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Published in: Linguistics and Education

DOI:

10.1016/j.linged.2018.03.001

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version Final author's version (accepted by publisher, after peer review)

Publication date:

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Willemsen, A., Gosen, M. N., van Braak, M., Koole, T., & de Glopper, K. (2018). Teachers' open invitations in whole-class discussions. Linguistics and Education, 45, 40-49. https://doi.org/10.1016/j.linged.2018.03.001

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Teachers' open invitations in whole-class discussions

Annerose Willemsen, Myrte N. Gosen, Marije van Braak, Tom Koole & Kees de Glopper 2018 | Linguistics and Education 45 | pp. 40-49

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.

Keywords

Classroom interaction; whole-class discussions; authentic questions; open invitations; conversation analysis

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, 1979b; Mehan & Cazden, 2013; 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 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 openended 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 repair information. requests for confirmation, initiations. assessments suggestions/offers/requests (ibid., 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, Wu, Gamoran, Zeiser, & Long, 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 hours and 35 minutes. The individual lesson durations vary from 30 to 78 minutes, with a mean of 47 minutes. The 78 minute lesson is an absolute maximum among the 4 longest lessons in the data with a length of 60-64 minutes. This is due to the fact that the teacher uses the last 10 minutes of the lesson to have a meta discussion about the whole-class discussion approach.

As whole-class discussions are seldom practiced at Dutch schools, we had to ask the four teachers participating in our research to depart from their 'normal' practice during history and/or geography lessons. Typically in Dutch history and geography lessons, students first read the text(s) in their text book and subsequently complete comprehension questions in an exercise book. For our study, the teachers held whole-class discussions with their students around the curricular history and geography texts. Most of the lessons revolved around a 'big question'. These big questions were designed in such a way that they did not have one immediate right answer (e.g. "What was it like for the Dutch people to live under the German occupation during World War II?") and were discussed throughout the lesson.

Our instructions to all four teachers were to hold 'real' discussions with their students around the curricular texts. In line with the literature (Cazden, 1988; Myhill, 2006; Soter et al., 2008), the teachers were asked to avoid acting as a dominant or primary respondent in the interaction (as described by McHoul, 1978, p. 188), and instead, to ask open-ended or authentic questions and let the students take the floor for extended periods of time (Cazden, 1988; Soter et al., 2008). Furthermore, the teachers received some question suggestions and tips to foster the discussion, but they were free to monitor the discussion as they saw fit. By means of our analyses, we attempted to find out how teachers go about asking open-ended or authentic questions when provided with these rather general instructions and whether different, more

specific types of these questions could be identified. As set out in the introduction, we will speak of 'open invitations' in the remainder of this paper because of the different forms that this practice has proven to take.

To get a closer insight into how exactly teachers invite their students to take part in the discussion and attempt to launch a discussion, we selected the open invitations that occur after (re)reading the text or a paragraph of the text, the point at which the teacher invites the students to participate in the discussion. The invitations we selected for our collection occur either directly after reading, or somewhat later, e.g. after the teacher has explained a notion, often followed by a clear transition marker (e.g. "hey"). In the latter case, the invitation is evidently the first 'real' (non-parenthetical) action, initiating the whole-class discussion.

We selected the invitations that were 'open' in their designs and/or as appearing from the sequential continuation. In the former case, the format of the invitation itself projects 'openness' by, for example, asking the students to give their opinion or to share just anything that comes to their minds. Some invitations, however, do not have a format that clearly conveys openness: they ask for answers that are objectively true or false (and therefore closely resemble KIQs). Nevertheless, the sequential continuation of these invitations is open in character and does not point to the initial invitation as a KIQ: the teacher does not evaluate the students' responses, lets more than one student respond to the question and/or uses post expansions to elaborate on a student's contribution (see also Nystrand et al., 2003).

Our collection of open invitations consists of 72 items, transcribed in accordance with the Jeffersonian conventions (e.g. Jefferson, 1986, see Appendix A). In the transcripts, the names of the students and teachers have been anonymized. The categories of open invitations within the collection, presented in the results paragraph, arose from data-driven, bottom-up analyses. In these analyses, we particularly focused on the projected response types and the referents (e.g.

the whole fragment or a specific sentence) in the invitations. Additionally, we analyzed the students' responses to the different invitations and subjected the subsequent sequential continuations to a general analysis, characterizing them as e.g. discussions or series of parallel responses. This enabled us to discern what types of invitations yield what kinds of responses and interactional continuations.

3. Results

In the data, we found that the teachers employ various ways to invite their students to participate in the discussion. All of these invitations are open in their design and/or appear to be open from the sequential continuation. However, the invitations do *vary* in the extent to which they are open. Our data contain less open invitations that project (a series of) objectively true or false answers (22%), as well as more open invitations that project specific types of responses (19%) or have a restricted referent but do not project a specific response type (10%). The most open invitation type comprises topic soliciting invitations (43%). The students' responses to the various invitation types reflect these differences in openness: the students give fitted responses to the more closed invitations and demonstrate a broader (and different) range of responses to topic soliciting invitations.

3.1 Open invitations projecting (a series of) objectively true or false answers

In our data, the teachers sometimes utter open invitations that project (a series of) possible answers in response. These invitations resemble KIQs in the sense that the projected answers are objectively true or false and that the right answer is presumably already available to the teacher. After all, in educational settings, teachers are generally more knowledgeable than their students and ask questions to which they themselves already know the answer (Mehan, 1979b,

p. 286). Nonetheless, the sequential continuations of these open invitations have an open character and retroactively convey the openness of the invitation: the teachers do not evaluate the answers given by the students (as is the case in IRE-sequences, Mehan, 1979b, p. 286) or provide them with their own 'final' answer. They merely use these invitations to let multiple students contribute with (a series of) possible answers.

