

# Dialogic Status in Design Education: Authority and Peer Relations in Studio Class Conversations

R. Keith Sawyer<sup>1</sup> 

## Abstract

*In this article, I study role enactment and status relationships in university design studio classrooms. I analyze conversations that take place during discussions of student creative work, and I interpret them in the context of previous studies of learning, classroom discourse, and creativity. I found that professors and students jointly establish and maintain a complex and hybrid participation structure in which they enact dialogic status: they simultaneously perform both an authority relationship and a peer relationship. I analyzed the interactional mechanisms that dialogically perform these two status relationships, drawing on prior studies of role and status in conversation. I show that the dialogic blend of authority and peer relationships continuously and frequently varies throughout reviews of student work. Drawing on past studies of creativity in education, I argue that the joint enactment of dialogic status is an effective pedagogy for teaching and learning for creativity.*

## Keywords

creativity, design, discourse, education, status

A substantial body of research suggests that student creativity is fostered by classroom conversations that are collaborative, with both instructor and students jointly participating in the creative construction of knowledge. Learning sciences research has found that this *participatory pedagogy* is effective at guiding students to learn adaptive expertise and to develop the ability to creatively transfer what they learn to new situations (e.g., Bransford and Schwartz 1999; Sawyer 2014). In participatory pedagogy, teacher and students co-construct a *peer participation structure* (Forman et al. 2017; Tabak and Baumgartner 2004) in which they jointly participate in classroom interactions as

peers. A participation structure includes “the configurations of interactional roles, rights, and responsibilities” (Tabak and Baumgartner 2004:399) and “the routines that develop over time in cultural contexts that guide turns at speaking and acting in a particular setting” (Forman et al. 2017:34). In participatory pedagogy, students take on responsibilities that are

---

<sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

### Corresponding Author:

Dr. R. Keith Sawyer, School of Education,  
University of North Carolina at Chapel Hill, Campus  
Box 3500, Chapel Hill, NC 27598, USA.  
Email: rksawyer@ad.unc.edu

typically associated with the teacher, including creating information, evaluating knowledge, and monitoring the flow of the classroom (Herrenkohl and Guerra 1998:439; Tabak and Baumgartner 2004:399). Students are legitimated speakers, jointly responsible for the successful performance of the encounter. Research has demonstrated that participatory pedagogies are more effective than traditional classroom instruction—often called *instructionism*—which is characterized by an *authority participation structure* where teachers perform an authority role with sole access to knowledge that they deliver to passive students (e.g., Bransford, Brown, and Cocking 2000).

Many educators aspire to participatory pedagogy and often refer to it by saying that teachers should be “the guide on the side, not the sage on the stage.” But although student active knowledge construction requires them to be granted agency, research suggests that the pedagogical effectiveness of the interactional flow of participatory pedagogy is enhanced by *scaffolds* that structure the joint participatory activity (Tabak and Baumgartner 2004). As the guide on the side, the teacher retains primary responsibility for the success of the learning encounter. Studies of apprenticeship learning environments, for example, have found that learners jointly participate in the ongoing maintenance and eventual success of the encounter (Lave and Wenger 1991; Rogoff 1990). Yet the more experienced member of the group—whether master, coach, supervisor, or teacher—takes on more responsibility than the apprentices for managing the successful execution of the joint activity. The teacher retains a higher status role, providing guidance and modeling even while students participate as agents. This tension results in a challenge facing participatory pedagogy: it is difficult for

a teacher to defer the authority role and to engage students in collaborative discourse as peers while at the same time retaining the authority to provide and maintain these guiding structures. In spite of the consensus among researchers and teachers in favor of participatory pedagogy, it has proven to be difficult to implement (Sawyer 2019; Tabak and Baumgartner 2004:421). In this article, I demonstrate that this difficulty is, in part, a result of the interactional challenge of negotiating two status relationships that are continually in tension.

My research question is: How can the teacher and students jointly enact status relationships that enlist the students in participatory pedagogy while at the same time granting the teacher sufficient authority to guide the improvisational flow of the class? Negotiating this balance is essential for students to attain creative learning outcomes (Sawyer 2019). To address this question, I chose to study studio classes in professional schools of art and design, where creativity is an important learning outcome (Sawyer 2018b). A recent literature review of empirical studies of studio pedagogy (Sawyer 2017) found that it is a participatory pedagogy. It is constructivist, active, hands on, and participatory (James 1996; Lo and Howard 2009). Instructors create an open-ended classroom environment where students and instructor enact a peer relationship rather than an authority relationship (Dannels 2005; Salazar 2013).

In this article, I focus on the interactional mechanisms used in studio classroom discourse and how they enact roles and status relations associated with participatory pedagogy. I analyze transcript data of classroom interactions where professor and students continuously negotiate the tension between an authority participation structure and a peer participation structure. This analysis reveals

the frequent use of interactional mechanisms that prior research has associated with each of these two status relationships. I show that both peer and authority interactional mechanisms are enacted in successive dialogue turns and, in many cases, in a single turn or utterance. When participants combine these mechanisms in the same stretch of talk, both the authority and the peer participation structures are overlaid and simultaneously enacted, and the demonstrated orientations of participants—visible through their coordinated use of interactional mechanisms—shift continuously and subtly. I call this hybrid participation structure a *dialogic frame*, using a term associated with Bakhtin (1981): speech is “dialogic” when it combines two social voices in a single utterance. I demonstrate that many studio classrooms are characterized by *dialogic status*—where the enacted relationship between professor and students combines elements of both authority and peer relationships.

In the discussion section, I build on these findings to suggest that the joint performance of dialogic status is necessary to successfully enact participatory pedagogy not only in design education but in all subjects. I argue that the difficulty of enacting dialogic status partially accounts for the challenge of successfully implementing participatory and constructivist pedagogy. I also argue that dialogic status talk in studio classes is consistent with, and extends, past studies of creative education. In the conclusion, I suggest how this analysis of dialogic status in studio classrooms might contribute to our understanding of teaching and learning for creativity in all subjects.

### THEORETICAL FRAMEWORK

I use a sociocultural theoretical framework that views social interaction as a jointly constructed and collective activity. This

theory is often used to explain pedagogical encounters in which the instructor does not enact a traditional higher-status teacher role. In sociocultural theory, learning is explained as a transformation in patterns of participation in a community of practice, as in Lave and Wenger’s “social practice theory of learning” (1991:35) and Rogoff’s “apprenticeship in thinking” (Rogoff 1990).

I take an epistemological stance that if structural position and status are relevant to participants, they will visibly orient toward the status relationship in interaction (Schegloff 1992). Status relationships and participant roles are jointly constructed by the situated social actions of participants (Macbeth 1991; Psathas 1995; Stevanovic and Perakyla 2012:297–98). To be sure, in schools as organizations, the teacher formally occupies a higher-status structural role as an authority. Yet these structural roles and relationships must be enacted by participants to have relevance to the pedagogical encounter (Goodwin and Duranti 1992). A professor cannot enact an authority role alone; authority and status become interactionally meaningful only when the students orient toward the professor as authority and themselves enact a lower-status role (Markee 2015).

### LITERATURE REVIEW

This study is situated within two bodies of relevant empirical research: teaching and learning for creativity and role and status performance in discourse.

