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Analyzing Scaffolding in Writing Center Interactions: Beyond Descriptions of Tutors' Interventions

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Abstract

This article examines the tutor-student scaffolding interaction as a means for writing center tutors to help students move forward in their development as writers and for tutors to develop expertise in teaching. To describe how scaffolding might operate effectively in student-tutor interactions, it defines six characteristics: intersubjectivity, where tutors and students develop a common goal for the conference; ongoing diagnosis, where tutors determine

students' current understanding; contingency, where tutors tailor their interventions according to students' existing understanding and willingness to learn; interactivity, where the interaction occurs with the back and forth of tutors' interventions and students' responses; zone of proximal development, the intellectual space where students' learning can occur; and fading, transfer of responsibility, and checking, where tutors are ready to pass on responsibility for completing a task to students but check back to see if the students can successfully move forward on their own. The article also provides four illustrative analyses to demonstrate tutors' scaffolding interventions and students' responses. It concludes by discussing the usefulness of analyzing scaffolding in an interaction, by making connections between scaffolding and directiveness, and by suggesting future data-driven research.

INTRODUCTION

What goes on during tutor and student interactions is a hallmark concern for writing center research. So far, investigations have considered these interactions from a variety of perspectives—for example, practical (Brooks; Harris), linguistic (Thonus "Dominance," "Tutor"; Blau, Hall, and Strauss), social constructionist (Bruffee), social justice (Babcock, "Disabilities," "Interpreted"; H. Denny). Here we assume a sociocultural perspective focused on learning and based on research by Lev S. Vygotsky (*Mind*, "Thinking") and David Wood, Jerome S. Bruner, and Gail Ross, and we extend previous research about the interventions tutors use to scaffold students' learning to a comprehensive look that considers students' responses.

Scaffolding is a metaphor used to describe a situation where someone with more expertise (the tutor) guides someone with less expertise (the student) to achieve predetermined learning

outcomes, thereby enhancing the student's learning development. A scaffold in this learning situation works like a scaffold used during building construction—a support to get the job done and removable once the task has been completed. One important characteristic of scaffolding a student's learning is contingency, where the tutor tailors interventions to what the student wants and is able to achieve at a certain moment. Contingent tutoring is comparable to locating a scaffold exactly according to workers' needs during a certain time in the building process. A well-placed but static scaffold is not enough. The tutor and the student need to move toward the student's increased understanding of the task and the student's ability to take over full responsibility for completing the task. Scaffolding focuses on the process of active knowledge construction.

This article is a review of research, primarily from education and psychology, about scaffolding and an application of that research to writing center interactions. As such, it extends current writing center investigations beyond a focus on tutors' interventions (Mackiewicz and Thompson, *Talk*) to a focus on the interactional back and forth that includes students' responses as an equal component. We begin by reviewing research about six characteristics of scaffolding. To demonstrate how the characteristics might work in writing center conferences, we analyze four selected illustrative excerpts of writing center dialogue, taken from research we conducted previously. Finally, we conclude by making further suggestions about how our framework might be used, particularly in tutor training, and some suggestions about future research. The conclusion shows a table of the six characteristics and questions that might be used by tutor trainers and by tutors themselves to assess

the in-the-moment effectiveness of intended scaffolding. We hope to spur research that operationalizes the discussion of scaffolding presented here and eventually to inform best practices in writing center tutoring.

CHARACTERISTICS OF SCAFFOLDING

Scaffolding denotes a particular learning process and certain roles for its participants (Danli; Dennen; Nguyen and Williams; Nordlof; Wood et al., “The Role”). As a process in writing instruction, its goal is to further students’ writing development, with accurately completed writing tasks as a tutor-led means for achieving this larger intention (Chaiklin). More generally, scaffolding assumes that performance precedes development. Helping students complete a task they cannot complete without assistance makes it more likely that when faced with the same or a similar task again, students will be able to complete it alone (Shanbi et al.). More difficult tasks—or more difficult versions of the same task—follow, creating a learning spiral of development (Bruner). This process seems to accord with Stephen North’s often-repeated admonition to focus on the student (development) rather than only on the current writing task.

Scaffolding also designates certain roles for the tutor and the student—expert-novice roles that indicate an asymmetrical relationship. Although scaffolding has been investigated in peer-group collaborations, results have indicated unsatisfactory learning outcomes (Bliss and Askew; Danli; Fernández et al.; Nguyen and Williams). Tutors’ roles require that they take control of the tutoring situation by using their expertise to develop and implement a “theory of the task and how it must be completed” and a “theory of the performance

characteristics of [the] tutee" (Wood et al. "The Role," 97). In deciding where to begin scaffolding, the tutor has two related considerations: (1) how strongly to intervene and (2) how much responsibility for the task to take on. Strength of the intervention is based on how directive the tutor decides to be. An imperative such as "Put a comma here." is a high-strength intervention. A question such as "What should go here?" is a low-strength intervention. In itself, strength of intervention is not important for promoting learning. Instead, the tutor's strength of intervention—low, medium, or high—has to meet the student's current needs as determined by the tutor's ongoing diagnosis of their understanding. The stronger the intervention, the larger the tutor's contribution and consequently the higher the level of responsibility the tutor takes on. The smaller the tutor's contribution, the more responsibility the student must take on. Even though the tutor and the student are not likely to be peers, the scaffolding process is collaborative, with both participants actively contributing to completing the task. In a successful scaffolding attempt, the tutor's expertise does not depose the student's responsibility; rather, the relationship is student centered (Dennen).