Accordingly, in most cases the students respond to these invitations by giving possible answers, albeit sometimes after pursuits by the teacher. The interaction following the invitation typically consists of a series of parallel responses (sometimes with arguments) given one after the other by various students or an actual discussion in which the students respond to each other and offer multiple perspectives and substantiate their views with arguments. Naturally, the teacher often has a hand in this as well by steering the students towards one of both continuations.

In excerpt 1, we see an example of an invitation projecting objectively true or false answers, preceded by the class reading about the Soviet-American arms race and Yuri Gagarin being the first human ever traveling through space. The students respond to the invitation by offering possible answers and subsequently providing relevant arguments. The teacher does not evaluate the responses but gives the students the floor to explore the possible answers.

Excerpt 1 - 2016S1L9.0.23.16 - Inviting (a series of) objectively true or false answers

```
((voorlezend)) het was spannend in die tijd. wie zou als
   Sum:
              ((reading aloud)) it was an exciting time.
2
              eerste met- mens voet op de maan z- [maan zetten.
              the first human to set foot on the moon
3
   Tch:
                                                    well
              (0.7) ((lays book on the ground))
              dat weten we inmiddels, ((staat op))
5
              we know that now ((stands up))
6
              maar die rake- >WAren de amerikanen d'r< blij mee dat de
           → but those rocke- were the americans happy that the russians
```

```
russen dat eh als eerste als eerste(n) land=
            → that uh as first as first country
8
    Clss:
              =[nee
                no
    Kar:
              =[natuurlijk
                of course
10
    ???:
              tuurlijk
              of course
              we:1? of niet,
11
    Tch:
              yes
                    or no
              lijkt mij ↑wel.
12
    Kar:
              I think so
13
              want ik bedoel •h het is nog nooit voorgekomen.
                                 it has never happened before
              because I mean
                                                                 (there) is a
14
              raket ((wijst omhoog)) de ruimte in en dan
                                                                  ((verwonderd
              rocket ((points up)) going up in space and then
                                                                 ((with face
15
              gezicht omhoog)) a:[:h [hhe
              full of amazement)) ah
16
    Tri?:
                                  [ik-
                                   I-
                                       [mis↑schien
                                                   >dachten ze wel alleen
17
   Mir:
                                       maybe they only thought of
18
              aan zichzelf en wouden ze juist dat het een amerikaan was. <
              themselves and wanted it to be an american
              ja maar dan >kunnen (hun) < ook een beetje afkijken.
19
    Tri:
              yes but then they can also copy a little bit
20
    Sum:
              ja dat denk Nk.
              yes that's what I think
21
   Kar:
                            yes
                                 en dan [(
22
    Pim:
                              yes and then (
23
    Tri:
                                         [dus dan hebben ze e- ((acterend))
                                          so then they have e- ((acting))
24
                    hebben informatie laten we nu even een (.) een raket
              oh we have information
                                        let us now just knock together a
                  elkaar knutselen.
25
              rocket
               (0.2)
26
27
              een beetje lijm [daar een beetje lijm daar
              a bit of glue there a bit of glue there
28
    Tch:
                               [reageer es
                                respond please
```

In this excerpt, the text (read aloud by Sumaya) ends with the question of who will be the first to step on the moon (l. 1-2). The teacher briefly comments on this question (l. 5) before he begins asking whether the Americans were happy about the Russians being the first nation [to

travel through space] (1. 6-7). Although this yes/no-interrogative has an objectively true answer which is presumably known to the teacher being more knowledgeable than his students (Mehan, 1979b, p. 286), the teacher does not evaluate the responses, but allows multiple (opposing) answers (1. 8-10). He then encourages the students to agree on an answer by asking "yes or no" (1. 11), which the students treat as an invitation to provide arguments and counterarguments (1. 13-25). Again, the teacher does not evaluate the responses. Instead, he further encourages the students to respond to each other¹ (1. 28). Likewise, in the subsequent interaction (not in excerpt because of the length of it) there is no point at which the teacher utters an evaluation or gives the final answer to his own question.

As excerpt 1 shows, this first category of open invitations consists of instances in which the teachers' invitations asks for answers that are objectively true or false and therefore closely resemble KIQs. However, the sequential continuations of these invitations have an open character that retroactively conveys the openness of the initial invitation: it does not actually target one predetermined final answer from the students. Rather, the teacher gives the students the floor to think about and discuss the question. Typically, the students respond accordingly and provide various answers or hold a discussion.

3.2 Open invitations projecting specific types of responses

The second category of open invitations that we identified in the data comprises invitations projecting a specific *type* of response: an opinion, an experience or a description of a hypothetical situation. With these invitations the teachers nominate a topic and ask for a specific

¹ For an analysis of these response invitations and the students' responses to them, see XXX (in preparation).

type of response, thereby guiding the students to some extent, but much less than the invitations discussed in the previous paragraph.

The invitations in this category are typically formatted as "what do you think about x", "how did you experience x" or "what would you do if x" and inherently target the students' own perceptions. Hence, the responses to these open invitations are not objectively right or wrong and lie within the students' epistemic domain (Heritage, 2012) rather than the teacher's. With these invitations the teachers move away from KIQs entirely and give their students more freedom in responding, despite the restricted response type projected.

