Using talk to scaffold referential questions for English language learners

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A R T I C L E   I N F O

A B S T R A C T

Research from interactionist second language acquisition and sociocultural theoretical perspectives shows that referential questions are important for learning, but also, that they can be difficult for English language learners (ELLs) to understand and produce answers to. By integrating analytical tools from both traditions, this study examined the scaffolding functions of a fifth grade teacher's talk. The study found that the teacher utilized various communicative moves to engage ELLs in referential questions. Examples illustrating these communicative moves and their scaffolding functions are provided. Implications from these findings for teacher education are discussed.

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1. Introduction

The characteristics and qualities of teacher-student dialogue have been examined across the curriculum. Many investigations into classroom talk draw on Vygotsky's (1978) ideas related to the centrality of language in mediating cognitive development. For example, Mercer (1995, 2000) has carried out extensive research into classroom dialogue and underscores the role of teacher-student talk in learning. In addition, Mercer and Littleton (2007) argue that, "for a teacher to teach and a student to learn, they must use talk and joint activity to create and negotiate a shared communicative space" (p. 21). Once a communicative space is established, teachers are able to extend students' content knowledge and strategic thinking through further dialogue (Gibbons, 2003; Renshaw & Brown, 2007). At the heart of this dialogic approach to teaching are questions that elicit students' thoughts, reasons, experiences, and opinions. In second language (L2) research, questions that serve this function are called *referential questions*, defined by Long and Sato (1983) as questions to which teachers do not know the answers (e.g., *Why do you think the author chose that picture for the book cover?*). Referential questions lay in contrast to *display questions*; questions that prompt students for information that is known to teachers (e.g., *What is the title of the book?*). Investigations focused on teacher-student dialogue in both language (e.g., English as a Second Language (ESL) and content (e.g., science)) classes identify referential questions as an important situational variable that help students produce extended turns of talk and provide a means for teachers and students to co-construct knowledge (Boyd & Rubin, 2002; Ernst, 1994; Mercer, 2000; Nystrand, 1997). Thus, referential questions prompt students to comprehend and produce target language that reflects their own thinking and provides opportunities for teachers to assist in those processes. Therefore, responding spontaneously to referential questions is a clear indicator of second/foreign language learning, and continues to be studied across linguistic (e.g., French and Italian (Anton, 1999), English (Brock, 1986)) and national borders (e.g., Iran (Shomoossi, 2004), China (Wu, 1993), Japan (Farooq, 2007)).

Language teaching materials (e.g., Brown, 2001; Celce-Murcia, 2001; Richard-Amato, 2003; Shrum & Glisan, 2004) and activities in teacher preparation courses (Brock, 1986; Thornbury, 1996; Walsh, 2006) focus on the need for teachers to ask referential questions. While teachers are urged to utilize these question types with regularity in their classrooms, the literature is replete with instances where English language learners (ELLs) are stifled by referential questions (Gibbons, 2003; Shomoossi, 2004; Suk-a-nake, Heaton, Chantrupanth, & Rorex, 2003; Wu, 1993). For example, when attempting to answer a referential question during a science lesson, one ESL student said to her teacher "I can't say it" (Gibbons, 2003, p. 261). In these instances, where language learners lack either the linguistic or cultural knowledge to understand the referential question or produce an answer to it, assistance from the

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teacher, or scaffolding, is needed. However, research investigating teachers' scaffolding talk with language learners is limited in both size and scope. A handful of studies have focused either on the ways to extend language learners' academic vocabulary and knowledge (Gibbons, 2003; Jarvis & Robinson, 1997), which does not address how teachers assist language learners struggling to respond to questions, or the scaffolding functions of teacher talk in situations that do not involve referential questions (Adair-Hauck & Donato, 1994; Anton, 1999).

By drawing from interactionist second language acquisition (SLA) and sociocultural theories, the current study aims to add to this literature by examining the scaffolding functions of teacher talk in a fifth grade classroom when ELLs experience problems with referential questions.

2. Theoretical background and relevant literature

Referential questions have been studied from two main theoretical perspectives—interactionist SLA theory and sociocultural theory. Reviewing literature from both lines of inquiry helps situate the current study, which adapts tools from interactionist SLA theory to frame instances where a teacher utilizes language in multiple and creative ways to scaffold ELLs. This section begins with a brief review of interactionist SLA theory and research, before discussing the main theoretical position of this paper, sociocultural theory, and the research carried out from this angle.