To clarify the process by which writing tutors scaffold students' development, in the sections that follow, we examine six characteristics of scaffolding:

- intersubjectivity
- ongoing diagnosis
- contingency
- interactivity
- zone of proximal development (ZPD)

- and (grouped together) fading, transfer of responsibility, and a final check for students' understanding.

Intersubjectivity

For scaffolded learning to proceed, tutors and students must first develop a shared understanding of the task at hand, or intersubjectivity, and account for students' motivation to participate in the scaffolding process and to complete the task generally (Boblett; Brownfield and Wilkerson; Dennen; Puntambekar and Hübscher; Shabani et al.). Intersubjectivity begins in a writing center conference's opening stage or perhaps with a previous conference, but it continues throughout a conference as tutors and students readjust their understanding of the current task. Without intersubjectivity, tutors cannot diagnose students' ability to complete the task at hand or know where to begin the scaffolding.

Ongoing Diagnosis

The second characteristic of scaffolding is ongoing diagnosis. Rico Hermkes, Hanna Mach, and Gerhard Minnameier discussed this concept in terms of "dynamic assessment" and "procedural facilitation" (147). Dynamic assessment refers to the importance of diagnosing students' understanding before and after intervention, while procedural facilitation refers to the importance of regulating the strength of tutors' interventions according to students' needs. Ongoing diagnosis allows tutors to determine how strong their intervention should be and how much responsibility they should assume for completing the task (De Sousa; Koole and Elbers). As Katherine Brownfield and Ian G. Wilkinson pointed out, "tutors calibrate in flight the

help they provide" (180). An initial diagnosis is followed by verification, where tutors determine that they have understood students correctly. Afterwards, they may explicitly check the diagnosis so that tutors and students reconfirm their shared conference goals, an important step in establishing and maintaining intersubjectivity (Van de Pol et al., "Promoting"; Hermkes et al.). Diagnosis first occurs during the opening stage of a conference, when tutors and students work together to establish an agenda, but it continues throughout the conference. However, tutors sometimes skip diagnosis and go immediately to interventions, providing support without a foundation (Elbers et al.; Lockhorst, et al.; Van de Pol et al., "Patterns").

Contingency

Contingency, the third characteristic of scaffolding, encompasses four of the other characteristics—intersubjectivity, diagnosis, interactivity, and ZPD—excluding fading, transferring responsibility, and checking students' understanding. Contingency is the cornerstone of scaffolding research. In contingent instruction, tutors work on the edge of students' existing knowledge and willingness to learn (e.g., Reynolds; Reynolds and Daniels; Van de Pol et al., "The Effects"; Wischgoll et al.; Wood and Middleton; Wood and Wood, "Commentary"). They increase and decrease the strength of their interventions and the responsibility they assume for completing the task according to their diagnoses of students' needs. Janneke Van de Pol, Monique Volman, and Jos Beishuizen ("Promoting") described contingency as "tailored adaptation to students' existing understanding" (194). David Wood discussed three dimensions of contingency: domain, which relates to the appropriateness of the content or skill the tutors teach next, given students'

input (intersubjectivity, diagnosis, and ZPD); temporal, "deciding when to give help" (Rodgers et al., 346), which relates to tutors' sense of students' motivation, including their frustration level (intersubjectivity and ZPD); and instructional, which relates to the extent of the support that tutors give to students upon diagnosis, from a little to a lot (interactivity). If tutors miss their windows of opportunity by waiting too long to intervene, students may become frustrated and lose motivation to participate actively in the conference, but if tutors intervene too early or offer too much support, students lose their chance to make their own revisions. Therefore, as previously stated, the strength and direction of support shifts, depending on the student's level of understanding.

These three dimensions of contingency are difficult to maintain simultaneously. Diagnosis can be especially difficult with students who already have a high level of competence (Rodgers et al.)—as is the case with many students who frequent writing centers. In addition, students sometimes do not follow tutors' leads. In that case, contingency requires that tutors redirect their intervention, adapting to the direction taken by students (Wood and Wood, "Vygotsky"). However, although it is necessary (Van de Pol et al., "Promoting"), contingency does not guarantee that attempted scaffolding will be successful (Wischgoll et al.). For example, tutors may fade too soon and leave unprepared students on their own.

