Teachers' use of open questions: investigating the various functions of open questions as a mediating tool in early literacy education

Ingvill Krogstad Svanes & Emilia Andersson-Bakken

Published online: 22 Nov 2021.

Submit your article to this journal ↗

Article views: 83

View related articles ↗

View Crossmark data ↗
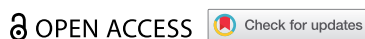
Routledge
Taylor & Francis Group

ORIGINAL ARTICLE

Teachers' use of open questions: investigating the various functions of open questions as a mediating tool in early literacy education

Ingvill Krogstad Svanes and Emilia Andersson-Bakken [ORCID]

Faculty of Education and International Studies, Oslo, Norway

ABSTRACT

This study identifies the various functions of open questions in whole-class teaching in language arts classrooms in primary school, and it explores how these questions may work as a mediating tool. Open questions are considered a valuable tool in classroom discourse, enhancing dialogue and students' learning by giving the students an opportunity to elaborate on their thoughts. The analysis draws on two data sets and includes observations from four schools and an examination of whole-class teaching in 32 language arts lessons. The results show that the teacher practice of asking open questions has one core function – classroom management. The teachers also ask open questions that are more subject specific, and the material covers writing activities and orthography and grammar instruction. The functions of open questions are quite similar in the two data sets. This may indicate that the teachers' open questions mediate an understanding of school culture and the values of the subject to the students, here how writing activities and grammar instruction should be interpreted. This article argues that we should go further than merely differentiating between open and closed questions and investigate the functions of open questions in the classroom.

Introduction

The quality of classroom discourse is regarded as decisive in its effect on students' learning (Alexander, 2008; Mercer & Littleton, 2007). One feature of classroom discourse is that teachers ask many questions, especially during whole-class teaching (Almeida & Neri de Souza, 2010; Andersson-Bakken & Klette, 2015; Croom & Stair, 2005; Myhill, 2006). Empirical studies examining these questions have often differentiated between open and closed questions (Chin, 2007; Myhill, 2006; Nystrand, Gamoran, Kachur, & Prendergast, 1997), with the former frequently being regarded as a valuable teaching tool and a sign of quality in classroom discourse (Applebee, Langer, Nystrand, & Gamoran, 2003; Barnes, Britton, & Torbe, 1986; Gillies, 2014; Smith & Higgins, 2006).

Other research argues that more interesting than the questions' form are the *functions* that questions serve in classroom discourse (Mercer, 2010). To understand the

function of a question, the context in which it is being asked has to be considered (Mercer, 2010; Sahlström, 2012). Furthermore, the function of the question will pinpoint how the students should interpret the subject. In students' encounters with a teacher's questions, the question can serve as what sociocultural learning theory calls a "mediating tool" (Säljö, 2005). Mediating tools are physical or intellectual tools that develop within a culture and that shape people's understanding *of* and interaction *with* the objects around them. Questions can therefore work as mediating tools and can implicitly show students how to think, act, and reason within a topic. Thus, in addition to investigating *what* goes on in the classroom, understanding *how* activities are played out in the classroom is just as important (Klette, 2010). Looking at teachers' questioning in light of the context and as a mediating tool raises several unanswered questions for research, including how teacher questions emerge within different school subjects and curricula.

This study examines the various functions of open questions asked in 32 Norwegian language arts lessons within early literacy education (6–8-year-olds) in primary school. Given that open questions are especially effective in improving classroom discourse, and to develop the research beyond the distinction between open and closed questions, we investigate teachers' open questions and the functions these questions serve in the first years of schooling. Moreover, our interest lies in how, through asking open questions, language arts teachers may mediate the understanding of different topics within the subject. Delving into context and investigating what the teachers ask about, the actual wording of their questions, and the functions those questions serve within the specific context may facilitate a deeper understanding of teachers' use of questions.