2.1. Interactionist SLA theory and studies of referential questions

Underlying interactionist theories of SLA (e.g., Long, 1996; Pica, 1994; Varonis & Gass, 1985) is the central role of comprehensible input in language acquisition. This focus stems from the work of Krashen (1985), who suggests that, "humans acquire language in only one way—by understanding messages, or by receiving 'comprehensible input'… We move from i, our current level, to $i + 1$, the next level along the natural order, by understanding input containing $i + 1$" (p. 2). Interactionist theorists are concerned with the ways that modifications made by speakers during negotiation of meaning episodes render input comprehensible. Pica (1994) describes negotiation of meaning sequences as "a process in which a listener requests message clarification and confirmation and a speaker follows up these requests, often through repeating, elaborating, or simplifying the original message" (p. 498). Modifications are important because they activate internal processes that allow learners to notice input that is developmentally appropriate. These components are highlighted in Long's (1996) Interaction Hypothesis, which suggests:

> Negotiation, and especially negotiation work that triggers interactional adjustments by the NS (Native Speaker) or more competent interlocutor, facilitates acquisition because it connects input, internal learner capabilities, particularly selective attention, and output in productive ways (p. 451).

From an interactionist perspective of language learning, interactional modifications of input and output increase message comprehensibility and allow learners to notice and thus acquire language that is just beyond their current linguistic levels.

Since interactionist theorists are concerned with the role of modifications to help interlocutors understand messages, a number of researchers working from this perspective have focused on the relationship between referential questions and the amounts and linguistic characteristics of student responses to them. Early studies in ESL by Long and Sato (1983) and White and Lightbown (1984) found that teachers rarely asked referential questions. Also in an ESL setting, Brock (1986) found that training teachers to ask

referential questions impacts the deployment of these question types in classroom practice. Furthermore, Brock discovered that when teachers ask referential questions, student responses are longer and more syntactically complex. More recent studies in English as a foreign language (EFL) settings continue to show that teachers use more display questions than referential questions, and that student responses are longer for referential questions than display questions (Farooq, 2007; Shomoossi, 2004; Suk-a-nake et al., 2003).

In addition to describing the relationships between question types and student output, some studies show that language learners do not always easily answer referential questions. For example, Suk-a-nake et al. (2003) report the struggles ELLs have with referential questions. The researchers collected observation and interview data from Thai university students of varying English proficiency levels in attempts to understand student responses to L2 questions. The researchers report that only students at high English proficiency levels could answer all question types. Low proficiency students struggled to answer questions calling for opinions, evaluations, or analyses (i.e., referential questions). Furthermore, interview results showed that students considered most difficult the questions calling for extended responses. These findings relate to an observation of Shomoossi (2004), who after observing 40 university-level reading classes in Iran notes, "when teachers ask a low-proficiency learner a talk-initiating question, and she/he fails to respond, the teacher is disappointed, turning to another student in the hope of achieving communication" (p. 102). These studies indicate that referential questions can be challenging for second language learners.

Wu (1993) also provides data illustrating the problems language learners have with these questions, in addition to studying how teachers modify their questions during classroom interactions. After observing four EFL classes in Hong Kong, Wu reports that in some cases, students in her study produced one-word responses to referential questions and in other cases, students did not attempt to answer them. The study did not gather data to explain why students reacted to referential questions the way they did. However, Wu describes five questioning techniques these four teachers used in their classes: a) rephrasing; b) repetition; c) simplification; d) decomposition; and e) probing. Like Wu, Farooq (2007) examined teacher questioning patterns. Observing an EFL teacher at a Japanese university, Farooq identified three ways that the teacher modified his questions: a) repeating questions; b) offering questions at slower rates of speech; and c) providing students with longer wait times to respond. Question modifications are highlighted in these studies because they have the potential to increase linguistic comprehensibility and aid language learning.

The literature surrounding referential questions from an interactionist SLA perspective suggests that: a) referential questions lead to longer and more complex student utterances than display questions; b) referential questions can be difficult for language learners to answer; and c) teachers modify questions during whole class, oral interactions. Although modifications occur within social settings, they are viewed from cognitive perspectives, where the instructional value of referential questions and questioning strategies lay psycholinguistically. Highlighting the psycholinguistic function of modifications, Long (1996) argues that the "environmental contributions to acquisition are mediated by selective attention and the learner's developing L2 processing capacity" (p. 414). Consequently, then, interactionist theories, similar to the $i + 1$ model they evolved from (i.e., Krashen, 1985), suggest that "the learner is fundamentally a loner who possesses a Language Acquisition Device (LAD) that does all the acquiring for the individual" (Dunn & Lantolf, 1998, p. 423). This view of interaction and