#### *Teaching and Learning for Creativity*

Research on creative teaching suggests several teacher behaviors that are associated with creative learning (e.g., Craft 2005; Sawyer 2012:399–400). For example, when a teacher communicates an openness to unusual ideas, it encourages

students to develop a broader variety of potential solutions, including some that may seem strange or even ridiculous when first proposed. Development of a greater variety of solutions—referred to as *flexibility* (Sawyer 2012:46–49)—is associated with more effective idea generation. Second, teachers can enhance creativity by encouraging students to ask new questions and redefine problems, an aspect of the creative process known as *problem finding* (Sawyer 2012:90–93). Third, research shows that the creative process can be enhanced when sensible risks are taken and when failure is acknowledged as a necessary moment in a successful creative process. As such, teachers can foster creativity by avoiding negative appraisals of student productive failures (Kapur 2008).

These teacher behaviors foster student agency and as such are consistent with participatory pedagogy. These parallels suggest that a peer participation structure would more effectively lead to creative learning outcomes than an authority participation structure. This study extends this research by examining the interactional patterns found in design studio classrooms, where creativity is an important learning outcome.

### **Role and Status Performance in Discourse**

Studies of K–12 classroom discourse have found that instructionist classrooms almost exclusively evidence an authority participation structure. Teachers enact an authority role through using higher-status interactional mechanisms, and students orient toward the teacher as having superior status. Inversely, when students talk, they are more likely to enact interactional mechanisms associated with low status and deference (e.g., Cazden 2001). In contrast, in classrooms that evince a peer participation structure,

the teacher uses fewer of the high-status interactional mechanisms—enacting a reduced authority role (Cazden 2001; Lo and Howard 2009).

Many close studies of naturally occurring talk have documented the interactional mechanisms associated with different status roles in interaction. This research has found that status and politeness are enacted through a repertoire of interactional mechanisms (see the overviews in Brown and Levinson 1978; House and Kasper 1980; Jablin 1979; Lakoff 1975; Leaper and Robnett 2011; Macbeth 1991; Stevanovic and Perakyla 2012). Interactional mechanisms associated with higher status include speaking with higher volume, speaking faster, or accenting specific words for communicative emphasis (Lamb 1981; Parker et al. 2018; Ridgeway and Berger 1986). Conversely, lower-status participants have been found to end their turns at talk with a rising pitch and to use more *hedging* (Bradac, Mulac, and Thompson 1995). Hedging includes interactional mechanisms such as “I guess” and “maybe,” which signal that the speaker is not definitively committed to the preceding or following statement. Hedging has been found to downplay the authority of the speaker (House and Kasper 1980; Oak 2012). These mechanisms also have been studied in classroom dialogue (e.g., Cazden 2001; Lo and Howard 2009).

A prominent indicator of a joint orientation toward status relations is demonstrated *floor rights*, defined as the right to speak or “to hold the floor” (Cazden 2001; Goffman 1981). In traditional classrooms, teachers have floor rights: they can speak at any time; they can interrupt students; they select who speaks next; and students do not self-select (McHoul 1978; Maroni 2011). Floor rights are indicated by length of turn, number of turns, speaker pauses, and self-selections. Higher-status participants take longer

turns and speak more overall; this is often “an indicator of dominance” (Lamb 1981:50). In contrast, in peer encounters, hearers are more likely to self-select when the current speaker leaves a short pause in speech—as short as a fraction of a second—known as a *transition-relevant place* (TRP; Cazden 2001:83; Forman et al. 2017). When hearers don’t self-select during a speaker’s TRP, it often signals deference to that speaker (Edelsky 1981; Parker et al. 2018:18–20).

Related studies of asymmetrical status have found that lower-status individuals are more likely to *backchannel* affirmation and understanding (Lerner 1999:250; Schegloff 2007:6–7; Stivers 2006). Backchanneling is defined as brief words being spoken by the recipient, such as “sure,” “mmm-hmm,” or “okay,” that do not take the floor from the higher-status speaker (Duncan and Fiske 1977; Goffman 1981; Yngve 1970). Lower-status individuals are more likely to use backchanneling (Bardovi-Harlig and Hartford 1993; Waring 2002).

There have been a few recent studies of the classroom discourse patterns associated with authority and peer participation structures in high school biology (Forman et al. 2017; Tabak and Baumgartner 2004) and mathematics (Wagner and Herbel-Eisenmann 2014). These studies have focused on teacher talk and have found that when teachers enact an authority role, they use first-person constructions, imperatives, closed questions, and modal verbs suggesting necessity (e.g., “have to” and “need to”). In contrast, when teachers invite students to engage with them as peers, they use third-person constructions, open questions, and constructions that suggest alternative choices (e.g., “if you want to,” or “you might”; Wagner and Herbel-Eisenmann 2014). Teachers talk more—both total time and number of turns (Forman et al. 2017)—and teachers are more likely to

initiate pair-part exchanges, such as asking a question that a student is then expected to answer (Tabak and Baumgartner 2004).

My study has the potential to extend these previous findings by analyzing the interactional mechanisms of status and politeness that are associated with these two participation structures. A close focus on these interactional mechanisms has the potential to reveal how teacher and students jointly perform status relationships, thus complementing prior studies of teacher talk. In addition, this study has the potential to extend prior findings by analyzing talk that demonstrates dialogic status—stretches of talk when these two participation structures are combined in a hybrid, dialogic frame.

## METHODOLOGY

The six class sessions analyzed here (see Table 1) were observed and recorded as part of a larger study that included ethnographies at two U.S. colleges of art and design (Sawyer 2018b). I used an interaction analysis methodology (Jacoby and Ochs 1995; Jordan and Henderson 1995) to gather, transcribe, and analyze video recordings of naturally occurring studio dialogue. This methodology was inductive in that I allowed concepts and theoretical categories to emerge from the data rather than deductively exploring the applicability of pre-existing categories and theoretical frameworks to this data. I focused on how the external structural relations of participants are realized through situated activities where conversation serves “as loci and media for the interactional engendering of these structures” (Jacoby and Ochs 1995:175).

Each of these six class sessions used a pedagogical format called a *pinup critique*, or “pinup” for short. In the pinup, a student—called here the *presenter*—brings his or her work-in-progress to class

**Table 1.** Classrooms Observed.

Professor	Discipline	Duration
ED	Interior design	1:00:46
JD	Product design	2:22:44
JV	Architecture	1:38:31
RA	Graphic design	55:13
HC	Communication design	32:02
DD	Illustration	21:20
Total		6 hours, 50 minutes

and pins it up on the studio wall. The presenter and the professor discuss the student's work while sitting or standing near the work. The other students sit in chairs that are positioned close by, and they focus intently on the interaction between the presenter and the professor and often participate in the dialogue.

Each student's pinup critique takes approximately 20 to 30 minutes, and several students are reviewed during a single 2 ½-hour class session. The critique begins with the presenter's providing a 1- or 2-minute description of the work—what process led to this point and what issues remain to be resolved as the creative process continues. After this brief introduction, in the rest of the pinup, the professor and presenter discuss how to identify and understand issues with this interim work and how to think about possible ways to move forward to resolve these creative challenges.

### **Transcription and Analysis**

My sociocultural theoretical framework holds that roles and status are performed in interaction. If status relations play a role in pedagogy, they will be *demonstrably relevant* to the participants in stretches of talk (Schegloff 1992). Interaction analysis is designed to empirically explore "how people make sense of each others' actions as meaningful, orderly, and projectable" (Jordan and Henderson 1995:41). Interaction is considered to be

"the collective achievement of participants" (41), and interaction analysts study "the ways in which participants make this orderliness and projectability apparent to each other" (42). I chose this methodology to explore the microinteractional mechanisms whereby classroom status relationships are enacted and negotiated.