In our data, the students' responses to these invitations are fitted without exception (but sometimes pursued by the teachers after some hesitation): invitations to tell about an experience elicit tellings about experiences in response, invitations to give an opinion are responded to with opinions, and to invitations to describe hypothetical situations the students respond with exactly these descriptions. Subsequently, the teacher typically asks for more responses, or asks a follow-up question to further discuss the topic. There are also some cases in the data in which the teacher explicitly asks for responses to the previous student contribution or in which the students spontaneously self-select and start a discussion in response to the previous contribution.

In excerpt 2 below, we see an example of an open invitation projecting an opinion as a response. The lesson revolves around the activities of the Dutch resistance during World War II. In this fragment the students have just read about women who smuggled food stamps in pregnancy braces and transported weapons in baby carriages. After having read the text fragment, the teacher asks his students to give their opinion on the women smuggling food coupons.

Excerpt 2 – 2015S1L3.0.28.02 – Inviting opinions

```
1
    Tch:
               ((voorlezend)) ze verwachtten bijvoorbeeld ook niet
               ((reading aloud)) they did not for example expect either
2
              dat vrouwen in een kinderwagen WApens vervoerden.
              that women transported weapons in baby carriages
3
              dat kwam dus goed uit
              so that was fortunate
4
              (0.9)
5
    Tch:
              eh[m
                                       ↑vind
                            wat
                                                     je]
            → uhm
                            what
                                       do
                                            you think
6
                [>(mag ik dat laatste stukje lezen?)<] ((vinger
    Sja:
                   (can I read that last piece)
                                                   ((raises hand))
              van: dat zwangere †vrouwen dat deden
    Tch:
            → of pregnant women doing this
              ↑goed
8
    Far:
               good
9
              (0.3) ((Oskar raises his hand))
10
    Tch:
              oskar
11
    Osk:
              ehm slim,
              uhm smart
12
              maar tegelijkertijd ook wel
              but at the same time also a bit funny
              slim, grappig, ((steekt duim
                                            tellend op))
13
   Tch:
              smart funny ((starts counting with thumb))
((three lines of classroom management omitted))
16 Tch:
              hoezo grappig?
              why funny
```

In this excerpt, the teacher reads aloud the last sentences of the fragment (l.1-3) and then asks the students "what do you [singular] think of pregnant women doing this" (l. 5, 7). By asking this question, the teacher solicits the students' opinions (or 'views', Rapley & Antaki, 1998) on the – supposedly – pregnant women smuggling food stamps (l. 5, 7). A first rather minimal but fitted response to this question comes from Farlou in line 8 ("good"). The teacher does not respond to Farlou's contribution, but allocates the turn to Oskar (l. 10) who has raised his hand right after Farlou's response (l. 9). Oskar responds by giving his opinion (l. 11-12) and the teacher partially repeats these words (l. 13). After some classroom management, the teacher asks Oskar to elaborate on his contribution (l. 16).

With this category of invitations the teachers ask for specific types of responses on a certain topic, but do not restrict the students' responses in any other way: the students are invited

to tell about things that lie within their own epistemic domain (Heritage, 2012) and there are no objectively right or wrong answers. Hence, this second type of invitations is much more open than the invitations described in paragraph 3.1 and it presumably is a closer approximation of what among others Soter et al. (2008) referred to with the notion of 'open-ended or authentic question'.

Within this category of invitations projecting specific types of responses, there is one instance that clearly deviates from the other invitations. It is the same as the others (and therefore part of this category) in the sense that it projects a specific type of response and that this response lies within the students' epistemic domain, but in this case, the students are provided with even more freedom with regard to their responses. They are no longer asked to share an opinion, an experience or the description of a hypothetical situation, but to share something (just anything) they have noticed. Just like the other cases in this category, the invitation receives a fitted response.

The instance is shown in excerpt 3. The teacher has just read aloud a story about televisions being newly invented and then asks the students what they noticed.

Excerpt 3 – 2016S2L13.0.06.47 - Inviting something noticeable

```
voorlezend)) maar nu moet je naar boven. huiswerk maken.
    Tch:
               ((reading aloud)) but now you must go upstairs. do homework.
2
               (2.4) ((Tch closes the story booklet))
3
    Nom:
               aurens is aan het slapen
              laurens is sleeping
4
    Lau:
              hehe ((laughs))
5
              (1.8) ((Tch looks at Nomar and Laurens))
6
              nou. ((legt boek achter zich neer))
    Tch:
            → well ((places booklet on table behind him))
7
              wat wat valt je ↑op (als) je dit lee[st
            → what what do you notice (when) you read this
8
    Nom:
                                                    [((makes noise))
              (1.0) ((teacher picks up text handouts))
              dat 't (in die) jare:n eh (0.2) (de) televisie nog maar net
10
   Mil:
              that it (in those) years uh (the) television was only just
```

```
11
              uitgevonden was, en dat niemand er echt zoiets (mee deed),
              invented and that nobody really (did) something (with) it
12
              (2.5) ((teacher warns Nomar by shaking his head, then nods
13
                      to Mila and looks around))
14
   Tch:
              ↑ja >en< wat nog meer
              yes and what else
15
              [°(anders kan ik me niet concentreren)°=
   Nom:
                (otherwise I can't concentrate)
16
              [(eh) ((vinger op))
   Lau:
               (uh) ((raises hand))
17
   Gee:
              =[en dat er (een)
                and that there (an)
18
              =[(ik denk eigenlijk) dat ehm de: (.) allemaal
   Lau:
                (I actually think) that uhm the
                                                     all
                                                         the (new digital
19
              digitale spul) eigenlijk best wel duur ware
              stuff) was actually quite expensive
```