David Wood, Heather Wood, and David Middleton, Janneke Van de Pol and Ed Elbers, and Hermkes, Mach, and Minnameier discussed the contingent shift principle, or CSP. According to the CSP, tutors should strengthen their intervention and assume more responsibility when students fail, for example,

by telling students what to do, and decrease the strength of their intervention and lessen their responsibility for completing the task when students succeed, for example, by asking a question with a largely open response. Strength of an intervention does not affect whether scaffolding takes place; rather, an intervention has to adapt to the student's understanding (Van de Pol and Elbers). Further, putting a support in place is not enough; contingency requires participation that actively changes students' thinking (Dix).

Interactivity

The fourth characteristic of scaffolding, interactivity, refers to the back and forth of tutors' interventions and students' responses. Interactivity is the means through which tutors diagnose students' understanding and respond to what students have said. Interactivity allows the tutor to intervene in the student's current understanding and the student to respond to that intervention. If the interventions from tutors are effective, students can move their understanding forward toward internalization, hence increasing and developing control over their current learning. For internalization to occur, students need to be active participants in the tutoring (Daniels; Salonen). In the illustrative analyses provided later, we discuss interactivity in terms of the reciprocal exchange of tutor interventions and student responses. We project that tutor interactivity can be discussed on a continuum of tutors' strength of intervention and assumption of responsibility for completing the task in a tutoring interaction. At one end are scaffolding interventions (Mackiewicz and Thompson, *Talk*), that require the least strength of intervention and the least assumption of responsibility by tutors (pumping, reading aloud, responding as a reader or listener, prompting); in the

middle are those that require a medium strength of intervention and responsibility (hinting, referring to a previous topic, forcing a choice); and at the other end are strong interventions that consequently exert strong tutor control over the student's expected response (suggesting, telling, explaining, and giving examples).[1]

Most research in education about contingency and scaffolding has used learning tasks with specific answers easily identified as correct, referred to later as closed-world domain tasks. For those tasks, Van de Pol and Ed Elbers put forth a fairly simple scheme for coding students' responses: poor, partial, and good. Hermkes et al. added a little complexity: no understanding of the task; misunderstanding; correct understanding but no solution; false solution; false solution, but realizing it is false; and correct or appropriate answer. Based on an extensive review of research to discuss 6- to 7-year-olds' responses to teacher scaffolding, Stephanie Dix identified seven types of student responses: comprehension of task/learning; active engagement; offers of additional information; repetition/recapping; questioning, challenging, negotiation; use of metalanguage; and evidence of learning/transfer/meeting of the minds. As tutors lessen the strength of their interventions and back off on responsibility, students are required to take up the slack in order for the exchange to be contingent.

We suggest that two requirements are necessary to classify a student's responses: (1) the student's demonstrated increase in understanding and (2) the student's assumption of greater responsibility in completing the task. In the illustrative analyses presented later in this article, we evaluate a student's understanding on a continuum with a range from lack of understanding, to partial

understanding, and finally to good understanding. The student's assumption of responsibility can be represented similarly on a continuum with a range of low responsibility, to medium responsibility, and finally to high responsibility. We add Dix's more detailed descriptions as often as possible.

Zone of Proximal Development

The fifth characteristic of scaffolding is the zone of proximal development (ZPD), a concept introduced by Vygotsky (*Mind, "*Thinking"), similar to David Wood and David Middleton's "region of sensitivity to instruction" (181). ZPD defines the target area for scaffolding, bounded on one end by the student's current level of mastery and on the other by what the student is capable of doing with more expert assistance from the tutor (Chaiklin; Daniels; Dennen; Shabani et al; Walker et al.). Here performance leads to competence and to development. The ZPD demarcates a shifting area for growth toward full mastery (Wells). Vygotsky argued that the size and character of a student's ZPD is a more important predictor of intellectual success than a high score on a traditional one-time test because the ZPD "highlights potential for emerging behavior" rather than focusing on knowledge confined to a particular time (Shabani et al., 239).

Fading, Transferring Responsibility, and Checking

Even though we discuss them together, fading, transferring, and checking are each characteristics of scaffolding. Fading occurs when tutors believe that students understand and can accomplish the task at hand alone. Then their responsibilities diminish, and they can withdraw support and pass the responsibility on to students (Dennen; Van de Pol et al., "Promoting," "Scaffolding"). The speed

with which tutors can fade depends on the rate and extent of students' understanding and willingness to take on responsibility. Transfer refers not just to cognitive abilities but also to affect; students become responsible for staying motivated and regulating their emotional state.