I transcribed the six videos using Transana software. In the first pass, I used a straightforward text-only style. In the second pass, I studied the transcripts along with the corresponding video to identify stretches of talk where status relationships were visibly oriented in conversational mechanisms. From these excerpts, I chose examples for this article that demonstrate the interactional mechanisms that are associated with status relationships. These examples were transcribed using the Jeffersonian conventions associated with conversation analysis (Jefferson 1984; see Appendix A).

### **FINDINGS**

I found that professors and students jointly enacted a social space where authority and peer relationships were blended and status relationships were dialogic. In these six class sessions, dialogic status was continuously negotiated, modified, and reproduced through joint social action. At any given moment in the interaction, the enactment of status relationships between professor and students ranged along a cline from an

authority participation structure to a peer participation structure. I rarely observed a pure authority or a pure peer participation structure. Instead, I saw them jointly enacted in a dialogic frame: professor and students performed the interactional mechanisms associated with both authority and peer relationships in the same talk.

The interactions analyzed in the following sections demonstrate how talk between professor and students enacts dialogic status by combining the interactional mechanisms associated with both authority and peer status relationships. These transcripts show that the nature of the dialogic frame subtly and frequently changed, with the status differential between professor and students always in flux. The analysis of these transcripts focuses on the interactional work that positions each interactional moment on a cline from authority to peer participation structure.

### Example 1: Professor status deference.

*Architecture professor JV and presenter S are standing and facing the presenter's sketch pinned on the wall. The rest of the class is sitting in chairs, facing JV and the presenter, silently observing their conversation.*

- 
- 1 JV: And, uh, I think that that's a very ex-,  
 2 potentially a very exciting direction (4)  
 3 S: (unintelligible)  
 4 JV: you know, and then you, you figure out  
 5 what's the viability and test it and,  
 6 according to program and, um, perceptual  
 7 views,  
 8 JV: ((gestures around aerial map portion of wall  
 9 Display))  
 10 where you (.) are coming from in various  
 11 parts of the city.  
 12 Uh, this, very much, I'm glad to see this  
 13 perspective here as well.  
 14 But you know, here, you, you've got very,  
 15 very tentative, I think, moves (1)  
 16 to showing something
- 

(continued)

### STATUS-DEFERRING MECHANISMS USED BY PROFESSORS

In schools as institutions, professors occupy a higher-status structural position. These design school students—just as all college students—have had many years of experience enacting asymmetrical status relationships in primary and secondary school, and their default behavior in classrooms is to occupy the lower-status role associated with instructionist pedagogy. The introduction of participatory pedagogy requires professors to do interactional work to shift the classroom performance toward a more symmetrical status relationship.

In part to counter their structural status role, I found that professors did substantial interactional work to *defer authority*, using many of the lower-status interactional mechanisms described earlier. In Example 1, from an architecture class, the professor JV uses a substantial number of lower-status interactional mechanisms.



(Continued)

---

5        So that- that you can really have those  
6        things go  
7        >back and forth and back and forth and back  
8        and forth?<  
9        To:: (2) add to the, (1) um, (3) the uh,  
10        interactivity? (2)  
11        uh, but at the same time, you know,  
12        uh <kind of add> to the, the meaning, or (1)  
13        the experienced meaning, rather than the  
14        visual representation of the meaning?

---

RA's status deference mechanisms in Example 2 include the following:

- Turn-final pitch rise—lines 4, 8, 10, 14
- “Uh” and “um”—lines 9, 11
- Hedges—lines 3, 12 (“maybe,” “kind of”)
- Restarts—lines 5, 9, 12 (“so that-that”)

As in Example 1, we see interactional mechanisms associated with an authority participation structure:

- Professor has floor rights. Student does not self-select at TRPs (e.g., the two- and three-second pauses at lines 2, 9, and 10)
- Faster speech—lines 7–8

Examples 1 and 2 both demonstrate dialogic status, and when compared,

demonstrate the variable nature of this dialogism, with Example 2 representing a slightly more asymmetrical status relationship.

#### LOW-STATUS MECHANISMS USED BY STUDENTS

In Examples 1 and 2, the professor *double voices* (Bakhtin 1981), speaking as both authority and peer in the same stretch of talk. Even when the professor uses interactional mechanisms that defer authority, the students often continue to use mechanisms associated with lower status, suggesting a resistance to the professor's projection of a more equal relationship. In the talk excerpted in Examples 3, 4, and 5—from different students and in different classes—the presenters describe their decisions and the process that led to the work on display.

#### Example 3: Student low-status interactional mechanisms. Professor JV, architecture class.

---

1    S:    The, um, when it was like, I mean like  
2        looking at acoustic studies, and they, they  
3        show like how the sound is projected, and  
4        how it bounces back. But like, I, without  
5        having a, a solid design for the interior  
6        how would I even- (1) decide

---

**Example 4: Student low-status interactional mechanisms. Professor HC, communication design class.**

---

1 S: Um:: and the text- like after I- I got rid  
 2 of like everything else, I just feel like  
 3 the, the text is (.) kind of (1) I don't  
 4 know.

---

**Example 5. Student low-status interactional mechanisms. Professor JD, product design class.**

*Example 5 is taken from the beginning of the student's pinup, when the presenter is explicitly given the floor to describe her work in progress.*

---

1 S: Yeah↑  
 2 On the weekends. (1)  
 3 ◦When you have time.◦  
 4 So, um, I mean I'll get rid of all these things,  
 5 and I would have this area kind of to have  
 6 (calendar) or something,  
 7 because it's a function of- that you would look at  
 8 every day anyways.  
 9 So um, >what I was thinking of is,< um (.)  
 10 what kind of packaging could go inside. (1)  
 11 So I found these tubes, and::  
 12 hhh I think if I kind of (.)  
 13 figure out that it- would be convenient, (.)  
 14 because it fits in really well. (1)  
 15 Like if I had to find, so (1)  
 16 they would fit in really nicely, and you could  
 17 just grab one and go and,  
 18 I mean like,  
 19 >you could even put it in your bag and stuff.<  
 20 >Because I have lids for them,< so that (2)  
 21 ((drops the lid, bends down to pick it up;  
 22 classmate picks it up and gives it to her; she  
 23 takes it))  
 24 ◦ thank you. ◦  
 25 And::, um, what:: else:: hhh as I discussed hhh  
 26 was how like once you eat hhh so many nuts in one  
 27 day,

---

In each of these three excerpts, the presenting student holds the floor. Because the presenters are the creators of the works, each presumably has privileged *epistemic access* (Heritage 2012) to the work vis-à-vis the other participants,

including the professor. When speakers have more knowledge of the current referent than others, they have been demonstrated to speak in ways associated with higher status, for example, using more declarative syntax (Heritage 2012). Yet

in these excerpts, the presenters use low-status interactional mechanisms, which are associated with low epistemic status, including the following:

- “Um” and “uh”
- Restarts
- Self-correction
- Hedges
- Utterance-final rise in pitch

In Example 5, the presenter uses many of the same lower-status mechanisms as the students in Examples 3 and 4. But the participation structure being jointly performed in Example 5 is less asymmetrical. For example, although professor JD does not speak in Example 5, he orients toward S as having floor rights, by not interrupting or self-selecting, even though S provides many TRPs in her talk (e.g., lines 10 and 14). This projects a status relationship where the presenter is an authority regarding his or her own work. The student in Example 5 enacts fewer lower-status mechanisms than do the students in Examples 3 and 4. The student also incorporates high-status mechanisms, consistent with the presenter’s position of authority as the creator of

the work, including sped-up speech (lines 9, 19, 20) and syllable emphasis (line 10).

