Linguistics and Education 45 (2018) 40–49

Contents lists available at ScienceDirect

Linguistics and Education

journal homepage: www.elsevier.com/locate/linged

Teachers' open invitations in whole-class discussions

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ARTICLE INFO

Article history:
Received 25 September 2017
Received in revised form 12 February 2018
Accepted 2 March 2018

Keywords:
Classroom interaction
Whole-class discussions
Authentic questions
Open invitations
Conversation Analysis

ABSTRACT

This article takes a conversation analytic approach to the often employed notions of 'open-ended or authentic questions' in classroom interaction. We analyzed the, as we called them, open invitations teachers utter after reading a piece of text during whole-class discussions in 4 Dutch upper primary school classes, of which 2 were followed for a longer period of time. Our data show that these invitations vary in openness. We found 4 different types: (1) invitations projecting (a series of) objectively true or false answers, (2) invitations projecting specific response types, (3) invitations that have a restricted referent but do not project specific response types, and (4) topic soliciting invitations giving room to various contributions. Virtually all invitations resulted in fitted responses. The subsequent interactions following the less open invitations typically resulted in series of parallel responses, whereas the more open invitations typically yielded discussions or the collaborative answering of clarification questions.

1. Introduction

Discussions and more specifically discussions about text are generally considered to be valuable and effective environments for learning (Applebee, Langer, Nystrand, & Gamoran, 2003; Beck & McKeown, 2001; Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009; Reznitskaya et al., 2009), because they can enhance text comprehension (Applebee et al., 2003; McKeown, Beck, & Blake, 2009; Murphy et al., 2009) and offer the opportunity to deal with texts on a deeper level, to reason together and to let students provide each other with context, perspectives and evidence (Chinn, Anderson, & Waggoner, 2001).

A meta-analysis by Soter et al. indicated that productive discussions occur "where students hold the floor for extended periods of time, where students are prompted to discuss texts through open-ended or authentic questions and where discussion incorporates a high degree of uptake". Furthermore, their findings support the view that productive discussions are "structured and focused yet not dominated by the teacher" (2008, p. 389). This often proposed shift from typical teacher-fronted classroom interaction, in which the teacher functions as the 'head' or 'director' (McHoul, 1978, p. 188) and takes every next turn, to a discussion situation in which the teacher acts as a facilitator who enables students to talk and think together (Myhill, 2006, p. 21; van der Veen, van Kruistum, & Michaels, 2015) also entails a shift from the dominant Teacher–Student–Teacher–Student turn-taking pattern (McHoul, 1978) to a pattern that is more like Teacher–Student–Student–Student (see Cazden, 1988; Chinn et al., 2001; Myhill, 2006).

But, as suggested by Cazden, the teacher's role in discussions "is not only reduced in quantity, but has to be changed in function as well" (1988, p. 59): the teacher should move away from asking a series of questions. This view is supported by Soter et al.'s (2008) finding that productive discussions co-occur with open-ended or authentic questions. With these questions the teachers can for example convey their interest in the students' opinions and thoughts (Nystrand, 1997) and move away from *known information questions* (henceforth KIQs) (e.g. Evans, 2001; Myhill, 2006; Nystrand, 1997): questions with a predetermined answer already known to the teacher (Mehan, 1979b, pp. 285–286) also called *known-answer questions*, *exam questions* or *display questions* (Rusk, Sahlström, & Pörn, 2017). In more traditional, teacher-fronted classroom interaction, the teacher asks a great number of these questions (Cazden, 1988; Lyle, 2008; Margutti & Drew, 2014; Mehan & Cazden, 2013; Mehan, 1979b; Nystrand, Wu, Gamoran, Zeiser, & Long, 2003; Shepherd, 2014; van der Veen, van der Wilt, van Kruistum, van Oers, & Michaels, 2017), in order to "evaluate the students' understanding and learning or to make the students

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https://doi.org/10.1016/j.linged.2018.03.001
0898-5898/

display knowledge that they have previously learned" (Rusk et al., 2017, p. 55), but also to *produce* knowledge of a correct answer (Koole, 2010, p. 206). These questions are typically part of IRE-sequences (Initiation, Response/Reply, Evaluation, Mehan, 1979b; Sinclair & Coulthard, 1975) which generate the T–S–T–S turn-taking pattern, for teachers often use third turns to evaluate the responses and start the next IRE-cycle (Chinn et al., 2001).

Moving away from KIQs and instead asking open-ended and authentic questions (or information seeking questions, Mehan, 1979b; real questions, Searle, 1969) has not only been suggested to provide opportunity for a more T–S–S–S-like turn-taking pattern. It has also proven to bring about discussions with higher incidences of high-level thinking, reasoning and elaborated explanations and/or exploratory talk (Soter et al., 2008; see also Chinn et al., 2001). After all, other than KIQs, open-ended or authentic questions "convey the teacher's interest in students' opinions and thoughts" (Nystrand, 1997, p. 7) and provide the students with the opportunity "to think about what is being considered" (Evans, 2001, p. 71) and contribute to the discussion with their own ideas, opinions and personal experiences (Myhill, 2006; Nystrand, 1997; Soter et al., 2008).