The possibility of fading likely depends to some extent on the type of task the tutor and student are working on. "Closed-world domain" tutoring (Person et al.,185), the subject of most research about scaffolding, is exemplified most exactly by math or other single-answer domains. The test of mastery for closed-world domain tasks is whether the student can perform the task successfully or remember what was learned in another context. Discussing closed-world domain tutoring, Hermkes et al. laid out two rules for assessing contingency:

> Rule 1: At the beginning … tutors exert only minimal strength of intervention, for example, merely pointing out an aspect of the task or judging correctness.
>
> Rule 2: Before revealing or explaining a solution, tutors should introduce new information that may allow students to figure out a new move on their own. (150)

These two rules appear to describe what writing center research has referred to as "minimalist tutoring" (Brooks, 1) and satisfy the admonition against telling that has long constituted nondirective tutoring.

However, most writing tasks are not closed-world domain tasks, but rather, they are "open-world domain" tasks. Unlike closed-world domain tasks, open-world-domain tasks are not as clearly

structured. Instead, tutors dispense advice and co-construct ideas and revisions rather than evaluating the accuracy of facts. In addition, the tutor may not completely fade in open-world domain tasks (see Dix; Many); instead, "[T]he threads of scaffolded conversation become an interwoven pattern" (Many, 401). In tasks where tutors and students are both "participants in socially constructed meaning" (401), tutors increasingly transfer responsibility, and students begin to exert more control and to self-regulate their performance (Brownfield and Wilkerson, 2018; Walker et al.).

Finally, Van de Pol et al. ("Promoting") argued for the importance of checking on a student's learning when a task seems complete before fading. With these checks, tutors determine the extent to which their efforts at scaffolding have worked. The need for this check emphasizes the importance of diagnosis throughout the tutoring interaction.

The conclusion includes a framework showing the six characteristics of scaffolding discussed here and some questions to determine if these characteristics occur in particular writing center interactions. This framework can be used to evaluate transcribed conferences as illustrations of effective (or not) scaffolding during tutor training or as a tool for self-assessment.

ILLUSTRATIVE ANALYSES

Below, we analyze four excerpts[2] of attempted scaffolding in writing center conferences drawn from previously collected data. In these excerpts, we identify attempts at scaffolding as contingent or noncontingent (Van de Pol and Elbers; Van de Pol et al., "Patterns," "Promoting"; Walker et al.). In addition, we identify a tutor's interventions

according to a previously developed coding scheme (Mackiewicz and Thompson, *Talk*) and discuss these interventions on a continuum in terms of their strength and the level of responsibility the tutor assumes (Hermke et al.). We discuss a student's responses on a continuum in terms of the student's understanding as lack of understanding, partial understanding, and good understanding (Van de Pol and Elbers) and in terms of their assumption of responsibility as low responsibility, medium responsibility, and high responsibility. We also use Dix's scheme of students' response types to clarify how students' responses revealed students' level of understanding and responsibility for their own learning.

In excerpt 1 below, we examine writing center tutoring in a closed-world domain. In contrast, excerpt 2 shows tutoring in an open-world circumstance for brainstorming, while excerpt 3 shows tutoring in an open-world domain for revising. Finally, in excerpt 4, we examine an example of failed scaffolding, one in which the tutor's intervention is not contingent and the student becomes confused. The appendix provides a list of the transcription conventions used.

Closed-world Domain Tutoring

The tutor-student exchange in excerpt 1 below demonstrates scaffolding in a closed-world domain circumstance. In this closed-world domain exchange, the tutor held responsibility for the interaction via the question he asked and eventually transferred that responsibility to the student because the student's answer to the question was correct. Such an exchange constitutes what education researchers have called an IRF (initiation-response-feedback) pattern (e.g., Carillo et al.;

Mehan; Nassaji and Wells). Excerpt 1 shows an expansion of the pattern: IRIRIRF. If the student's final answer had not been correct, probably the most efficient intervention for the tutor would have been to tell the student the answer. Doing so, however, would have run counter to the tutor's sustained attempts to avoid usurping the student's own responsibility to participate actively.

Before the talk excerpted below, T1 had been reading the draft aloud to help S1 with proofreading. This process continued in excerpt 1.

> Excerpt 1
>
> T1: "In Tobacco Road," Now, what do we do when there's a title? <<Reading aloud. Pumping question. Low-strength interventions and low responsibility.>>[3]
>
> S1: What do you do?<<Cannot answer T1's question. Not contingent.>>
>
> T1: Mmhm.<<Backchannel, which avoids answering the question for the student.>>
>
> S1: [2s] Um- [6s]<<Filler. Still no contingency.>>
>
> T1: What did we do earlier when we had a title? <<Referring back to a previous topic. Medium-strength intervention and medium responsibility.>>
>
> S1: Underline it. Right? <<Good understanding and high responsibility. Ends with a confirmation question. Contingent.>>

T1: Ok. Yeah. <<Confirms correct response.>>

When he spotted an error, T1 stopped and asked, “Now, what do we do when there is a title?” In response, S1 repeated the tutor’s question, signaling that he had understood the question and was thinking about his response but also showing a lack of understanding about how to answer the question. Rather than rush in to answer the question himself, T1 waited for S1 to remember the answer. When S1 hesitated in his response, T1 asked a more constrained question, “What did we do earlier when we had a title?” This question referred back to an earlier part of the conference, pushing S1 to recall what they had discussed before in order to apply it to the current situation. S1 is able to do so, indicating good understanding and high responsibility. T1’s final turn showed that T1 accepted S1’s answer as correct. At the moment at least, S1 seemed to know how to indicate titles in written text. No further discussion about titles was needed at this time. The exchange was contingent.