### NEGOTIATING THE DIALOGIC FRAME: FLOOR RIGHTS AND BACKCHANNELING

In instructionist classrooms, teachers have *speaking rights*: they can “speak at any time and to any person; they can fill any silence or interrupt any speaker; they can speak to a student anywhere in the room and in any volume or tone of voice. No one has the right to object” (Cazden 2001:82; also see McHoul 1978). This is consistent with the research reviewed earlier, which has found that in many social contexts, higher-status participants have greater floor rights, including the right to select the next speaker (e.g., Edelsky 1981).

In studio conversation, I observed stretches of talk that seem similar to instructionist classroom discourse, in that the professor and students use interactional mechanisms associated with professor speaking rights. For example, presenters often backchannel at TRPs in professor talk rather than self-selecting in a bid to take the floor, as demonstrated in Example 6.

#### **Example 6. Student backchanneling during the professor’s talk. Professor HC, communication design class.**

*HC is standing at the wall, immediately next to two posters designed by S, and pointing at various visual elements throughout her talk. HC’s head position and eye gaze alternate between the wall and the student. S is leaning on a table that is 8 feet from the wall.*

---

1 HC: >Everything is on this side.<  
 2 It’s not because the scale shifts. It’s because (.)  
 3 ((quick glance at S and then back to poster))  
 4 this is sitting on this side of an axis that  
 5 ((quick head turn to S and back))  
 6 you’ve clearly established.  
 7 ((head turn to poster))  
 8 S: Mm-hm.

---

(continued)

**(Continued)**


---

9 HC: So (.) on this one (2)  
 10 there are whole passages that jump back and forth.  
 11 S: Right.  
 12 HC: which is fine, (2) but I wonder about,  
 13 ((head and gaze to S))  
 14 giving us a little hierarchical moment  
 15 ((head to poster))  
 16 >even within your system whether there's a scale  
 17 shift or not.<  
 18 So, this seems like a a really nice line to do  
 19 that with.  
 20 S: Okay.

---

In Example 6, HC uses many higher-status mechanisms, including emphasized words (line 12) and rapid speech (lines 1, 16–17), and none of the status-deferring mechanisms used by JV in Example 1, or by RA in Example 2. S participates in the co-construction of an authority participation structure by backchanneling affirmation at lines 8, 11, and 20. When recipients backchannel at a TRP rather than take the floor, it indicates agreement with the prior talk and also that the recipient is deferring the floor for the previous speaker to continue (Goffman 1981:13; Koole 2010; Lerner 1999:237, 250; Schegloff 2007:6–7; Stivers 2006). Student backchanneling signals that the professor is speaking clearly

enough to be understood. In an analysis of graduate seminars, Waring (2002) suggested that a student demonstration of lack of understanding might be perceived as implying the professor was not speaking clearly enough, and as such, an implicit critique of the professor's ability to communicate. Such a critique would be inappropriate for a low-status participant.

In Example 7, the professor holds the floor and does most of the talking, as in Example 6. But Example 7 represents a more symmetrical dialogic status relationship. Compared to HC's talk in Example 6, the professor in Example 7 uses more status-deferring mechanisms while also incorporating mechanisms associated with an authority role.

**Example 7. Student backchanneling to professor's dialogic voicing. Professor JD, product design class.**

*Students have developed prototypes of a product made with recycled materials. S's product, made from a brown paper bag that has been cut into pieces and reassembled, is a beach bag designed to hold a towel and other common beach items.*

---

1 JD: But then you know, okay.  
 2 >okay so that's where- < you know,  
 3 it would be inferred that maybe, like,  
 4 my towel would just kind of insert there,  
 5 and it becomes like a little- (.) er, like that.  
 6 ((demonstrates on the model))  
 7 S: So, kind of merge these two into one.

---

(continued)

**(Continued)**


---

8 JD: Yeah. Because I don't think there's a need for  
 9 more materials=  
 10 S: =okay  
 11 JD: In- this- kind of- environment already.  
 12 Like >I already have a lot of material here.<  
 13 So, like why not use what I'm going to take to  
 14 the beach.  
 15 I'm gonna take-  
 16 or I'm going to take (1)  
 17 a towelo-  
 18 I'm going to take something that, you know, I'm  
 19 going to need to dry off with anyways,  
 20 so let's, let's,  
 21 >let's have that<,  
 22 you know, run double duty. And- (1)  
 23 I just kind of roll it up, (1) and (1)  
 24 S: Mm hm  
 25 JD: slide it in there,  
 26 omaybeo.  
 27 [You know.]  
 28 S: [Yeah.]  
 29 JD: Um- (2) the other thing I think, (1) I think for  
 30 me, and-  
 31 I'll just kind of throw this out to these guys  
 32 is-  
 33 The, but- but let's just kind of bring this over  
 34 here  
 35 ((picking up the presenter's prototype model))

---

In Example 7, JD's status-deferring mechanisms include restarts (lines 15–16, 20, 33) and hedging (lines 3, 26). Even while JD uses many more lower-status interactional mechanisms than HC, we also see interactional mechanisms associated with higher status, including faster speech (lines 2, 12, 21) and increased volume for emphasis (e.g., lines 5, 9, 11, 29). The presenting student copresents an authority participation structure by enacting lower-status speech mechanisms—including by backchanneling that the message has been understood (lines 10, 24, 28)—and by acknowledging JD's floor rights by not self-selecting at the TRPs at the end of JD's utterances.

Examples 6 and 7 are both joint performances of dialogic status. The professor enacts an authority role through interactional mechanisms, and the student orients toward the professor as higher status. If we consider only these specific interactional mechanisms, the classroom talk in these examples may seem similar to traditional classroom discourse. Yet both HC and JD also incorporate a substantial number of status-deferring interactional mechanisms. Professor and student jointly perform dialogic status, without the appearance of confusion, tension, or uncertainty, and they do not display conflicting orientations toward the encounter.

### FLOOR RIGHTS: SELECTION OF NEXT SPEAKER

In these transcript examples, students orient toward the professor as having floor rights, and they behave interactionally in ways that project floor rights onto the professor. For example, compared to students, the professor leaves longer pauses between utterances, and because students don't self-select, the professor continues to hold the floor (see McHoul 1978). Yet in the dialogic frames I analyzed, the students have significantly more floor rights than in traditional classrooms, as demonstrated by the student self-selection in Example 8 below. When a student self-selects in a professor TRP, as in Example 8, line 5, this is a sign of higher-status performance than

in Examples 6 and 7, where students do not self-select.

In the studio classes I observed, the students who are not presenting are often invited to respond to the presenter's work by offering reactions and suggestions for future work. I observed many stretches of talk in which multiple students' self-selections occurred in sequence, without professor mediation or interruption, as in Example 8, lines 5 to 12 and lines 15 to 42. Professor JD orients toward these self-selections by acknowledging the students' floor rights: he jointly participates in a peer participation structure by backchanneling affirmation during or in response to student utterances (lines 2, 8, 17, 25). In an authority participation structure, in contrast, only the instructor has the right to select the next speaker.