After reading aloud the last sentences of the text in his booklet (l. 1), the teacher projects the next step in the interaction with what Mazeland calls a 'next step NOU': a 'nou' ('well') that signals the start of a next step in a larger course of action (2016, p. 378). Indeed, after this 'nou' and putting the story booklet aside (l. 6), he progresses to the discussion. He invites the students to share something they have noticed (l. 7) and thereby restricts their response possibilities. After a pause in which the teacher picks up a pile of handouts he will shortly distribute among the students (l. 9), Mila responds to the invitation with a type-conforming "dat" ('that') followed by a piece of information from the text that she has noticed: televisions were very new and not yet put to use as much (l. 10-11). In the pause that follows (l. 12-13), the teacher nods to Mila and seems to attempt to engage the other students into the discussion by looking around ('lighthouse gaze', Björk-Willén & Cekaite, 2017). Subsequently, he acknowledges Mila's response and asks for additions (l. 14). Both Laurens and Geeke (the latter with another type-conforming "dat"/'that') start a response (l. 16-17), but only Laurens completes it and shares an assumption (l. 18-20).

Similar to the invitations projecting opinions, experiences and descriptions of hypothetical situations, the invitation in excerpt 3 asks for a specific type of response that lies

within the students' epistemic domain. However, this invitation provides the students with more freedom, for it projects responses in which the students share something – just anything – they have noticed and thereby enables and even encourages them to initiate a topic. This invitation is therefore more open than the others in this category of invitations projecting specific types of responses.

3.3 Open invitations with a restricted referent but without projection of a response type

The third category of invitations found in the data is quite different from the two categories we have seen until now. Where the invitations described in the two previous paragraphs projected (series of) objectively true or false answers and specific response types respectively, the invitations in this third category zoom in on something specific in the text, but do not convey restrictions on the (type of) response. With these invitations, the teachers typically refer to the text with a specific characterization or pick out something such as an image or a sentence and, by using the verbs 'tell', 'say' and 'respond', ask the students to discuss it. The invitations do not project specific types of responses, as the invitations discussed in paragraph 3.2 do.

In line with this, the students' responses to these invitations show a wider variety than the responses to the invitations in the first two categories. After all, the invitations in this category are more open with respect to response types and thereby allow for a larger set of fitted responses. The students mostly respond with (fitted) comments related to the text or image, ranging from recitations to assertions and opinions (again, sometimes pursued by the teacher after student hesitation) and, once, a clarification question. Subsequently, the students typically have a discussion in response to the previous contribution or give their own responses to the initial invitation. In the case of the clarification question, the students collaboratively formulate an answer to it.

In excerpt 4, we show an example of this category of open invitations that have a restricted referent but do not project a response type. In this excerpt, the class has just read a piece of text about the Dutch winter of starvation during World War II. After reading, the teacher quotes one specific sentence and asks the students to say something about it.

Excerpt 4-2015S1L1.0.24.39 – Inviting with a restricted referent but without projection of a response type

```
((voorlezend)) om te zorgen dat (.) alles
1
    Eva:
               ((reading aloud)) to make sure that everything
                                                                was divided
2
              verdeeld kregen de mensen bonnen.
              fairly the people received stamps
3
    Tch:
              ja.
              yes.
               (1.6) ((students raise hands for reading the next fragment))
4
5
              dankjewel,
    Tch:
              thank you
6
               (0.3)
                                           heel belangrijk om te kunnen
7
    Tch:
              eh Eten en brandstof
            \rightarrow uh food and fuel are very important to be able to
8
    Clss:
                                          [((all lower hands, except Fay))
9
    Tch:
              BLIJven lever
              survive
10
               (1.0)
                                     zeggen.=wiehh
11
   Tch:
              kun je daar
              can you say something about that=who
12
               (0.9)
13
               ((doet vinger omlaag)) "'t is gewoon-" ((en weer omhoog))
   Fay:
               ((lowers hand)) it's just- ((raises hand again))
14
               (.)
               Fay,
15
    Tch:
16
                    het is wel het is wel be | langrijk want (0.3) volgens
    Fay:
               yes it it is it is important because
17
               mij kan je kan je geen jaar zonder drinken of ↑eten.
              you can you cannot do a year without things to drink or eat
               [nou drinken sowieso (niet)
18
   Far:
               well definitely (not) drink
19
   Eva:
               [((raises hand))
20
               (2.1) ((some noise, Tch looks around, then at Eva and tilts
21
                       his head backwards))
              in het boek staat e:h zeven procent (
22
   Eva:
                                                              water
              in the book it says uh seven percent (
                                                              water )
```

After closing the reading and thanking Eva for reading aloud (1. 3, 5), the teacher picks out the sentence before the last and quotes it (1. 7, 9). Then, after a pause, he invites the students to say something about it (1. 11). With his invitation, he does not project any specific response type, but merely asks the students to say something (just anything) about the selected sentence. Fay responds to the invitation and comments on the sentence by acknowledging that 'it' is indeed important and gives an account for this (1. 13, 16-17). Farlou responds to Fay's contribution with a (partial) affiliation (1. 18) and subsequently, Eva raises her hand (1. 19). The teacher allocates the turn to her by looking at her and tilting his head backwards (1. 20-21), after which Eva starts her contribution to the discussion (1. 22 ff).

