about what is being discussed during the conferences. Common-ground questions allow the tutors to keep the dialogue going without having to circle back and ask further questions to clarify a previously discussed point for themselves or for students. These excerpts also demonstrate how tutors model the kinds of questions more experienced writers ask themselves.

## Conclusion

This study shows that questions in writing center conferences serve a number of instructional and conversational functions. They allow tutors and students to fill in their knowledge deficits and check each other's understanding. They also allow tutors (and occasionally students) to facilitate the dialogue of writing center conferences and attend to students' active participation and engagement. In addition, tutors use questions to help students clarify what they want to say, identify problems with what they have written, and brainstorm. Some of these questions are known-information, with tutors using questions purposefully to limit students' responses and help them move ahead in their thinking. Although known-information questions are often criticized because they curtail the length and elaboration of students' responses, these restrictions can sometimes benefit students by simplifying immediate responses and limiting the confusion that comes from mentally sifting through too much information. In our conferences, tutors were sometimes able to move from known-information questions to negotiatory questions, opening up the response space for students after leading them in a certain, possibly successful direction. In other words, our study suggests the potential usefulness of all types of questions. Hence, it is not possible to describe a "good" question outside of the context in which it occurs, and even in context, the effects of questions are difficult to determine.

So, what does this study tell us about training tutors in questioning strategies? First, the tutors in the conferences analyzed here used questions very frequently. In our almost six hours of recorded conferences, tutors asked 562 questions, averaging 93.7 questions per hour, more than one question per minute. In the shortest conference analyzed here (17 minutes), the tutor asked 17 questions—at least one of each type except for social coordination. Therefore, our study supports

the common-sense view that questioning is a major tutoring strategy used in writing center conferences.

Second, rather than being concerned about asking negotiatory questions, which may be difficult to craft on the spot and which are often difficult for students to answer immediately, tutors may simply position themselves as questioners, trying to understand what students want to say and helping them move along their thinking slowly and incrementally. Therefore, in a Socratic questioning pattern, tutors may learn to ask questions as part of extended dialogue with students rather than as restricted to a single question-and-answer turn. As our conferences showed, one question can lead to another. If a student responded inappropriately to a negotiatory question, the tutors often asked a known-information question with a more restricted range of responses and then moved to the negotiatory question—again, usually rephrased.

Third, tutors may use questions as politeness strategies sometimes to temper their suggestions and often to end conferences. Occasionally, as shown in Excerpt 2, especially with L1 students, the use of a question rather than a directive implies that the tutor is aware of and respects a student's ownership of the conference agenda. However, concerns about students' ownership and tutors' politeness must be balanced with concerns for clarity and students' understanding. As shown in our conferences, tutors' concerns for clarity usually outweighed their concerns for politeness, and the students did not seem offended by the tutors' directness.

Finally, and most important, tutors need to tailor questions individually for each student and check to be certain the student is following along in the dialogue. They need to attend to both the instructional and conversational goals of the conference—remembering that these goals depend on each other.

Besides offering insights about questions potentially useful for tutor training, our study also brings up issues that need further research. For example, our results are consistent with those reported by Graesser & Person in their analyses of problem-solving tutoring relating to elementary school math and research methods, where the skills being learned are primarily quantitative rather than verbal. Like Graesser & Person, we found a higher percentage of student questions in our corpus of writing center conferences than the percentage of student questions reported from classroom data. In data collected from classroom instruction, teachers asked 96% of the questions, and students asked only 4% (Graesser & Person; Person, Graesser, Magliano, & Kreuz). Further, the percentages of questions asked by tutors and students in our corpus

were almost exactly the same as those asked by tutors and students in the larger corpus. In our corpus, tutors asked 81% of the questions, while students asked 19%; in Graesser & Person's corpus, tutors asked 80% of the questions, while students asked 20%. It would be interesting to determine whether the consistency holds up with a larger corpus of writing center conferences—one that includes a more diverse range of participants and writing topics.

It would also be interesting to determine if repeated conferences with the same writing center tutor lead to a student's asking more questions. As previously stated, the conferences analyzed here were first meetings for the participants. However, our larger corpus of 51 conferences includes a conference with a tutor and student who had worked together several times. The same tutor conducted a first-meeting conference with a student—one of the conferences we analyzed for this paper. The conference with the familiar student is longer than the conference with the unfamiliar student (38 minutes versus 25 minutes), and the difference in the number of questions asked by each student is dramatic. In the repeated conference, the student asked 75% (46) of the questions, while the tutor asked 25% (15). In the first-meeting conference, the student asked 10% (4), while the tutor asked 90% (37).

Moreover, it is important to determine if writing center tutoring shares the intellectual benefits demonstrated by problem-solving tutoring. According to research about the importance of Socratic questioning in quantitative problem solving, learning may be enhanced by two important outcomes: first, students' increased ability to self-explain while working through problems aloud with tutor guidance and, second, their increased regulation of their own learning processes. This research about problem solving has shown that tutors' explanations are not nearly as effective in enhancing students' learning as students' own self-explanations (Chi; Chi, Bassok, Lewis, Reimann, & Glaser; Chi, DeLeeuw, Chiu, & LaVancher). Students who can explain the problem-solving process to themselves are likely to perform the process more satisfactorily by learning where certain actions will allow them to achieve their goals and by understanding the relationships between actions and goals (VanLehn, Jones, & Chi). Students' self-explanations move their learning forward toward the goal of self-regulating their learning processes (Chi, De Leeuw, Chiu, & LaVancher). Two indicators of students' self-regulation are the ability to set appropriate agendas for conferences and to ask questions leading tutors to maximize their assistance in improving drafts. By taking the initiative to come to the writing center, by collaborating with tutors to set agendas, and by asking questions, students in the conferences analyzed here

are already exercising some self-regulation. However, it is likely that these students will benefit from further practice and feedback about their self-regulation behaviors. As shown in Excerpts 10 and 11, it is also possible to identify segments of self-regulation in the form of self-explanation and determine if such explanations are reflected in students' subsequent drafts.

This study also revealed that the subject matter of the tutoring conference—writing versus quantitative problem-solving conferences for example—may play a role in the kinds of questions tutors ask. Writing center tutors deal in subject matter for which definite, objective answers exist less often than they do in engineering, science, or business tutoring. To stimulate students' thinking, writing center tutors may be more likely to string questions together—one right after the other—and thus to use multiple questions to enact one step of an IRE sequence. The number of turns in a single episode may also be larger as the tutors support students in brainstorming and revising. In particular, they may use more scaffolding—both known-answer and negotiatory questions—as they work not so much to get students to produce a (the) correct answer but instead to think about potential ways to convey in writing the meaning that they intend. In our future research, we hope to investigate these topics and thus get some more answers to our questions about questions.

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