#### Example 8. Multiple student self-selections.

*Professor JD, product design class. Many students are giving suggestions to the presenter, S4. The professor and the students are all looking at S4's sketches on the wall. The professor's body and head position face the wall; he does not direct eye gaze to any one student.*

---

1 S4: (unintelligible)  
 2 JD: Mm-hm.  
 3 ( (head turns to class) )  
 4 What do you guys think about the- (. )  
 5 S2: Yeah. I think also like, uh, it's a little like  
 6 two (.) dancing.  
 7 S1: Start=stop=start=stop-  
 8 JD: Right.  
 9 S4: And colorwise? What do you all like?  
 10 S1: I like the orange.  
 11 S2: I like the orange one. Orange and brown, second  
 12 to last one there.  
 13 JD: I think it just feels earthy, but fresh. You  
 14 know?  
 15 S4: Maybe that could be just you know just  
 16 supporting color for like the packages.  
 17 JD: Mm-hm. ((nods))  
 18 S1: ((off camera)) I mean, they all go together, for  
 19 sure.  
 20 That's a color scheme right there that you can  
 21 use for your package.

---

(continued)

**(Continued)**


---

22           ((as S1 talks, professor and presenter S4 are  
23           gazing at each other, while they both nod heads  
24           up and down in affirmation))  
25    JD:    Yeah. Yeah. Mm-hm. ((nods))  
26           ((4 second silence, while presenter and  
27           professor gaze at the work))  
28           ((S1 takes two steps from off camera, stands  
29           next to work and gestures at the feature he is  
30           commenting on))  
31    S1:    Well I like the (unintelligible) for this on is  
32           in typeface inside of (unintelligible). Now that  
33           makes it unique.  
34           ((S1 steps back three steps, off camera again))  
35    S4:    I don't know hhh, I just don't know whether I  
36           want to repeat that again. (1)  
37           ((S4 briefly steps toward work, and gestures at  
38           the feature being discussed))  
39    S7:    I feel like, uh,  
40           ((points to one of S4's logo graphics))  
41           I's ((referring to the "I" characters in the  
42           logotype))  
43    JD:    I's? Yeah. ((smiles and nods))  
44           ((JD is making a subtle joke that the plural of  
45           "I" sounds funny))  
46           ((professor and student laughter, and  
47           overlapping talk in background))  
48           ((JD turns head to gaze at S7.))  
49    JD:    That's- (.) not good. Right?  
50    S7:    Yeah.  
51    JD:    Yeah. I'm with you.  
52           Are I OK with that other one?  
53           ((This incorrect use of "I" instead of "we" continues the joke))  
54           ((laughter from class members))  
55           ((overlapping student utterances))  
56    JD:    >All right.< So those are things you need to do  
57           with this, too. Just tweak that up.  
58           All right. Um, tell the folks what I were  
59           talking about earlier, about um, the  
60           (unintelligible) here, so I can see and just the  
61           kind of thoughts that I had.  
62    S4:    Okay. So, um I wanted to upcycle it. It's a  
63           lapboard...  
64           ((S4's turn continues for 72 s.))

---

Throughout Example 8, the professor and students jointly enact a participation structure in which they have relatively equal status, as indicated by four students' frequent self-selections: S1 at lines

7, 10, 18, and 31; S2 at lines 5 and 11; S7 at line 39; and S4 (the presenter) at lines 9, 15, and 35. As Cazden (2001) noted in her study of classroom discourse, with "more local management of turn-taking

**Table 2.** Total Turns and Turn Length of All Participant Types During Three Pinups of JD's Studio Class

	Professor	All Students	Presenter Only	Other Students
Total turns > 10 seconds	44	61	40	21
Total talk duration	1,401	1,269	904	365

by individual students at the moment of speaking ... classroom discourse becomes more like informal conversation" (83). Furthermore, the professor defers the floor rights associated with the authority role by not initiating turns at many TRPs throughout the transcript, such as the four-second pause in lines 26–27, which ends with a self-selection by S1 at line 31.

Note the subtle changes in dialogic status throughout Example 8, with the participation structure occupying a range of positions along the authority-peer cline. These rapid, frequent, and unmarked shifts indicate that JD and his students are skilled at negotiating dialogic combinations of role and status. Note the contrast with dialogic status performance in Example 7, excerpted from the same class session: in Example 7, JD holds the floor and comments as an expert on the student's prototype, primarily enacting an authority role, while also using status-deferring mechanisms. Example 8 inverts the balance between authority and peer: the dialogic status is enacted primarily as a peer relation.

Although Example 8—up to line 55—is very close to a peer frame, the professor still performs a higher status than the students. For example, the transcript begins with JD's guiding the students toward a specific discussion topic, at line 4: "What do you guys think about the- ." In addition, JD speaks a total of five turns, more turns than any of the students including the presenter, S4. And the professor retains the authority to transition the dialogic frame away from

a peer interaction, as he does in lines 56–61. JD begins line 56 by saying "All right"—using the high-status mechanisms of emphasis and sped-up speech—and then giving the presenter explicit direction about what to do next. Also note that this switch is not oriented toward as a violation by the students; at line 62, S4 acknowledges JD's shift away from a peer participation structure, and orients toward his authority moves as appropriate.

I observed this broad range of dialogic status relations throughout JD's class, so I decided to gather some descriptive statistics to examine the distribution of floor rights throughout this class session. Across three student pinup critiques in JD's studio class, a total of 44 minutes that include both Examples 7 and 8, I counted turns of 10 seconds or longer (see Table 2). Ten seconds is of sufficient length to contain multiple utterances, each with a TRP at its completion.

The interaction patterns in JD's class—with professor and students holding the floor equally, and with short speaking turns throughout—display the characteristics associated with participatory pedagogy. JD's total talk is 1,401 seconds (23:21), more than the total of all students together (1,269 or 21:09). But still it is barely more than half, indicating that the class's dialogue occupies a position on the cline close to a peer participation structure.

Even though professor JD talks more than all of the students combined, the students take more turns with a duration of more than ten seconds than the

professor—61 compared to the professor's 44 turns. Because students have more turns of more than ten seconds, even though their total talk time is less, this implies either that the professor's long turns are much longer than the students' or that the professor takes more and/or longer turns that are less than ten seconds. Consistent with the fact that the presenter's work is being discussed, the other students take 21 long turns whereas the presenter takes 40, almost twice as many. These figures indicate a relatively high equality in floor rights: the dialogic frame is a joint performance incorporating all students in the class, not only the professor and the presenter. These descriptive statistics, over 44 minutes and three pinups, provide confirmation that the short excerpts in Examples 7 and 8 are representative of the class's pedagogy.

Also interesting is the comparison of the presenting student and the other students (columns 3 and 4). The presenter talks more than the other students—40 long presenter turns compared to 21 long other-student turns—and the presenter's total duration of talk is 904 seconds, contrasted with 365 seconds for those students who are not presenting. This reflects a joint enactment of a participation structure in which the presenter has greater floor rights than the other students, even as the other students have the right to self-select with comments and questions.

## DISCUSSION

These findings demonstrate the complexity of the interactional work used to negotiate dialogic status in design studio classes. Compared to instructionist classrooms, these professors use fewer interactional mechanisms associated with an authority role and more interactional mechanisms associated with deference

and politeness. These mechanisms project onto students the right to play an agentive classroom role. At the same time, these professors continue to use interactional mechanisms associated with an authority role, allowing them to guide the unfolding collaborative flow of the classroom.

Participatory pedagogy was interactionally realized through negotiations of dialogic status. Professors and students jointly enacted varying blends of authority and peer role performance, using interactional mechanisms that have been associated with status and role relations in prior studies.