With this excerpt, we have demonstrated that the teachers also use 'open invitations' that refer to a specific part or aspect of the text, but do not project a specific type of response; they merely ask the students to share their thoughts on the selected referent. Hence, these invitations are more open than the invitations in the previous categories, as they give room for a wide variety of possible responses. Often, these responses are followed by a discussion.

3.4 Topic soliciting invitations

The last and largest category comprises the most open invitations. With these invitations, the teachers do not refer to a specific part or aspect of the text, as we saw in paragraph 3.3, but to the text as a whole. Moreover, they do not project a specific type of response either, but give room for all kinds of responses. Hence, the teachers give their students 'carte blanche' (Mazeland, 2008): the opportunity to contribute to the discussion with anything that comes to their minds and thereby initiate a topic. As these invitations are quite similar to topic solicitations in everyday conversation (Schegloff, 2007; also 'topic initial elicitors', Button & Casey, 1984), we will refer to these invitations as topic soliciting invitations.

Even though all of the invitations within this category are clearly recognizable as openended invitations, they differ quite widely in form. In just over half of the cases, the invitations
are formatted as "(is there anyone) who wants to respond..." questions, but our data also include
other formats: elliptical invitations (e.g. "first responses"), imperatives (e.g. "(please)
respond"), declaratives with a modal verb (e.g. "you may respond to this") and even minimally
verbal and purely embodied conduct (e.g. ("well" and) looking around the classroom). The
elliptical invitations as well as the purely embodied and minimally verbal invitations only occur
later on in the series of lessons, when the students are already accustomed to the new lesson
approach and these formats suffice to convey the open invitation. The declaratives with a modal
verb, on the other hand, typically occur when there seems to be some indistinctness as to what
is going to happen next in the lesson or what the rules were for taking a turn.

Just like in the previous category (paragraph 3.3), the responses to the topic soliciting invitations show a wider variety than the responses to the invitations in the first two categories and typically comprise contributions that are text-related, ranging from recitations to assertions, opinions and clarification questions. However, the topic soliciting invitations sometimes (more often than the other invitation types) prove to be difficult to respond to and receive hesitations, non-forthcoming responses, or meta-comments in the first instance. Nonetheless, after a pursuit by the teacher, virtually all topic soliciting invitations receive a fitted response. The interaction following these responses typically comprises discussions and/or the collaborative answering of clarification questions. In some cases, the teacher explicitly invites, and mostly receives, other (parallel) responses or asks a follow-up question to further discuss the topic.

Excerpt 5 below is an example of the most exemplary format within this category of topic soliciting invitations: the "(is there anyone) who wants to respond" question. In this excerpt, the class reads about the Dutch resistance against the Nazis and their illegal newspapers. When

the teacher has read aloud the last sentence of the fragment, he invites the students to discuss it with the prototypical topic soliciting invitation uttered in line 5-6.

Excerpt 5 – 2016S1L10.0.07.10 – Topic soliciting invitation

```
1
    Tch:
              ((voorlezend)) dat mag niet van de ↓duitsers. dat is
              ((reading aloud)) the germans do not allow it. it is
2
              illegaal. (.) de kranten hebben namen als vrij nederland (.)
                        the newspapers have names such as free netherlands
3
              trouw (.) de waarheid en het parool.
              allegiance the truth and the watchword.
              (2.2) ((looks in textbook))
4
              "nou" (.) wie wil d'r reageren op het
5
    Tch:
                        who wants to respond to the first
6
              (van [wat ik) net voorgelezen heb
              (of what I) just read aloud
7
                   [((raises hand))
    Tri:
              (0.5) ((Teacher looks at Tristan))
8
    Tri:
              (nou) eh::m (0.2) die eh namen van die kranten dat komt ↑wel
              (well) uhm
                                 those uh names of those papers that does
10
              overeen dat ze
              match that they do want freedom
11
   Tch:
              je hoort daar veel vrijheid in in ieder geval ja
              you hear a lot of freedom in that in any case yes
```

After having read aloud the last sentences of the first two paragraphs of the lesson (l. 1-3), the teacher utters the invitation "well, who wants to respond to the first piece of what I just read aloud" (l. 5-6) with which he opens the discussion and invites the students to participate. With 'the first piece', the teacher refers to the (first) two paragraphs just read as a whole, not to a specific part of it (as is the case in the invitations described in paragraph 3.3). The referent is, hence, unrestricted and so are the response possibilities, for the teacher's invitation does not project any specific response types. In line 7, Tristan bids for the floor by raising his hand (Mehan, 1979a, p. 91). The teacher then allocates the turn to him by looking at him (l. 8) and Tristan comments on the content of the text by noting that the names of the papers really convey

the resistance's conviction. The teacher affiliates with Tristan's contribution in line 11 and subsequently (not in excerpt), a further discussion of the text follows. Tristan's response is characteristic of the responses in this category of topic soliciting invitations: a fitted, text-related response.

As illustrated with excerpt 5, the invitations within this category are entirely open. They do not refer to something specific in the text, but to the text as a whole, and they do not project a specific type of response. They leave the students entirely free to initiate a topic by responding to the invitation with whatever comes to their minds. Our data show that the students typically respond to these invitations with text-related comments, from recitations to personal perspectives and clarification questions.