Theoretical perspectives

In sociocultural learning theory, language is viewed as an intellectual tool that mediates reality for people within a specific context (Vygotsky, 1978). Language is therefore crucial when students must adapt to the social and cultural community in the classroom setting. According to sociocultural theory, learning and development are, to a large degree, understood as queries about the way in which people get in touch with and acquire different mediating tools as resources in sociocultural practices, such as school. Students are socialised into a school culture but also into different academic cultures. Thus, students must be able to integrate their everyday knowledge and school knowledge into a school discourse. From a sociocultural perspective, learning is regarded as a form of socialisation into a particular society, and this socialisation takes place through participation in activities and as a consequence of that participation (Säljö, 2005; Vygotsky, 1978). Cultural tools can be identified in the resources offered to the child through the scaffolding mediation and appropriation process that is supported by the teacher, such as hints and questions (Wallerstedt, Pramling, & Säljö, 2014). In our context, this means that students will be socialised into the subject of language arts through different aspects of the school subject that will work as mediators, such as tasks, classroom activities, homework, and classroom discourse, which will include the teachers' questions. All these mediating tools form parts of the classroom culture and show the students how the subject should be understood, and which activities are important within the subject. Open questions may serve as an important mediating tool in the

classroom as they ask students to elaborate on and share their thoughts, communicating to the students that their voice is important in the language arts classroom and in the interpretation of the subject. It is therefore interesting to investigate what functions these open questions have and whether the functions vary between the different topics in a subject or between curricula.

The Norwegian language arts context

In Norway, students start school when they are six years old. Even though 97.3% of three- to five-year-olds go to kindergarten (Statistics Norway, 2021), the formal reading and writing instruction is the school's task, and learning to read and write is a key activity for students in the language arts lessons in the first years of schooling. The observed classrooms in this study followed the same curricula, *The Knowledge Promotion* (Ministry of Education and Research, 2006/2013), which lasted until 2020. This curriculum included three main elements within language arts – oral communication; written communication; and language, literature, and culture. The curriculum, however, was in addition affected by ideas regarding communication skills and competences (Ongstad, 2015), and language arts carried the main responsibility for three of the basic skills – reading, writing, and oracy – but should also contribute in developing digital skills. The subject may thus be characterised as broad, with a certain tension between the discipline of the school subject and the role of the school subject as a means to more generic competences (Ongstad, 2015). When examining the functions that teachers' questions serve and mediate in early literacy classrooms, it is thus crucial to be aware of the purpose and topic of the particular lesson and see the teachers' use of questions in this context.

A contextual view of teachers' questioning

When examining teacher questions, the context of whole-class teaching has been predominant (Almeida & Neri de Souza, 2010; Cazden, 2001; Chin, 2007). Whole-class teaching is defined as an instructional process wherein teachers pose questions, deliver lectures, and conduct other related activities involving the entire class (Lindblad & Sahlström, 1999). Going beyond merely counting the number of open and closed questions employed in classrooms enables a thorough appreciation of the context in which teachers ask open questions. This allows researchers to investigate the functions that these questions may serve (Mercer, 2010; Sahlström, 2012). Mercer (2010) argues that questions can have multiple functions depending on the context in which they are asked. He states that the same question can be asked to check a student's knowledge, to wake up a tired student, at the start of a lesson to check prior knowledge, etc. (Mercer, 2010). It is therefore apparent that, during the data analysis process, calibrating teacher questions into smaller sub-categories can provide researchers with a clearer picture of what is happening in classrooms (Ødegaard & Klette, 2012).

Several studies have investigated the different functions of questions (e.g. Andersson-Bakken & Klette, 2015; Chin, 2007; Myhill, 2006; Myhill & Dunkin, 2005; Wragg & Brown, 2001). Wragg and Brown (2001) examined more than a thousand questions asked by teachers in secondary schools and classified them into the following three

categories according to function: managerial questions (intended to facilitate classroom management), information/data questions (which involve recall of information), and higher-order questions (which go beyond recall and invite students to think). These authors found that most questions revolved around classroom management and that very few questions encouraged students to think beyond recalling information. Myhill and Dunkin (2005) and Myhill (2006) identify 11 different *functions* of questions. Myhill and Dunkin (2005) find that most teacher questions are factual questions (closed) and that the most frequent function is factual elicitation. They are, however, not specifically discussing the functions of open questions and how these functions are related to different parts of the subject. Furthermore, the teachers in this study are not using questions as way to manage the classroom; only a small number of the questions the teachers put forward have this function. They address the fact that the manner in which these questions are used during whole-class teaching must be taken into consideration (Myhill & Dunkin, 2005). Boyd and Markarian (2011, p. 517) also argue for this; they state, "It is the perceived function of the talk in a situated, social context, not its decontextualized form, that determines its effectiveness". So, to further understand the functions of open questions in the classroom, we need to go deeper into the context that surrounds the questions; in our case, this is specifically the academic subject within which the questions are asked.