These findings are consistent with, and extend, previous empirical studies of participatory pedagogy in a variety of school subjects. These prior studies have found that in the most effective classrooms, the improvisations of collaborative knowledge construction are guided and structured for maximum learning. For example, Tabak and Baumgartner (2004) observed a biology classroom in which the teacher shifted fluently between mentor and partner speech styles and hypothesized that the two speech styles together may have contributed to learning more than either one alone (423).

Dialogic status has the characteristics that prior research has associated with learning for creativity. Prior research has demonstrated that the best way to foster creative learning is not to allow learners complete freedom to improvise their own path; it is, rather, to guide them in a collaborative and emergent process of knowledge construction. Dialogic status combines learner freedom and instructor guidance in ways that are aligned with this prior research.

I did not observe binary and discontinuous shifts between peer and authority participation structures. Participants quickly and smoothly modified their joint performances as dialogic status moved

back and forth along the cline. This indicates that participants are continuously monitoring, reproducing, and negotiating status relations, and they are readily able to reorient their verbal performance.

In this data set, these status shifts were always unmarked. Participants did not call attention to these shifts or orient toward them as frame breaks (Goffman 1974). This suggests that dialogic status performance is an expected and familiar part of the pinup as a pedagogical encounter. Contrast this with an instructionist classroom, where transitions in participation structure are often explicitly announced by the teacher—for example, announcing the end of a lecture and then inviting students to participate in a discussion.

Professors almost always initiate shifts in dialogic status; rarely do students. When a professor initiates a shift, even if it occurs within a single turn of talk, the students immediately switch to the use of interactional mechanisms appropriate to this new dialogic status. Prior studies of classroom interaction have likewise found that students modify their performance to match the authority relation that the professor is enacting and projecting onto them (Kohnen 2013; Stevanovic and Perakyla 2012).

In cases wherein the professor initiated a shift from peer to authority relationship by switching to high-status interactional mechanisms, students did not resist the shift by continuing to orient toward the professor as peer (as demonstrated in Example 8 in lines 56–61). This suggests that students are attentive to the always-present possibility that the professor might initiate a shift in dialogic status toward professor as authority. Their quick acceptance of these shifts indicates that professors retain the authority status associated with their structural position in the classroom, even during periods when they perform

status deferral through interactional mechanisms.

I observed one type of potential conflict between professor and students as they negotiated dialogic status: when a professor shifted from authoritative speech to deferred status, hence projecting a peer role onto students, the students often continued to use interactional mechanisms that performed lower status, even though the professor's status deferrals enabled the students to shift their role performance to that of peers. A similar pattern was found in Forman et al. (2017), who documented student resistance “when the teacher began to violate the norms of traditional instruction.” These researchers hypothesized that these instances of instructor status deferral may have “increased students’ discomfort” (37). This finding is consistent with Ridgeway and Berger's (1986) argument that “legitimate status structures”—such as the superior status of the professor vis-à-vis the students—are resistant to change. Their *expectation states theory* predicts that high-status members are expected to participate more, to be less positive when evaluating others' ideas, to speak with a firmer voice tone, and to interrupt more. For the most part, their analyses focus on situations in which low-status members perform as if they have higher status than expected, but the theory also may help to explain the finding that high-status members have difficulty *reducing* their status. Furthermore, I did not observe encounters when students attempted to raise their status, echoing Ridgeway and Berger's claim that “high status members are freer to break group norms than other members” (612).

This analysis helps to explain why participatory pedagogy has been difficult to implement in classrooms: the interactional mechanisms used to enact dialogic status are difficult to perform, and students often resist the instructor's

attempts to enlist them as peers in classroom interaction. The constant negotiation of dialogic status requires interactional skill and experience of both professor and students. In instructionism, in contrast, roles and status relationships are well defined and do not have to be as actively negotiated.

Enacting dialogic status is not only a solo performance by the instructor. As Jacoby and Ochs (1995) write, “reproducing and reasserting *any* social order among interlocutors—whether that order is more symmetrical or more asymmetrical—is just as much a coordinated, co-constructed interactional achievement as is challenging that social order” (178). Participatory pedagogy requires collective action among instructor and students, and all participants must be skilled at performing complementary status roles. Even when a teacher is committed to participatory pedagogy, and is skilled at deferring the authority role, the students must jointly participate in establishing and maintaining dialogic status. In response to the instructor’s status-deferring moves, they must shift their status performance, as appropriate to the moment, along a cline from the traditional lower-status role—projected onto them by the institutional structure of the school—to the more symmetrical peer status relationship being interactionally projected onto them by the professor. A successful classroom performance requires the students, as well as the professor, to master a changing balance of interactional mechanisms associated with higher and lower status.

The professors and students analyzed here demonstrate skilled performance of dialogic status. The transcribed encounters come off so smoothly that they might seem to be unproblematic and easy to enact. Yet these performances represent a high degree of pedagogical expertise; these six professors have an average of

11 years of university teaching experience, and most of these students have been in art and design studio classes since high school. When beginning instructors haven’t mastered status deferral, or when students are most familiar with instructionist pedagogy and have no experience performing as a peer with the instructor, teacher and students alike may find it easier to revert to instructionist pedagogy. Our study could contribute to teacher professional development by providing examples of the subtleties and potential of participatory pedagogy using the negotiations of dialogic status.

#### LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

A limitation of this study is that I didn’t gather data on student learning outcomes. As a result, I can’t make claims about what balance of dialogic status leads to greater student learning or greater creativity. In future research, one might conduct empirical studies of how different status relationship performances are related to creative learning outcomes either by assessing the products generated or by conducting independent assessments of student creative thinking skills. Yet even with such a post-instruction assessment of student creativity, this study’s methodology would remain a necessary contribution to a full understanding of learning to create in design. Our sociocultural theoretical framework holds that “evidence that learning is occurring or has occurred must be found in understanding the ways in which people collaboratively do learning and do recognize learning as having occurred” (Jordan and Henderson 1995:42), not only evaluated in separate and summative assessments.

This study focuses on isolated encounters and does not examine the overall learning trajectory through the entire

semester or through a single two-week project assignment. I chose a methodology that allowed a deep analysis of single pinup episodes, but the trade-off is that this precluded a breadth of analysis across multiple successive learning encounters. This study could be complemented by studies of how classroom talk changes through a student's learning trajectory (see Jacoby and Ochs 1995:179). For example, future studies might compare pinup talk at the very beginning of a project assignment with talk toward the completion of that same assignment. Studies of scaffolding and fading in project-based learning suggest that learning is more effective when more structure is provided early in a learning trajectory, and with gradually less structure provided as students progress through their learning trajectory. This general finding would suggest that design pedagogy might be more effective if the earliest pinup encounters were more balanced toward an authority participation structure, with dialogic status performance gradually shifting toward a peer style of dialogue.

Social interaction is complex, and talk often communicates more than one implicit social message. For example, some of the mechanisms documented here—such as hedging or turn-final pitch rise—seem as if they might model for the student some aspects of successful creativity, such as exploration, divergent thinking, and openness to failure (also see Sawyer 2018a). Future research could explore the additional pedagogical functions that might be accomplished by these same interactional mechanisms.

### CONCLUSION

This study examined how teachers and students jointly enact participatory

pedagogy in which they simultaneously perform an authority participation structure and a peer participation structure. This study explored this research question by documenting and analyzing talk between instructors and students in studio classrooms in schools of art and design. I chose this research site because prior research has demonstrated that the design studio is a good example of participatory pedagogy. Because creativity is an important learning outcome in these classrooms, this study also has the potential to contribute to our understanding of the classroom practices that foster learning for creativity.

