Instructional discourse and argumentative writing

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ABSTRACT

Fifth-grade students from two urban school districts completed an integrated unit on wolves. Classes received either direct instruction (DI) or collaborative group work (CG). Analysis of reasoning in classroom talk indicated that CG students more often used connective and contrastive words and the performative verb phrases *I think* and *I know* than DI students. Analysis of written arguments about a controversial question raised by the unit indicated that, compared to DI students, CG students included more logical connectives, contrastives, and performative verbs, produced fewer unelaborated arguments, more frequently asked rhetorical questions, and more often considered both sides of the policy issue. The study provides fresh insight into how instructional frameworks can affect how students view themselves as writers in relation to a prospective audience.

1. Introduction

Preparing students for productive civic engagement requires teaching them about the balance of the common good with individual liberty and how to think critically about issues of policy. Policy issues are too ill-structured for people to strictly apply the rules of formal logic. The policy controversies for which educators are preparing their students involve reasoning from plausibility instead of accepting or rejecting arguments based on undeniable truth (Kock, 2003). Incorporating the needs of the many into one's decision making involves affective as well as logical considerations. The question becomes, how do we best prepare our students to engage constructively in the informal reasoning necessary to make sensible decisions about the sometimes emotional issues that impact their community?

In answer to this question, this paper addresses ways in which classroom discourse impacts students' reasoning about authentic policy questions that involve multiple stakeholders, some of whom hold positions antithetical to one another. We examine the reasoning of students taught in two common instructional frameworks, teacher-centered direct instruction and peer-led collaborative groups, with the goal of identifying how the classroom talk within the two frameworks influences student reasoning. Our approach is

to identify differences in talk between the instructional conditions that could influence students' individual reasoning and then analyze variation in the students' written argumentation attributable to differences in classroom talk.

2. Theoretical framework

This study is situated within a sociocultural view of learning according to which learners become attuned to the means of communication within their learning community. The attunement involves positioning themselves in relation to the "constraints and affordances" of the learning context (p. 255, Greeno, 2016; Lave & Wenger, 1991). By attending to the norms of learning contexts, students discover how to use language to maneuver within a problem space while adhering to any locally organized rules of engagement. Students' language is dynamically scaffolded by their peers and teachers (Rogoff, 1990). Over time, students come to represent these discourse processes, and their role in the process, as generalized frames, or *schemas*, and these schemas can influence communication and meaning making between students and across learning episodes (Green & Harker, 1982). *Schemas* (Reznitskaya & Anderson, 2002) or *frames* (Goffman, 1974) represent the commonalities among communication events and, "are both the tools that facilitate the co-construction of knowledge and the means that are internalized to aid future independent problem solving activity" (Palinscar, 1998, p. 353). The development of such schemes is scaffolded by the implicit and explicit ways in which the student is invited by teachers and fellow students to engage in the activities of the classroom (Fernandez, Wegerif, Mercer, & Rojas-Drummond, 2001).

In this study we characterize the discourse processes within two instructional frameworks based on a systematic sampling of lesson videos recorded during a six week intervention in which students were charged with making a decision about a controversial public policy issue. Then, following an analysis of the students' independent reasoning in a post-intervention essay, we made connections between features of the classroom talk and the nuances of the student reasoning revealed in the essay.

2.1. Written argumentation

As our interest is in comparing the written arguments of students who experienced different instructional conditions, we first present perspectives on the cognitive processes in constructing a written text. Writing is a process in which an author creates a text for an intended audience (Flower & Hayes, 1981; Bereiter & Scardamalia, 1982). A critical element is the recognition that the audience contextualizes the text in a parallel process. The success of the text largely depends on the degree to which mutual understandings are exploited and potential confusions are anticipated (Nystrand, 1983).

Young writers struggle with balancing their expressive goals and the needs of the audience (Knudson, 1992; Scardamalia, Bereiter, & Steinbach, 1984). Novices' written productions suggest an additive conception where thoughts are simply translated to writing in the order in which they occur to the author (Flower & Hayes, 1981). Bereiter, Scardamalia, and colleagues (1984, 1988) refer to this process as *knowledge-telling* and explain that it, "Consists of reducing writing assignments to topics, then telling what one knows about the topic" (Scardamalia, Bereiter, & Steinbach, 1984, p. 174). In contrast, *knowledge-transforming* (Scardamalia et al., 1984) is a more sophisticated mode of writing that relates expressive means to perceived audience characteristics.

The goal of educators, then, is shifting novice writers from knowledge-telling to knowledge-transforming, but this has proven a very difficult task in the case of written argumentation (Knudson, 1992). Argumentative writing is a genre acutely concerned with the intended audience, as the audience determines the sorts of reasons and types of rhetoric that will be effective (Walton, 1998). Because successful argumentation is so dependent on managing the problem space between the content of arguments and the audience, and since the metacognitive oscillation between the goals of delivering content and being understood is difficult for students, it is not surprising that argumentative writing is a difficult genre for students.

Studies have shown improvement in argumentative writing through prompting about the structure and purpose of argumentative writing (Ferretti, Macarthur, & Dowdy, 2000; Knudson, 1992; Scardamalia et al., 1984). Similarly, argumentation can be improved by establishing an authentic audience of peers and teachers as critics during the revision process (Midgette, Haria, & MacArthur, 2008; Wong, Butler, Ficzere, & Kuperis, 1996). Bearing in mind the purposes of argumentation and keeping in mind the audience while writing have both been shown to improve argumentative writing.

In the current study we will explore how two common instructional frameworks, collaborative learning and direct instruction, contribute to students' argumentative writing, in particular whether texts created by the students include indicators of the students' awareness of their audience.

2.2. Direct instruction

Teacher-led direct instruction is a straightforward approach for teaching students about a policy controversy. By controlling the flow of information, teachers can methodically introduce difficult concepts and scaffold students' understanding with examples and differentiated explanations (Duffy et al., 1987; Pressley, 2006). Using questioning techniques, teachers can draw out misconceptions and build any background knowledge they perceive their students are missing (Edwards & Mercer, 1987). By making themselves the focal point of the lesson, teachers can alter their instruction on the fly in order to address misunderstandings or redirect non-productive talk (Alvermann, O'Brien, & Dillon, 1990; Wells, 1999).

However, talk during teacher-centered instruction can be one-sided with little opportunity for students to make lengthy contributions to the discussion or engage in extended reasoning themselves (Cazden, 1988; Mehan, 1979). Direct instruction usually has an initiation-response-evaluation (IRE) (Mehan, 1979) pattern, during which speaking turns follow the predictable sequence of the