Teachers' use of open questions in the classroom

Many terms are used for open questions: some call them open-ended questions (Barnes, 1976; Lee & Kinzie, 2012; Nystrand et al., 1997), others, display questions (Long & Sato, 1983; Nunan, 1996), while yet others speak of divergent questions (Mehan, 1979; Stevens, 1912). Despite the differences in terminology, all the studies cited separate these questions (which can be answered in a variety of ways) from questions with a predetermined correct answer. In this article, we thus build on a definition of open questions as those that can be answered in a variety of ways, with no specific correct answer (Myhill, 2006; Nystrand et al., 1997). In this, yes/no questions are included if the answer is not predetermined (Nystrand et al., 1997).

Open questions encourage active student participation and student exploration (Smith & Higgins, 2006), thereby driving greater dialogical teaching and student engagement (Alexander, 2008; Gillies, 2014; Nystrand, Wu, Gamoran, Zeiser, & Long, 2003; Twiner, Littleton, Coffin, & Whitelock, 2014). Open questions are effective motivators because they invite students to engage in conversation and thus help to increase the students' understanding and reasoning, among other purposes (Smith & Higgins, 2006). A number of research studies have shown that teachers rarely ask open questions even though these have been identified as important tools in developing student understanding (Almeida & Neri de Souza, 2010; Lee & Kinzie, 2012; Osborne & Chin, 2010; Wu, 1993).

In the language arts classroom, the value of open questions has been stressed in literature instruction and comprehension as a tool that can stimulate the students to interpret texts and identify with the content (Applebee et al., 2003; Nystrand, 2006; Nystrand et al., 1997) as a part of developing students' literary reading (Langer & Close, 2001). A finding in teacher questions linked to literary conversations is that the form of the question (e.g. open or closed) is not as important for how the

conversation develops as is the function of the question in the context. Furthermore, the findings indicate that the teacher may be asking open questions but not accepting all the students' answers, thereby closing the conversation (Andersson-Bakken, 2015). The use of open questions by teachers is also stressed in the development of more generic reading skills (Vaish, 2013) and the reading strategies needed for the comprehension of informational texts (James & Carter, 2007). A repeated finding in relation to writing instruction and assessment is that teachers ask many questions but that while the importance of open questions is acknowledged, there is a surprising lack thereof (Hawkins, 2015; Heritage & Heritage, 2013; McKeaney, 2009). Research based on the use of questions by teachers in grammar and ortho-graphy teaching seems to be scarce once second language learning is excluded, and this is also true of research into questioning linked to curricula.

Drawing on the overview presented above, we are interested in investigating the function of open questions and how teachers use them to mediate understanding to school students in general and to those in language arts classes in particular. Research involving language arts appears fragmented, and this is probably because the subject consists of several topics from different academic traditions. The majority of research on teacher questions still focuses on the question form and concludes that open questions are important. There is thus a lack of research that examines these open questions thoroughly and explores the functions they serve. We intend to investigate this topic through the following research questions:

(1) What functions of open questions emerge in language arts classrooms in the first years of schooling?
(2) How can teachers' open questions mediate an understanding of the subject of language arts in the context of different language arts activities?

Methods and data

This study builds on two sets of data from two different video studies of Norwegian language arts classrooms. In both studies, the data material were collected by the First author. In all the observed classrooms, the whole-class teaching was videotaped, and the teachers were wearing lapel microphones. The classrooms involved are centred in the capital area of Norway. Despite that neither of the studies were conducted with a specific focus on whole-class teaching, quite a lot of time was spent on this activity in all class-rooms, which make re-analysis of the original material relevant regarding the research questions of this study. The teachers in both studies were told to teach and organise the lessons as usual, without taking into account our presence. So, it can be argued that the teachers in the periods of whole-class teaching were speaking freely and according to their own knowledge structures (Stenbacka, 2001, p. 552). The two studies are presented below.

Data set A

The first data set is taken from a study of six third-grade classrooms (8-year-olds) and was originally conducted to analyse teachers' instruction during students' individual seatwork

in language arts (Svanes, 2016). To get the context of this seatwork, whole lessons were videotaped, including whole-class teaching. The teachers were observed for one week each, and the current analysis draws on videos of five teachers from 20 language arts lessons (n = 20). From these lessons, there were a total of 222 minutes of whole-class teaching.