I found that professor and students use a variety of interactional mechanisms that past research has associated with both asymmetrical and symmetrical status relationships. I have called this hybrid combination of status and role performance *dialogic status*. In the design studio classrooms analyzed here, participatory pedagogy is realized through the enactment and continual negotiation of dialogic status. This study contributes to our understanding of the interactional challenges associated with participatory pedagogy and demonstrates how these challenges may be negotiated successfully through dialogic status. A better awareness of these unstated and implicit classroom social practices can potentially help us to understand how to enact pedagogies that are more likely to lead to creative learning outcomes in all school subjects.

### APPENDIX A: JEFFERSONIAN TRANSCRIPT NOTATION

The transcription conventions used here are based on Gail Jefferson's notation as presented in Sacks, Schegloff, and Jefferson (1974), Atkinson and Heritage (1999), and Button and Lee (1987).

---

.	(period) a stopping fall in tone, not necessarily the end of a sentence
,	(comma) continuing intonation, not necessarily between clauses of sentences
?	rising inflection, not necessarily a question
¿	rising intonation weaker than that indicated by a question mark
—	(en-dash) cut-off: flat pitch, sudden stop in breath/vocal chord. Can be followed by the same speaker, or by a different speaker
no mark	no mark at a TCU ending indicates a level intonation
t!	dental click
=	connecting talk. There will be two: one at the end of one speaker's utterance, the second at the beginning of the next speaker.
[ ]	overlapping utterances or actions. There will always be two, from two different speakers whose speech or action occurs at the same time
> <	talk is faster than surrounding talk
< >	talk is slower than surrounding talk
»	talk that becomes gradually softer and faster, usually at the end of a turn
◦ ◦	(small circles) a passage of talk that is quieter than surrounding talk, usually short—one phrase within a turn
<u>crazy</u>	(underline) emphasis: usually under only one syllable, and indicating slightly louder volume and/or slight rise in pitch. Not as loud as boldface or capitalization
<b>okay</b>	(boldface type) to emphasize important words. More emphasis than underlining, less volume than capitalization
SO	(Capitalization) a passage of talk that is louder than surrounding talk; louder than underlining or boldface
↓↑	marked falling (down arrow) or rising (up arrow) shifts in pitch
::	(colons) an extension of a sound or syllable. More colons means a longer extension
( )	Indicates that the speech is hard to hear, and uncertainty that this text is exactly correct. Insert "unintelligible" for speech that can't be understood at all
(( ))	Analyst's comments.
(1)	A silent pause, in number of seconds
(.)	(period in parentheses) a short untimed pause, less than one second
hh	audible aspirations. Use more "h" for longer aspirations
.hh	audible inhalations
—?	a marker to indicate something that the analyst thinks is important; usually referenced in the analysis of the transcript

---

## ACKNOWLEDGMENTS

I would like to acknowledge the anonymous reviewers, who provided helpful comments on earlier drafts of this paper. Their reviews made it clear that they had read the manuscript very closely, and engaged substantively with the argument. I am particularly grateful for the excellent advice provided by the special issue editors. They invested substantial effort in integrating and summarizing the peer reviews, and provided detailed and constructive suggestions at each stage of the process.

## ORCID ID

R. Keith Sawyer  <https://orcid.org/0000-0002-5410-461X>

## REFERENCES

- Atkinson, J. Maxwell, and John Heritage. 1999. "Jefferson's Transcript Notation." Pp. 158-66 in *The Discourse Reader*, edited by A. Jaworski and N. Coupland. New York: Routledge.

- Bakhtin, M. M. 1981. "Discourse in the Novel." Pp. 259–422 in *The Dialogic Imagination*. Edited and translated by Michael Holquist, translated by Caryl Emerson. Austin: University of Texas Press.
- Bardovi-Harlig, Kathleen, and Beverly S. Hartford. 1993. "The Language of Comembership." *Research on Language and Social Interaction* 26(3):227–57.
- Blair, Bernadette. 2004. "Interpretations of Assessment: A Study of Students' Understanding of the Assessment Criteria through the Practice of Formative Feedback." Pp. 74–90 in *Enhancing Curricula: Towards the Scholarship of Teaching and Learning in Art, Design and Communication in Higher Education*, edited by A. Davies. London: CLTAD: The Centre for Learning and Teaching in Art and Design.
- Bradac, James J., Anthony Mulac, and Sandra A. Thompson. 1995. "Men's and Women's Use of Intensifiers and Hedges in Problem-Solving Interaction: Molar and Molecular Analysis." *Research on Language and Social Interaction* 28(2):93–116.
- Bransford, John D., Ann L. Brown, and Rodney R. Cocking, eds. 2000. *How People Learn: Brain, Mind, Experience, and School*. Washington, DC: National Academy Press.
- Bransford, John D., and Daniel L. Schwartz. 1999. "Rethinking Transfer: A Simple Proposal with Multiple Implications." *Review of Research in Education* 24:61–100.
- Brown, Penelope, and Stephen Levinson. 1978. "Universals in Language Usage: Politeness Phenomena." Pp. 56–289 in *Questions and Politeness: Strategies in Social Interaction*, edited by E. N. Goody. New York: Cambridge University Press.
- Button, Graham, and John R. E. Lee. 1987. *Talk and Social Organisation*. Clevedon, UK: Multilingual Matters Ltd.
- Cazden, Courtney B. 2001. *Classroom Discourse: The Language of Teaching and Learning*. 2nd ed. Portsmouth, NH: Heinemann.
- Craft, Anna. 2005. *Creativity in Schools: Tensions and Dilemmas*. New York: Routledge.
- Dannels, Deanna P. 2005. "Performing Tribal Rituals: A Genre Analysis of 'Crits' in Design Studies." *Communication Education* 54(2):136–60.
- Duncan, Starkey, and Donald W. Fiske. 1977. *Face-to-Face Interaction: Research, Methods, and Theory*. Hillsdale, NJ: Lawrence Erlbaum.
- Edelsky, Carole. 1981. "Who's Got the Floor?" *Language in Society* 10(3):383–421.
- Forman, Ellice A., Virginia Ramirez-DelToro, Lisa Brown, and Cynthia Passmore. 2017. "Discursive Strategies That Foster an Epistemic Community for Argument in a Biology Classroom." *Learning and Instruction* 48:32–39.
- Goffman, E. 1974. *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row.
- Goffman, Erving. 1981. *Forms of Talk*. Philadelphia: University of Pennsylvania Press.
- Goodwin, Charles, and Alessandro Duranti. 1992. "Rethinking Context: An Introduction." Pp. 1–42 in *Rethinking Context: Language as an Interactive Phenomenon*, edited by A. Duranti and C. Goodwin. New York: Cambridge.
- Heritage, John. 2012. "Epistemics in Action: Action Formation and Territories of Knowledge." *Research on Language and Social Interaction* 45(1):1–29.
- Herrenkohl, Leslie Rupert, and Marion R. Guerra. 1998. "Participant Structures, Scientific Discourse, and Student Engagement in Fourth Grade." *Cognition and Instruction* 16(4):431–73.
- House, Ernest R., and Gabriele Kasper. 1980. "Politeness Markers in English and German." Pp. 157–85 in *Conversational Routine: Explorations in Standardized Communication Situations and Prepatterned Speech*, edited by F. Coulmas. The Hague, the Netherlands: Mouton.
- Jablin, Fredric M. 1979. "Superior-Subordinate Communication: The State of the Art." *Psychological Bulletin* 86:1201–22.
- Jacoby, Sally, and Elinor Ochs. 1995. "Co-Construction: An Introduction." *Research on Language and Social Interaction* 28(3):171–83.
- James, Patricia. 1996. "The Construction of Learning and Teaching in a Sculpture Studio Class." *Studies in Art Education* 37(3):145–59.
- Jefferson, Gail. 1984. "Transcript Notation." Pp. ix–xvi in *Structures of Social Action: Studies in Conversation Analysis*, edited by J. M. Atkinson and J. Heritage. Cambridge, England: Cambridge University Press.
- Jordan, Brigitte, and Austin Henderson. 1995. "Interaction Analysis: Foundations and Practice." *Journal of the Learning Sciences* 4(1):39–103.