Open-world Domain Tutoring for Brainstorming

More commonly, though, tutors and students work in the realm of open-world domains, where the two co-construct the student’s writing through dialogue. Excerpt 2 is taken from a conference focused on brainstorming ideas for a critical analysis of an article called “The Soup Nazi” assigned in a first-year writing course. The opening stage of the conference was brief and devoted to gaining intersubjectivity about the agenda—brainstorming ideas for the critical analysis.

At the beginning of excerpt 2, which is also the beginning of the teaching stage, T2 responded to

S2's description of the article's context with a question designed not to lead the student to a predetermined answer, as in excerpt 1, but instead to push S2 to think about the importance of author's anonymity.

> Excerpt 2
>
> S2: I was like- When I was writing I was writing more about like the author. He's like he's anonymous and he was published in *The New Yorker* and *The New Yorker* was like a big magazine but it's like- Usually they don't publish anonymous essays or whatever. <<Introduction of the topic.>>
>
> T2: Ok. Well why do you think that's important? <<Diagnosis via pumping question. Low-strength intervention and low responsibility.>>
>
> S2: Well, they just thought the type of the writing was good. <<Partial response and medium responsibility. Contingent.>>

S2 responded to T2's question with a contingent but vague answer: "Well, they just thought the type of the writing was good." The conference continued, and T2 became more explicit in her questioning.

> T2: Ok. Alright, tell you what, grab a piece of paper and let's start making some notes for you to work with. [S2 gets paper] Ok, so here we have this idea of the author and the author is anonymous. So ok the one thing you said that was important about that is that *The New Yorker* doesn't usually publish that so um what are some possible reasons that they have published this even

> though it’s anonymous? <<Telling and explaining. Strong interventions and high responsibility. Pumping question. Low-strength intervention and low responsibility.>>
>
> S2: Maybe because it’s like intriguing in that the way he acts to his customers but he still gets like good reviews and um everybody still comes to his place. <<Good understanding and high responsibility.>>
>
> T2: Ok. <<Signals the student’s correct answer. Transfers responsibility for this information to the student. Contingent.>>

Responding to this second, again contingent, question, S2’s answer showed good understanding. Dix would call this response an offer of further information—in that it articulated the contradiction of a restaurant that thrives despite the ill-temper of its owner. This appropriate response suggests that T2 had accurately diagnosed S2’s level of understanding. However, although S2 provided appropriate information and the exchange was contingent, the brainstorming continued, with the student being led by the tutor through the conference. The tutor did not fade from her role.

Open-world Domain Tutoring for Revising

Excerpt 3 shows scaffolding that occurred in a conference focused on sentence-level revising. The tutor used the strategy of reading aloud, a strategy that tutoring manuals (e.g., Ryan and Zimmerelli) have advocated.[4] T3, a native English speaker, and S3, a native speaker of Korean, had worked together before. In their previous conferences, T3 and S3 had established a shared goal, and, because they had,

they started the teaching phase of the conference immediately, without first discussing an agenda. The approach seemed to work for them; throughout excerpt 3, T3's diagnoses of S3's understanding seemed accurate.

Reading aloud, as opposed to more high-strength interventions, namely, telling, suggesting, and explaining, manifests a low-strength of intervention (Mackiewicz and Thompson, *Talk,* 36); that is, in terms of contingency, reading aloud provides less support than do other stronger interventions. Throughout excerpt 3, S3 responded to T3's reading aloud with questions and possible revisions to her draft, signals of student participation according to Dix's scheme (i.e., questions, offers of further information, and evidence of learning). S3's interactivity through such responses sanctioned T3's use of reading aloud. During the conference, S3 generated suggestions for wording, what Mackiewicz and Thompson have called spoken written-language, or SWL ("Spoken Written-Language").[5] At the end of the excerpt, T3 also generated SWL.

> Excerpt 3
>
> T3: "I became one of the regular customers at Caribou. I always need coffee. When I have a writing assignment, I order twenty-ounce Americano." <<Reading aloud. Low-strength intervention and low responsibility.>>
>
> S3: Can I add more like, 'I always need more than a cup of coffee'? <<Question and SWL. Good understanding and high responsibility. Contingent.>>

> T3: Yeah. Yeah, I can’t survive on a cup of coffee either. [laughs] You need the large. <<Off-task talk.>>
>
> S3: Yeah, I need always. <<Off-task talk.>>

T3 began with reading aloud, to which S3 responded with a question about adding content to her paper: “Can I add more like, ‘I always need more than a cup of coffee’?” The student questions, which occurred throughout the excerpt, indicated that the student had assumed a high level of responsibility for her essay. They also demonstrated good understanding of the writing task and what the outcome should be. After responding affirmatively and with some solidarity-building small talk, T3 used another reading-aloud strategy, and this one garnered more draft-related input from S3.