Data set B

The second data set builds on a study of observations from two classrooms, one first-grade classroom and one second-grade (6–7-year-olds) (Bjørkvold & Svanes, 2021). The two teachers were observed for two days each, three lessons each day (n = 12). The school and teachers were strategically chosen because of their commitment to using tablets in the initial literacy education within the writing to read (WTR) paradigm (Trageton, 2003). The whole-class conversations the current study builds on happened before and after the students' individual digital writing, for instance, as a part of the motivational phase. From these lessons, there was a total of 158 minutes of whole-class teaching.

Summarised schematically, the data material for this article is as follows (Table 1):

Table 1. Overview of the material.

	Data set A	Data set B	Total amount of data
Schools	3	1	4
Teachers	5	2	7
Lessons	20	12	32
Whole-class teaching (in minutes)	222	158	380

Combining two data sets provides an opportunity to analyse a richer set of data. Observations of seven different teachers within early literacy instruction provide material with possibilities to discuss the nature of the teachers' questions in the observed primary school classrooms. Our results cannot be seen as representative of all language arts classrooms in an early literacy context, but the data give us an opportunity to make analytic generalisations (Maxwell & Chmiel, 2014). The different data sets may thus be regarded as illustrations of what teachers' questioning may look like in different language arts classrooms in early literacy instruction, and they make it possible for us to discuss the different functions of open questions and how they mediate an understanding of language arts in these classrooms.

Re-use of qualitative data

Video data are rich data and enable researchers to study different topics based on the same videos. In this research, we study different parts of the lessons (whole-class conversations) than the original studies (individual seat work/writing). There are three main considerations when it comes to the re-use of qualitative data (Corti & Thompson, 2004; Hammersley, 2010; Irwin, 2013). Firstly, it is important to consider that you get good enough information about the context around the data. The re-use of video recordings is helpful in this regard as watching the videos gives a lot of the context needed (Blikstad-Balas & Sørvik, 2015). Giving the two authors the possibility

to discuss and analyse both data sets, the video recordings are fundamentally linked to both validity and reliability questions of the study (Creswell & Miller, 2000 Klette, 2009). In both studies A and B, one of the authors has gathered the data and, in this way, secured the contextual background for the data. The second consideration regarding the re-use of data is to ensure that the material is suitable for answering the research questions, called the "question of fit" (Andersson & Sørvik, 2013). This has not been an issue in this case as the authors knew that the data contained whole-class teaching with relevant content for this study. Finally, the third consideration is that ethical guidelines are followed. As a secondary researcher, you must, in the same way as the primary researchers, insure the confidentiality and anonymity of the participants in the study (Corti, 2007). The data in both projects were gathered and stored according to the guidelines for data protection by the Norwegian Centre for Research Data (NSD). Informed consent was collected from the teachers and the students' guardians, and the participants have been anonymised throughout this study. Furthermore, all participants have given their consent for the data to be re-used for purposes other than the original study for 10 years. The data used in this article are also securely archived, and only the researchers have access to them.

Analysis

The analysis was carried out in two steps. First, all teacher questions were identified and transcribed. Questions were defined according to their grammatical form, meaning sentences starting with either a verb or a question word or ending with a tag question, such as "You are gathering ideas for writing, aren't you?" Thus, the questions were defined independent of the teachers' purpose in the questioning or the expected response from the students. While transcribing these questions, the authors also included answers from the students and the teachers' responses to these answers together with descriptions of some of the contexts in which the questions were asked. The questions were then categorised as open or closed (Code level 1). Open questions were defined as questions with no predetermined answer and closed questions as a question with a correct or predetermined answer.

The second step of the analysis was to extract the open questions for further analysis. These open questions constitute the data material for this article. The open questions were then analysed in terms of their functions (Code level 2) with reference to Myhill's (2006), p. 11 different functions of questions, described in Table 2. We find Myhill's categories suitable for the material as they are nuanced and developed closely related to the teaching of language arts in primary school, which is the classroom contexts this article builds on. Table 2 shows the definitions and an operationalisation of the different question functions.

Based on their function, the questions were assigned to one of the categories presented in Table 2. After categorisation, the questions in each category were counted. This was done to give an overview of how the functions of the open questions were distributed across the categories. The categories are not mutually exclusive, which means that some questions could fit into several categories. To make the coding as reliable as possible, both authors coded the whole material and discussed the categories. Then 110 (approximately 30%) of the questions were control coded by a third

Table 2. Functions of questions (Myhill, 2006, p. 26, 27).