It is interesting to note that the format of the "who wants to respond" questions is rather closed as its design is that of an invitation to bid (Mehan, 1979a) and principally projects a candidacy pool of self-nominating students bidding for a turn by raising their hands (Koole, 2015; Mehan, 1979a; Schegloff, 1987; Shepherd, 2013, 2014) as a relevant next. Just like in excerpt 5, most of the invitations with this format (also occasionally appearing in the previously discussed invitation categories) follow the sequence structure of 1) the invitation, 2) the students bidding for a turn, 3) turn allocation by the teacher and 4) the actual response by the nominated student (see also Shepherd, 2014, p. 87). Hence, the students are not expected to self-select, but to self-nominate and await turn allocation by their teacher. In some cases, however, a student does self-select as next speaker and thereby the bidding and turn allocation are being skipped.

As mentioned before, next to the "(is there anyone) who wants to respond" questions and the other verbal topic soliciting formats (elliptical invitations, imperatives and declaratives with a modal verb), we also found a few instances in our data that are not immediately recognizable as open invitations but unquestionably function as such: topic soliciting invitations formatted

as minimally verbal and sometimes even purely embodied conduct. The minimally verbal topic soliciting invitations all consist of ("okay" and) "well" and looking around by the teacher with what Björk-Willén & Cekaite (2017) have called the 'lighthouse gaze'. The purely embodied invitations are conveyed only by the teacher staying silent and doing a (sometimes subtle) lighthouse gaze. Naturally, these invitations are as open as they get, since nothing is actually being said that can restrict the response possibilities.

The minimally verbal and embodied invitations occur later on in the lesson series, which is probably why the students are perfectly capable of identifying these purely embodied and minimally verbal actions as invitations. Typically, they self-nominate or self-select with a fitted response similar to their responses to verbal topic soliciting invitations: a text-related comment.

In excerpt 6, we show an example of a minimally verbal topic soliciting invitation. The class has just read a fragment about the Nazis bombing the Netherlands at the beginning of World War II when the teacher invites the students into the discussion with a minimally verbal invitation.

Excerpt 6 – 2016S2L6.0.23.19 – Minimally verbal open invitation

```
orlezend)) daan kijkt peter ang- (0.9) angstig aan,
    Mis:
               ((reading aloud)) Daan looks at Peter apprehensively,
2
                  zou dit verder gaan.
               how will this develop.
               (0.8)
3
                slecht
    Dor:
               badly
5
    Tch:
               [↑okee ((kijkt kring rond))
                okay ((lighthouse gaze))
               (0.6) ((teacher looks at the text))
6
7
    Tch:
              nou
              well
8
               °(ja
                         verder [gaat)°
    Lau:
                         develops)
                (yes
    Tch:
                                 [((looks at Laurens with his eyebrows
10
                                    raised))
```

```
11  → (0.3) ((lighthouse gaze by teacher again))
12 Gee: we weten eigenlijk al wel een beetje nu hoe: het is afgelopen
we actually already know a little bit about how it ended
```

After Misha has finished reading aloud the text, Dorian immediately responds to the question posed in the last sentence of the text (l. 4). Simultaneously (l. 5), the teacher brings the reading to a close with "okay", which marks the transition between the activities of reading and discussing the text fragment (see Beach, 1995; Schegloff & Sacks, 1973; Sliedrecht & van Charldorp, 2011), and looks around the classroom. Then, after remaining silent for 0.6 seconds and looking at the text just read (l. 6), he utters a 'next step NOU' ('well') (Mazeland, 2016, p. 378) in line 7, with which he really opens up the next activity in the interaction: the discussion of the text. This "nou" is not followed by an actual invitation (and it does not sound prosodically incomplete), but is apparently enough to convey a topic soliciting invitation nonetheless. Just like the other (more verbal) topic soliciting invitations, it leaves the students free to respond to the invitation with anything that comes to mind, for there are no restrictions expressed in the invitation.

When Laurens very softly utters (something that sounds like) a response that seems to endorse the question in the text (l. 8), the teacher looks at him with his eyebrows raised and then looks at the other students, with which he seems to invite them to join the discussion as well (l. 9-11). Then, in line 12, Geeke indeed does so and starts a multi-unit turn in which she responds to the question posed in the text. Her response, thus, comprises a text-related comment, prototypical for the responses to topic soliciting invitations, followed by a discussion in response to Geeke's contribution.

This excerpt demonstrates that a minimally verbal invitation of "well" and "nou", accompanied by silence and a lighthouse gaze, apparently is enough to be taken up by the

students and function as an actual invitation. In fact, as mentioned earlier, the teachers can even convey an invitation purely with embodied conduct: just by keeping silent and looking around the classroom. We will see an example of this in excerpt 7, in which the students do not respond to the teacher's initial embodied invitation (from the 14th of 15 lessons in this specific class). It is only in 3rd position that it becomes clear that the teacher's silence and lighthouse gaze were indeed meant as an invitation.