> T3: “I always need more than a cup of coffee. When I have a writing assignment, I order a twenty-ounce Americano at Caribou. The last semester I always prepared lots of snacks to get energy.” <<Reading aloud. Low-strength intervention and low responsibility.>>
>
> T3: Yeah, why aren’t you doing it this semester? <<Pumping question. Low-strength intervention and low responsibility.>>

The reading aloud and the pumping question pushed S3 to elaborate on the idea about avoiding snacks. Since it built on what S3 had said previously, the pumping question ratified S3’s assumption that she needed to explain why she wasn’t making snacks to take to the library.

> S3: How can I say like ‘energy to make me,’ ‘but not this semester because’- <<Question and SWL. Good understanding and high responsibility.>>
>
> T3: Mmhm. <<Backchannel.>>

In responding to T3’s pumping question, S3 began to struggle a bit, working to string together a way to phrase her reason for going to the library without snacks. S3’s hard work reflects her high level of responsibility, and the response along with those that follow show her increasing understanding. When S3 broke off her SWL, T3 encouraged her to continue, backchanneling with “mmhm,” a signal that T3 was prepared to listen rather than speak.

But in continuing, S3 repeated what she had said before and broke off once again at the same place in the SWL:

> S3: ‘But not this semester because’- <<SWL. Good understanding and high responsibility.>>
>
> T3: ‘I gained weight’ maybe? <<Suggestion and SWL. Strong intervention and high responsibility.>>
>
> S3: ‘Almost ten kilograms.’ <<SWL. Contingent.>>

Responding contingently, T3 provided more support, moving from the low strength of interventions of reading aloud and pumping that she had used before to a high strength of intervention suggesting strategy, specifically, a suggestion of SWL. With this additional support, S3 was able to continue to

generate content for her paper, latching more SWL onto what T3 had suggested.

Besides the ongoing diagnosis and contingent intervention T3 used throughout the talk in excerpt 3, this interaction also shows the critical role of interactivity. Throughout this exchange, S3 presented ideas, asked questions, and contributed SWL, all of which signaled the responsibility she took for her own learning. Her interactivity enabled T3's ongoing diagnosis and contingent interventions. The tutor and student continued to move through the student's draft, with the tutor reading aloud and the student responding by asking questions or trying out SWL. The tutor did not fade.

Failed Scaffolded Teaching

To further clarify the moment-to-moment development of scaffolding, here in excerpt 4 we examine a noncontingent exchange. T4 was knowledgeable and enthusiastic about the S4's topic: fashion during the sexual revolution of the 1960s. Ironically, T4 was so interested in what S4 was writing about that she neglected to diagnose S4's current level of understanding, for example, S4's plan for the paper. Without such understanding, contingency could not occur. Instead of diagnosing and then providing a targeted intervention, T4 confused S4, who spoke English as an L2, by directing the conversation toward topics that appeared to be unfamiliar to the student.

T4 and S4 had worked together previously, a context that suggests they had developed some rapport. Indeed, in an earlier conference, they had worked on this same assignment about 1960s fashion. For this conference with T4, S4 brought the feedback she had received from her instructor about this fashion-

related topic. Her instructor suggested that S4 address these questions: “How did the sexual revolution inspire unisex clothing, and did the spread of this fashion loosen gender boundaries?” Despite these guiding questions and even though they had discussed this assignment before, T4 and S4 did not have a shared understanding—intersubjectivity—of the task for this latest conference.

As the talk in excerpt 4 began, S4 had just explained to T4 what she had done so far, including finding and reading some scholarly articles (high level of responsibility). Then, T4 took the floor for a long turn at talk, a turn in which T4 stated some assumptions about what S4 might be thinking and potentially writing about.

> Excerpt 4
>
> T4: Yeah. How these trends kind of emerged and when. If you’re already talking about the sexual liberation movement and you’re only talking about unisex clothing and you’re talking about the feminist discourse around using clothing and like taking on a more masculine, more covered up image to get by in the workplace and to be taken seriously by sexism and counterparts, but then also to have like this other camp of prefigurative, radical, you know, “I want to wear stuff that's revealing not to cater to male gaze, but just because I like it.” Right. Like where those kind of disagreements wear or- Yeah? <<Suggestion and explanation. Strong interventions and high responsibility. Asks S4 to confirm understanding.>>

S4: I- <<Lack of understanding.>>

T4 described two "camps" of sociologists—one camp that sees unisex clothing as a way to get by in the workplace and the other "prefigurative, radical, you know." The turn consisted primarily of explaining interventions, with a possible suggestion to include the prefigurative camp in order to discuss "those kind of disagreements." Throughout, T4 assumed a high level of control for S4's understanding and a high level of responsibility for the task. But S4 seemed overwhelmed by the tutor's ideas.