Category	Myhill's definition	Examples from the data material
Class management	Related to the management of behaviour/tasks	Harry, do you have the textbook?
Factual elicitation	Asking for recall of facts/information	What is this book about?
Cued elicitation	Giving clues to answer	If this is the space you have available, can you write that large letter then?
Building on content	Gathering information about the topic/theme	How did Alice figure out that it was nighttime?
Building on thinking	Making children think about the ideas and concepts; this moves ideas forward, unlike checking understanding, which looks back at ideas already covered	What can you say to describe a snowman?
Recapping	Recalling past lessons and work done in the current lesson	Do you remember what we talked about on Friday?
Practicing skills	Inviting children to rehearse, repeat, or practice a strategy or grasp of understanding, e.g. how to divide by two or practice identifying verbs in writing	*No existing example*
Checking prior knowledge	Checking the child's knowledge and experience outside of school that might be relevant to the lesson	Have any of you had a memory book?
Developing vocabulary	Testing/clarifying the understanding of words	Does anyone know what a purse is?
Checking understanding	Querying understanding and checking grasp of learning undertaken	Do you not remember what you thought?
Developing reflection	Inviting children to think about how they are learning and the strategies they are using	If you do not understand the assignment, what do you do then?

researcher to establish the amount of inter-coder reliability between coders regarding the category distinctions. According to Lombard, Snyder-Duch, and Bracken (2002), a control sample should consist of at least 50 units, and it is seldom necessary to have more than 500. As a statistical measure of the inter-coder reliability, we calculated Cohen's kappa. Code level 1 had a kappa value of 0.87, and at code level 2, the value was 0.86. Landis and Koch (1977, p. 165) consider values above 0.80 as "almost perfect", while Fleiss, Levin, and Paik (2003) refer to values above 0.75 as "excellent". There is, therefore, reason to consider the coding of the tasks as being reliable.

Some of the questions demanded deeper contextual information than we had. For instance, defining when a question works as repetition may require knowledge about what the class has learned the day before, or last week, or last year, and so on. Another challenging category was *checking prior knowledge*. According to Myhill, this is about the students' knowledge and experience outside of school, which means that we need information about where the student has experienced something. Talking, for instance, about vocabulary, we do not know whether the student has learned the meaning of a word at home, from a book, from TV, or at school. As a conclusion to the analytical procedures, to delt with these callanges, the authors read the transcripts containing the teachers' questions, the student answers, and the responses from the teachers and examined the classroom context within which the questions were raised. In this way, the questions were analysed both in themselves and as a part of a larger context.

In the next section, the results for the different functions of the open questions are presented. The number of questions that teachers asked their students and the different functions of these questions are discussed. The results are then represented by transcripts to demonstrate how the different functions played out in the analysis of the language arts classroom.

Results

Functions of open questions in the different data sets

The observed teachers asked both open and closed questions in their whole-class teaching. Table 3 shows that the amount of open and closed questions is approximately the same in the two data sets, with some more closed questions in data set A.

As the article's ambition is to investigate the use of open questions more thoroughly, it is of special interest that the teachers asked 161 (data set A) and 201 (data set B) open questions during the videotaped lesson times. This means is that the teachers in study B had a higher rate of open questions per minute (1.7 per minute) than in study A, with approximately 1.3 questions per minute. When studying these questions in terms of their functions (see Table 4 below), the analysis suggests that most questions were linked to the function of class management, about one-quarter in both data sets (A: 23.6% and B: 26.1% of the whole material),

Table 3. Different types of questions across data sets.

Type of Question	Data set A	Data Set B
Closed	181	199
Open	161	201
Total	342	400

Table 4. Functions of open questions across the data sets.

Function of open question	Data set A	Data set B
Class management	68	77
Factual elicitation	2	13
Cued elicitation	3	15
Building on content	5	11
Building on thinking	39	50
Recapping	22	11
Practicing skills	0	0
Checking prior knowledge	2	3
Developing vocabulary	9	5
Checking understanding	4	6
Developing reflection	4	10
Total	161	201

while building on thinking was the second most frequent function, with 39 (A) and 50 (B) open questions. None of the teachers asked questions coded as practicing skills. Table 4 below describes the results in greater detail.