- Kapur, Manu. 2008. "Productive Failure." *Curriculum and Instruction* 26(3):379–424.
- Kohnen, Angela M. 2013. "‘I Wouldn’t Have Said It That Way’: Mediating Professional Editorial Comments in a Secondary School Science Classroom." *Linguistics and Education* 24(2):75–85.
- Koole, Tom. 2010. "Displays of Epistemic Access: Student Responses to Teacher Explanations." *Research on Language and Social Interaction* 43(2):183–209.
- Lakoff, Robin. 1975. *Language and Women’s Place*. New York: Harper and Row.
- Lamb, Theodore A. 1981. "Nonverbal and Paraverbal Controls in Dyads and Triads: Sex or Power Differences?" *Social Psychological Quarterly* 44(1):49–53.
- Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.
- Leaper, Campbell, and Rachel D. Robnett. 2011. "Women Are More Likely to Use Tentative Language, Aren’t They? A Meta-Analysis Testing for Gender Differences and Moderators." *Psychology of Women Quarterly* 35(1):129–42.
- Lerner, Gene H. 1999. "Turn-Sharing: The Choral Co-Production of Talk-in-Interaction." Pp. 225–56 in *The Language of Turn and Sequence*, edited by C. E. Ford, B. A. Fox, and S. A. Thompson. New York: Oxford.
- Lo, Adrienne, and Kathryn M. Howard. 2009. "Mobilizing Respect and Politeness in Classrooms." *Linguistics and Education* 20:211–16.
- Macbeth, Douglas. 1991. "Teacher Authority as Practical Action." *Linguistics and Education* 3:281–314.
- Markee, Numa, ed. 2015. *The Handbook of Classroom Discourse and Interaction*. San Francisco, CA: Wiley.
- Maroni, Barbara. 2011. "Pauses, Gaps and Wait Times in Classroom Interaction in Primary Schools." *Journal of Pragmatics* 43(7):2081–93.
- McHoul, Alexander. 1978. "The Organization of Turns at Formal Talk in the Classroom." *Language in Society* 7(2):183–213.
- Oak, Arlene. 2012. "You Can Argue It Two Ways": The Collaborative Management of a Design Dilemma." *Design Studies* 33:630–48.
- Parker, John N., Edgar Cardenas, Alexander N. Dorr, and Edward J. Hackett. 2018. "Using Sociometers to Advance Small Group Research." *Sociological Methods and Research*. <https://doi.org/10.1177/0049124118769091>.
- Psathas, George. 1995. *Conversation Analysis: The Study of Talk-in-Interaction*. Thousand Oaks, CA: Sage.
- Ridgeway, Cecilia L., and Joseph Berger. 1986. "Expectations, Legitimation, and Dominance Behavior in Task Groups." *American Sociological Review* 51(5):603–17.
- Rogoff, Barbara. 1990. *Apprenticeship in Thinking: Cognitive Development in Social Context*. New York: Oxford University Press.
- Sacks, Harvey, Emanuel A. Schegloff, and Gail Jefferson. 1974. "A Simplest Systematics for the Organization of Turn-Taking in Conversation." *Language* 50(4):696–735.
- Salazar, Stacy McKenna. 2013. "Studio Interior: Investigating Undergraduate Studio Art Teaching and Learning." *Studies of Art Education: A Journal of Issues and Research* 55(1):64–78.
- Sawyer, R. Keith. 2012. *Explaining Creativity: The Science of Human Innovation*. 2nd ed. New York: Oxford.
- Sawyer, R. Keith, ed. 2014. *The Cambridge Handbook of the Learning Sciences, Second Edition*. New York: Cambridge University Press.
- Sawyer, R. Keith. 2017. "Teaching Creativity in Art and Design Studio Classes: A Systematic Literature Review." *Educational Research Review* 22:99–113.
- Sawyer, R. Keith. 2018a. "The Role of Failure in Learning How to Create." *Thinking Skills and Creativity*. <https://doi.org/10.1016/j.tsc.2018.08.002>.
- Sawyer, R. Keith. 2018b. "Teaching and Learning How to Create in Schools of Art and Design." *Journal of the Learning Sciences* 27(1):137–81.
- Sawyer, R. Keith. 2019. *The Creative Classroom: Innovative Teaching for 21st Century Students*. New York: Teachers College Press.
- Schegloff, Emanuel A. 1992. "In Another Context." Pp. 191–227 in *Rethinking Context: Language as an Interactive Phenomenon*, edited by A. Duranti and C. Goodwin. New York: Cambridge.
- Schegloff, Emanuel A. 2007. *Sequence Organization in Interaction: A Primer in Conversation Analysis*. Vol. 1. Cambridge, England: Cambridge University Press.
- Stevanovic, Melisa, and Anssi Perakyla. 2012. "Deontic Authority in Interaction: The

- Right to Announce, Propose, and Decide.” *Research on Language and Social Interaction* 45(3):297–321.
- Stivers, Tanya. 2006. “Treatment Decisions: Negotiations between Doctors and Parents in Acute Care Encounters.” Pp. 279–312 in *Communication in Medical Care: Interaction between Primary Care Physicians and Patients*, edited by J. Heritage and D. W. Maynard. Cambridge, England: Cambridge University Press.
- Tabak, Iris, and Eric Baumgartner. 2004. “The Teacher as Partner: Exploring Participation Structures, Symmetry, and Identity Work in Scaffolding.” *Cognition and Instruction* 22(4):393–429.
- Wagner, D., and G. Herbel-Eisenmann. 2014. “Identifying Authority Structures in Mathematics Classroom Discourse: A Case of a Teacher’s Early Experience in a New Context.” *ZDM Mathematics Education* 46:871–82.
- Waring, Hansun Zhang. 2002. “Displaying Substantive Reciprocity in Seminar Discussion.” *Research on Language and Social Interaction* 35(4):453–79.
- Yngve, Victor H. 1970. “On Getting a Word in Edgewise.” Pp. 567–78 in *Papers from the Sixth Regional Meeting of the Chicago Linguistic Society, April 16–18, 1970*. Chicago: Chicago Linguistics Society.

### BIO

**R. Keith Sawyer** is the Morgan Distinguished Professor in Educational Innovations in the School of Education at the University of North Carolina at Chapel Hill. His empirical research focuses on the interactional dynamics of creative groups, including jazz, improv theater, and collaborative learning. He has developed a theory of collaborative emergence to explain how collective phenomena emerge from these interactional dynamics. He has published this empirical and theoretical work in numerous books and journal articles.