Excerpt 7 – 2016S2L14 .0.07.59 – Embodied open invitation with 3rd turn proof

```
((voorlezend)) al deze mensen brachten hun eigen cultuur
   Mil:
              ((reading aloud)) all these people brought their own culture
              mee (ja.) in nederland leven we allemaal
                                                         samen (met veel
2
              with them (yes) in the netherlands we all live together (with
              mensen uit andere landen en met) andere culturen.
3
              many people from other countries and with) other cultures
4
              daarom noemen we ne- nederland een mul- ti- culturee: l land;
              that is why we call the netherlands a multicultural country
              (7.9) ((a few students quietly pronounce 'multicultural',
5
                      lighthouse gaze by teacher))
6
7
              niemand die wil
                               °rea geren°?
   Tch:
            → nobody who
                         wants to respond?
              ehm[m
8
   Ama:
   Man:
```

After Mila has finished reading aloud, there is a 7.9 second pause (although some students quietly repeat the word "multicultural" for themselves) in which the teacher looks around (l. 5-6). Subsequently, the teacher asks if there is nobody who wants to respond (l. 7). By means of this question with the negative polarity item "nobody", the teacher clearly conveys retrospectively that the pause and his lighthouse gaze in lines 5-6 were meant as an invitation and should have been taken up by the students as such: a response was due but not provided

(Heritage, 1984, pp. 248–249; Schegloff, 1972). After the teacher's 3rd turn, the students start to respond to the initial embodied invitation after all (1. 8-9, ff.).

This example provides an extra validation of our analysis of minimally verbal and purely embodied conduct, for it demonstrates that these teacher practices are indeed intended and functioning as actual invitations: the absence of a response to such an invitation is oriented to and reported on by the teacher as he pursues the response with a post-expansion question (Sidnell, 2012, p. 80).

4. Conclusion and discussion

The objective of this study was to get a more detailed grip on the rather general notion of 'open-ended or authentic questions' (Soter et al., 2008) in whole-class discussions and specify the characteristics of these questions other than not having a single, predetermined correct answer and allowing students more and/or different options to respond (see e.g. Chinn et al., 2001, p. 394). The method of Conversation Analysis enabled us to study the details of the practices of the participants in the classroom interaction (ten Have, 2007, p. 6) and to specify how 'open invitations', as we have called them, are formatted, what types of responses they project and, hence, how they actually function in the interaction. The data studied consisted of 39 video-recorded history and geography lessons in 4 fourth grade classes in which the teachers implemented instructions based on the literature: to avoid acting as a dominant or primary respondent in the interaction, and instead, to ask open-ended or authentic questions and let the students take the floor for extended periods of time (Cazden, 1988; Myhill, 2006; Soter et al., 2008). We analyzed the kinds of open invitations the teachers pose after reading a piece of text, and the responses and subsequent interaction that these invitations yield in order to uncover how different invitation types function in the interaction.

First of all, our analysis revealed the important finding that open-ended or authentic questions are indeed far from uniform and cover a great variety of practices. The instruction of asking open-ended or authentic questions leads even a small number of teachers to design their open invitations in a wide range of formats and with various extents of openness.. The least open invitations are the ones that still give a lot of guidance and project (a series of) objectively true or false answers in response (22%). The invitations that project a specific type of response such as an opinion or experience (19%) are more open: they nominate a topic and project a constraint on the response type, but these responses lie within the students' epistemic domain. Even more open are the invitations that have a restricted referent but do not project any restrictions on the response type (10%). These invitations are almost entirely open, as they do not project any restrictions on the response types and just ask the students to share their thoughts, albeit on a selected referent. Finally, the topic soliciting invitations (43%) are the most open. They do not project any restrictions at all, but leave all options open and provide the students with the freedom to initiate a topic (Button & Casey, 1984) by contributing with anything that comes to their minds.

The formats of all these invitations range from interrogatives to imperatives and even purely embodied practices, all of which deserve further scrutiny in future research. One especially remarkable format is the "(is there anyone) who wants to respond…" invitation constituting more than half of the verbal topic soliciting invitations and occasionally appearing in the other invitation categories as well. These invitations do not project immediate responses by self-selecting students, but have the format of an invitation to bid (Mehan, 1979a) and thereby typically yield a sequence structure of 1) invitation, 2) bidding for a turn by the students, 3) turn allocation by the teacher and 4) the actual response. A further analysis of the "who wants to respond" question practice and the often ensuing 4-step structure lies beyond the scope of

this study, but would be very interesting, as it could start to explain why teachers so commonly use such a closed question format for the most open type of invitations. One possible reason could be that the 4-step sequence structure generates more smoothness in the discussion as self-nomination prevents having a student without an answer being forced to provide one (McHoul, 1978, p. 201) while at the same time avoiding situations in which multiple students simultaneously start a turn at talk (ibid. p. 198).

Our study has also demonstrated that virtually all invitations in our collection succeed in eliciting fitted responses that contribute to the discussion instigated by the open invitation. Because of the great variety of open invitations, the responses show rather large differences as well. The least open invitations projecting objectively true or false answers receive (series of) these answers in response; the invitations to share opinions or experiences elicit exactly these tellings; and the invitations to participate in the discussion and respond to (a specific element of) the text with just anything that comes to mind generate various types of responses, all text-related. Hence, the students typically respond to the invitations with contributions that are fitted to the expectations projected in the invitations.

However, more often than the other invitations, the topic soliciting invitations sometimes prove difficult to respond to and result in hesitations, non-forthcoming responses, or metacomments in the first instance. The problem may lie in the fact that these topic soliciting invitations give so much freedom and so little direction that students may not know what to say and clam up. Nonetheless, after pursuits by the teacher, virtually all topic soliciting invitations receive a fitted response. These pursuits are also interesting for further analysis: how are the pursuits formatted compared to the initial invitations and which formats are most successful in yielding a fitted response in second instance?