T4: Ok, get it. <<Response to S4's question about getting something out of her backpack.>>

S4: I'm so sorry. I- I want to make sure I'm understanding correctly. <<Lack of understanding but high responsibility. Not contingent.>>

After T4's long turn, S4 left briefly to get something from her bag. When she returned, she apologized to T4 for not fully understanding what T4 was trying to suggest.

T4: Sure, and I could also be just like going off on a tangent, too. <<Hedge on prior suggestion.>>

S4: No, no. <<Reassures the tutor.>>

T4: I want to make sure you and your ideas are focused. I just think, given how prevalent a lot of these themes- <<Explaining and suggesting. Strong interventions and responsibility.>>

> S4: Yeah. <<Backchannel. S4 understands that T4 wants her to focus her ideas, but she does not indicate that she understands how. Not contingent in terms of the conference agenda.>>

This excerpt demonstrates that students can assume high levels of responsibility (finding and reading secondary sources) but low levels of understanding during conferences. If S4 had understood what T4 said, the strength of the intervention might not have interfered with contingency; S4 might have been able to take over some control and responsibility for the rest of the exchange. However, in response to T4's long turn, S4 could not respond beyond "I."

Rather than trying to diagnose S4's current understanding in order to provide contingent scaffolding, T4 justified her approach. She did so first when S4 left to grab something from her bag. While S4 was gone, T4 turned to the camera and said: "I hope I'm not like taking over and trying to write the paper for her, I just think that's like the question kind of arose." T4 justified her approach again after S4 reassured her that she had not spun off on a tangent by saying that she wanted to be sure that the S4's ideas were focused.

And rather than ask a question, S4 went along with T4's approach (as many undergraduates probably would). The exchange in excerpt 4, then, shows that tutors sometimes fail to diagnose students' level of understanding—even in situations where the two have already established a relationship. When the diagnosis fails—or fails to occur—and the student is unable to respond to what the tutor is saying, scaffolding can't proceed.

CONCLUSION

This article moves forward writing center research by focusing closely on what can happen during a writing center interaction, the heart of writing center tutoring. To achieve its goal, it discusses six characteristics of scaffolding and demonstrates the working of these characteristics with illustrative excerpts of writing center dialogue. It adds to research that moves beyond tutoring interventions toward a broader and more comprehensive look at the junction between tutor intervention and student response.

Scaffolding allows writing center tutors to guide students without relieving those students of the responsibility to control their own learning. It occurs in a context where learning is both social and individual. In the social aspects, tutors assume the responsibility and control for completing the tasks. They support students' learning by keeping frustration low and by not allowing students to fail. They relinquish control and transfer responsibility as students demonstrate good understanding and assume high levels of responsibility for completing tasks—that is, able to regulate their writing processes individually. Although it has been discussed in classroom teaching and teacher-led small group instruction, scaffolding seems particularly well suited for tutoring, where a tutor can focus on diagnosing the needs of one student and ensure interventions are targeted and contingent based on one student's response.

The important dual focus on students' responses as well as tutors' inventions will inform our discussions of an old but on-going writing center bugaboo: directiveness (See Eckstein for a recent discussion). Examining tutors' interventions according to

strength of intervention and assumption of responsibility and students’ responses according to their understanding and ability to take on responsibility brings directiveness into a less pejorative light. The focus is then on the juxtaposition of the student-tutor interaction, and if a student is able to remain motivated and move forward in understanding and taking over responsibility for completing a task, the exchange is contingent. The notion of contingency is more descriptive and goes beyond loaded discussions of directiveness.

A summary of the six characteristics of scaffolding along with related questions appears below in Table 1 (see Appendix B). The table presents a framework to analyze exchanges that are deemed effective or ineffective based on their in-the-moment contingency. How might the potential, in-the-moment success of scaffolding be determined? By taking into account the student’s response as well as the tutor’s intervention, the contingency of the tutoring exchange can be determined: If the tutor has correctly understood the shared goal and diagnosed the student’s current understanding correctly, the tutor’s interventions should lead the student to an appropriate response in most cases. The framework can be used during tutor training with a previously transcribed conference to demonstrate a tutor’s potentially more and less effective interactions with a student.

Transcribing their own conferences and applying these questions can also help tutors assess the effectiveness of self-chosen interactions with students in the moment. Hence, this framework can encourage and perhaps lead tutors in reflecting on their own behaviors. This reflection may enhance tutors’ in-conference experience and move tutors

along in developing expertise. It can provide a personal look at tutoring unavailable in tutoring manuals and unachievable via listening to general (or perhaps even personalized) advice.