Notwithstanding the apparent consensus in the literature, a closer insight into these open-ended or authentic questions is needed in order to be able to specify their characteristics, other than "appear[ing] to have no single correct answer and allow[ing] students leeway to answer in a number of different ways" (Chinn et al., 2001, p. 394). Deepening this kind of general characterizations, often tacitly assumed or used for example to code questions as either KIQs or genuine information seeking questions (e.g. Beck & McKeown, 2001; Myhill, 2006; Soter et al., 2008), will enable us to distinguish between different types of open-ended or authentic questions and gain insight into the interactional effects these different types elicit.

As Schegloff pointed out, the notion of 'question' is already problematic, since it refers to the grammatical format of an utterance and not to the social action it does in the interaction (1984, pp. 30–31); many different actions can be performed with questions and to ask a question, we can rely on many different forms (Englert, 2010, p. 2666; Schegloff, 1984, pp. 30–31). Accordingly, Englert (2010) has demonstrated that the questions in her Dutch corpus (consisting of utterances that were formally marked as questions and/or sought information, confirmation or agreement as a next action, see page 2667) can function as requests for information, requests for confirmation, repair initiations, assessments and suggestions/offers/requests (Englert, 2010, p. 2679). The requests for information (constituting only 30% of the questions in Englert's corpus), mainly done with content-questions and polar interrogatives (Englert, 2010, p. 2676), are probably the most open-ended or authentic-like questions within the range of social actions presented in Englert's corpus, for they really elicit information from the addressee.

However, this analysis applies to everyday conversation and not to classroom interaction, in which many of Englert's requests for information could still very well function as KIQs (e.g. "What time is it, Denise?", Mehan, 1979b). To our knowledge, a conversation analytic take on the open-ended or authentic questions as a means for teachers to incite a discussion and actually request information from the students is still lacking (but see for example Gosen, Berenst, & de Glopper, 2015 for an analysis of teacher moves in a discussion framework; Nystrand et al., 2003 for event-history analysis assessing the role of among others authentic questions in classroom discourse; Soter et al., 2008 for their meta-analysis of indicators of high-level comprehension in talk; and Lyle, 2008 for a plea in favor of further investigation of dialogic teaching approaches).

The objective of the current study was to specify open-ended or authentic questions and their functions in whole-class discussions by analyzing how the rather general recommendation to use this type of questions is implemented by teachers: when instructed to ask open-ended or authentic questions, what kinds of questions do the teachers pose that can indeed be considered as such? What kinds of variations do we find within a collection of these questions? And how do these variants function in the interaction? I.e. what (different) types of responses do they elicit and how do these interactions develop?

Our study focuses on the open-ended or authentic questions occurring just after reading a piece of text, for this is the point in the interaction at which the teacher invites the students to take the floor and participate in the discussion. Henceforth, we will talk about 'open invitations', as this appears to be a more adequate description of the phenomenon than the problematic notion of 'question' (see above), also because, as will be shown, the invitations take various grammatical forms other than questions, such as imperatives, declaratives and elliptical utterances.

With our analysis, we will demonstrate that teachers use a broad range of open invitations after reading a piece of text. In their designs, the invitations project different extents of openness and thereby constrain the students in what constitutes a fitted response: we found invitations that project (a series of) objectively true or false answers, invitations that project specific types of responses (e.g. opinions), invitations that have a restricted referent but do not project a specific response type and finally, topic soliciting invitations: invitations that do not project any constraints on the students' responses, but leave all possibilities open and invite topic initiations. The invitations thus show different extents of openness, ranging from invitations that still give a lot of guidance to invitations that give no guidance at all and provide the students with the freedom to contribute with anything that comes to their minds.

Our analyses also involve the interactional effects these different types of questions have on the unfolding discussion. We will show that the students' responses are typically fitted to (the openness of) the invitation and often form the start of a discussion or a series of parallel responses.

2. Data

In order to get a more detailed grip on the rather general notion of open-ended or authentic questions in whole-class discussions than provided in previous studies (e.g. Evans, 2001; Nystrand, 1997; Soter et al., 2008), we made use of Conversation Analysis. In contrast to coding schemes and/or consultation of the teachers in retrospect (e.g. Nystrand et al., 2003), the method of Conversation Analysis enables us to study the details of the actual practices of teachers and students by focusing on their observable attributions and displays (Maynard, 2012, p. 28; ten Have, 2007, p. 6). In this way, we were able to specify how open invitations in whole-class discussions are formatted, what types of responses they project and how they actually function in the interaction.

The data studied consist of 39 video-recorded history and geography lessons in 4 different fourth grades in 3 Dutch (upper-) primary schools in the northern part of the Netherlands. The children in the data are around 9–10 years old. In two of the classes, three lessons were recorded. The other two classes were followed for a longer period of time: during half a year, 15 and 18 lessons were recorded respectively. All lessons were recorded with three cameras to make sure that the teacher and the students were all within view of at least one of the cameras. The first author of this article was present during the lessons to ensure the quality of the video-recordings. The total duration of the video-recordings is 30 h and 35 min. The individual lesson durations vary from 30 to 78 min,