With regard to the interactions following the invitations and their usually fitted responses, our data have shown that the students typically give parallel answers, respond to the teacher's follow up questions, collaboratively formulate an answer to one student's clarification question and/or have actual discussions with each other without the teacher taking every next turn. The two last and most open types of invitations, the invitations with a restricted referent and the topic soliciting invitations, most often result in discussion continuations. In these cases, the T-S-T-S turn taking pattern characteristic for most classroom interaction is broken. The teacher abstains from functioning as the primary respondent (or 'head' or 'director' of the interaction, McHoul, 1978, p. 188) and gives the students the floor to directly respond to each other and have a discussion among themselves. This yields a T-S-S-S turn taking pattern and resembles the discussion framework as described by Gosen, Berenst and De Glopper (2009; 2015): a participation framework (Goffman, 1981; Goodwin & Goodwin, 2004) in which the students participate without being selected by the teacher, direct their contributions also to each other rather than solely to the teacher, and are thinking together (see also Littleton et al., 2005; Forman, Ramirez-DelToro, Brown, & Passmore, 2017).

Some of the continuations comprising series of parallel responses, most often elicited by the first two types of invitations (invitations projecting (series of) objectively true or false answers and invitations projecting a specific response type), also take the turn taking pattern of T-S-S-S, but in these cases one could say that the *sequential* pattern for these series is more like T-S-T-S, as the students respond to the initial invitation by the teacher in parallel rather than to each other's contributions. The likely cause for this is the fact that the invitations within these categories project certain response types, which almost automatically causes the students to have their own parallel responses ready and contribute to the discussion with these responses, whereas the more open invitation types provide scope for a greater variation in responses and

thereby more opportunity for actual discussions. This is substantiated by the fact that the two more open categories of invitations indeed generate more discussion continuations.

As we mainly focused on the types of invitations and the students' responses to these invitations and only characterized the subsequent interactions in a general way, further research into the participation frameworks incited by the different types of invitations and responses would be of great value. Not only to further determine when exactly which invitations yield which participation framework, but also to analyze with what types of contributions the students respond to each other within these different frameworks.

Another object worthy of further research is a different type of openness that can be identified in our data: openness with regard to the possible respondents. Other than the already discussed "who wants to respond" questions, which invite all the students to bid for a turn, but eventually lead to the selection of one single student, our data also contain examples of direct selection of a single student as well as invitations that invite all the students to reply by projecting a direct response without the 4-step sequence structure for turn allocation. Hence, the invitations in our data range from instances in which all students can potentially contribute by self-selecting, via instances in which all students can self-nominate but only one gets selected by the teacher, to instances of individual selection.

To a great extent, these types of openness correspond to the three basic turn-allocation procedures identified by Mehan under "normal classroom conditions" (1979a, p. 84): individual nominations, invitations to bid and invitations to reply. However, the last type is mainly associated with students responding to the invitation in unison, a phenomenon typical for more traditional classroom interaction, but rarely seen in our data of whole-class discussions. It would, therefore, be interesting to further analyze the interactional effect of the turn-allocation types as identified by Mehan (1979a) in our own data of whole-class discussions and,

additionally, explore whether and to what extent this type of openness coincides with the different extents of openness regarding the referent and the projected response types as described in this paper.

With this study, we have demonstrated that the recommendation to teachers holding whole-class discussions to ask open-ended or authentic questions (e.g. Soter et al., 2008) still gives scope for a variety of teacher practices that could be labeled as such. By making and analyzing a collection of these practices occurring after reading a piece of text, we were able to specify the concept of open-ended or authentic questions. Even with a rather small dataset comprising 4 classes, the teachers demonstrated a wide variety of formats and different extents of openness, which confirms the idea that the notion of open-ended or authentic question is rather general and presumably too vague as a recommendation. We discerned four different categories of 'open invitations', as we called them, that convey different extents of openness. Furthermore, we identified the typical responses to these invitations, virtually all of them fitted to the invitation and concerned with the text's topic or the students' personal connection to this topic. Finally, we also provided a general analysis of the interactions following the invitations and revealed that the less open invitations typically resulted in series of parallel responses, whereas the more open invitations typically yielded discussions or the collaborative answering of a clarification question.

While keeping in mind the qualitative and small-scale character of our study, we can conclude that the notion of open-ended or authentic questions does not refer to one uniform phenomenon, but rather to a set of open invitations of different designs, projecting various extents of openness and receiving different types of contributions in response. These findings suggest that the recommendation to teachers holding whole-class discussions should be more specific than just to ask open-ended or authentic questions. Teachers should be made aware of

the different types of open invitations in order to enable them to tailor their invitations to the specific situation and to their educational and interactional goals. For holding 'real' discussions with their students, "the more open the invitation, the likelier an actual discussion" seems to be a valid motto.

Appendix A

Transcription conventions (based on Jefferson, 1986)

Tch: teacher

Sum: pseudonym of an identified student

???: unidentified student Tri?: probably Tristan

Clss: several students in the class talking simultaneously

[word overlapping talk

[word

word= 'latching': no gap between two turns

=word

(1.0) pause of one second

(.) micro pause, shorter than 0.2 seconds

sharp rising phrase intonation, not necessarily a questionslight rising phrase intonation, suggesting continuation

. falling phrase intonation

flat intonation

↑↓ marked rising or falling shift in syllable intonation

WORD louder than surrounding talk *word* softer than surrounding talk

word stressed syllable

wo:rd lengthening of the preceding sound

wo- abrupt cut-off

>phrase< faster than surrounding talk <phrase> slower than surrounding talk

hh audible aspiration audible inhalation

(word) unclear talk() inaudible talk

((points)) verbal description of (non-verbal) actions

→ focus of analysis

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