We hope to open up areas for future inquiries. Most obvious are large-scale data-collecting studies. Likely in large-scale data-collecting studies, we will find instances in a single conference where numerous exchanges of tutor and student turns at talk are required before the tutor and student can move along to a new topic. We wonder too how tutors and students co-construct scaffolded learning across two or more conferences. To begin to answer such questions, researchers should look for patterns across conferences, using robust, replicable coding. Certainly many more questions will arise, but we believe that an increased effort to closely examine scaffolding in tutor-student conferences can yield extensive benefits for the professionalization of writing center research and practice.

We end by echoing John Nordlof's argument for the importance of theory. The theoretical perspective and tutor practices in the research discussed here are well established—almost fifty years since Wood, Bruner, and Ross's 1976 article and 100 years since Vygotsky's research. In spite of its age, the relevance of the research remains as shown by the recent research from which we've drawn our analysis. The Vygotsky-Wood-Bruner sociocultural perspective can provide ways of discussing tutors' roles, mastery versus development, success of tutors' moves based on students' responses, and other important aspects of tutoring interactions.

NOTES

1. In previous research on tutoring interventions, Mackiewicz and Thompson (*Talk)* separated tutors' cognitive interventions into two categories—scaffolding and instruction—following other researchers at the time (Cromley and Azevedo). However, this research follows the discussions of researchers investigating contingency (Hermkes et al.; Van de Pol and Elbers; Van de Pol et al., "Patterns," "Promoting," "Scaffolding," "The Effects") by referring to both scaffolding and instruction as scaffolding.
2. Excerpts 1 and 2 were collected during 2005–2008 with Institutional Review Board approval and were published in several works previously (e.g., Mackiewicz and Thompson, *Talk*). Excerpts 3 and 4 were collected in 2017 with IRB approval and also were published in several works before this one (e.g., Mackiewicz).
3. We use less-than and greater-than symbols to denote our comments on each excerpt. These comments refer to Dix; Hermke et al.; Mackiewicz and Thompson (*Talk*); and Van de Pol and Elbers.
4. However, advice about who should read out loud—the tutor or the student—varies (see Block).
5. Melody Denny, too, has studied tutors' and students' oral generation of words intended for students' texts, which she calls oral revision.

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APPENDIX A: TRANSCRIPTION CONVENTIONS

This study employed orthographic transcription. The following extralinguistic features were transcribed in addition to the spoken words:

- Silent reading, with "reading silently" in brackets, as in [reading silently]
- Occurrences of unintelligible talk, with "unclear" in brackets, as in [unclear]
- Laughter, with "laughs" in brackets, as in [laughs]
- Pauses longer than one second, with the number of seconds in brackets, as in [2s]
- Pauses one second or less, with a comma

- Rising intonation for an inquiry, with a question mark
- Cut-off speech, with a hyphen
- Reference to a word as a word, with double quotation marks, as in the following example:

  S: I had "tell" but the computer wouldn't let me do "tell." It kept underlining it and saying "tells."

- Occurrences of overlapping talk, denoted with brackets as in the following exchange:

  T: Ok. Alright. Well, thanks for coming by. I'll give you your stuff back here. And I just keep this so I can put it in the computer. [So. But, um, you have a good day

  S: [Uhhuh.

  T: and I hope that it goes well for you.

- Occurrences of reading aloud, with double quotation marks, as in the following example:

  "For example, in the article, there is an example." Uh, you could say…

- Spoken written-language (SWL), with single quotation marks, as in the following example: 'Like, one character, Momma Gump,' dot dot dot.

APPENDIX B: TABLE

Table 1: Proposed Framework for Analyzing Scaffolding

Characteristics	**Questions**
Intersubjectivity	• Did the tutor and the student demonstrate that they worked from a shared agenda?
Ongoing diagnosis	• Did the tutor correctly diagnose the student's understanding and motivation before intervening? • Did the tutor verify the diagnosis? • Did the tutor check the diagnosis after intervening to ensure understanding of the student's response, to check the student's motivation to continue, and to reaffirm the agenda?
Contingency, Interactivity, and ZPD	• Did the tutor follow the spirit of the contingent shift principle by (1) strengthening the intervention (low, medium, high) and taking on more responsibility (low, medium, high) when the student does not understand and (2) decreasing the strength of intervention and taking on less responsibility when the student understands or makes an appropriate response? • Did the tutor's response clearly lead the student forward in understanding, as determined by the student's response? • Did the student demonstrate understanding (lack of understanding, partial, good) and take on more responsibility (low, medium, high)?
Fading, Transferring of responsibility, Checking	• Did the tutor move forward to a new interaction when the student provided a correct/appropriate answer? • Did the tutor pass on some responsibility to the student during the interaction or series of interactions? • Did the student show signs of self-regulation? • Did the tutor check back on the student's ability to self-regulate?

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