As shown in Table 4, there are small differences between the open questions across the two data sets for six of the categories (*class management, building on thinking, practicing*

skills, checking understanding, developing vocabulary, checking prior knowledge). *Cued elicitation* (A:3, B:15) is the most divergent category in the material. In the rest of the categories, however, one of the data sets stands out. Data set A is notable with fewer open questions coded as *factual elicitation* (A:2, B:13) and more questions coded as *recapping* (A:22, B:11), while data set B had more open questions coded as *building on content* (A:5, B:11) and *developing reflection* (A:4, B:10) than data set A. As shown, there are similarities and differences across the data sets, and we will now show how this is displayed in the context of different parts of the subject of language arts within early literacy education.

Teachers' use of open questions in the language arts context

The following section draws on transcripts of the videotaped lessons to exemplify how teacher questions can mediate an understanding of language arts. It turned out that the whole-class conversations in this material mainly happened before and after various writing activities. This is not surprising regarding data set B as the original study was designed to research students' digital writing on tablets. In data set A, the writing activities consisted of writing both factual and fictional texts. In these classrooms, we also observed task solving in textbooks about grammar and orthography. The selected transcripts were chosen because we found them relevant to illustrate how Myhill's categories may appear in these different activities. The transcripts are typical of the data set they represent in the sense that we find several similar examples of this type of question. We start with questions related to the function class management and move on to more content-specific areas found in our different data sets.

Open questions as a part of class management

As shown above, asking open questions related to *class management* was common in the reported language arts lessons. Most of these questions were used for lesson and task management, while very few were used to manage or correct student behaviour. Class management questions seemed to have a practical and pragmatic function in the classroom. Many of the questions related to checking school equipment, such as pencils and books, for example, "Harry, do you have the textbook?" (A, q47).[1] The teachers also used open questions to make progress in the teaching and classroom conversations, such as: "Do you want to sing a song?" (B, q61). In data set B, in which the students wrote digitally on tablets, the number of classroom management questions increased when the students picked up their tablets. The conversations then mainly centred on the equipment or supported the students in managing the application, such as "Can you all see the red icon on the top now?" (B, q61). This applied for both the observed classrooms. Most of the questions coded as *recapping* in this study were closely linked to the class management function, such as, "What do you remember from yesterday?" (A, q82). These kinds of question are used to refresh what was covered in the last language arts lesson and to get the students back on track.

Open questions during writing activities

We observed writing activities linked to both factual and fictional writing within different assignments. The function of teachers' questions seemed to be partly related to where the students were in the writing process. In the pre-writing phase, especially linked to factual writing, we observed questions coded as *factual elicitation*. An illustration of this is first-grade students who were going to write about spiders. Before the writing started, the teacher wanted to repeat what the students knew about spiders by repeatedly asking, "Do we know anything more?" (B, q10). The information gathered through these questions seemed to work as an idea bank for the students' writing. Also, as a part of the pre-writing, the teacher showed the students similar texts about spiders from another class. One text said: "Tassen is a spider. He likes the letter T". When asking about this, she pronounced the Ts very clearly. She then asked: "Why do you think he likes the letter T?" (B, q18). We thus see this question as an example of *cued elicitation* within the frame of phonological awareness in first grade.

As a part of the writing assignment, the same students had made a spider of pipe cleaners, who lived in a decorated milk carton house. One student wrote "The spider lives in a box". The teacher confirmed this but asked "Can we use another word?" (B, q19), interpreted by us as *developing vocabulary*. The student suggested "house", and the teacher replied, "Yes, we can say house. Can we say something else?" (B, q22), and other students suggested "garage" and "carton" as other possible words to write.

Fictional writing assignments require a great deal of students' imagination. To encourage this, several of the teachers asked questions that had the function *building on thinking*. In the next excerpt from data set A, the students were going to write sense poems about dandelions. The teacher explained that they were going to write one line about each sense: A dandelion looks like … It smells like … .:

Excerpt 1
Teacher: Then you must really think, what does a dandelion sound like [A, q 148]? That is not that easy!
(A lot of pupils want to answer)
Teacher: No, keep it inside your head; we want many different answers that are your own thoughts.

Here, the teacher asked a question to make the students think and get ideas. She did not want the students to share their thoughts with the others but rather to transform their ideas into writing.

The use of questions *building on thinking* in writing instruction may also be illustrated by data set B. The second-grade students were going to write a fairytale about a snowman, and the teacher spent a lot of time generating ideas for writing. To encourage a conflict in the students' fairytales, the teacher introduced that the snowman should be afraid of something. Each student was going to decide what their snowman was afraid of. The teacher asked: "Do you have an idea about what he is afraid of?" (B, q125) and "What else can make a snowman so terribly scared?" (B, q134). The "thinking" in these contexts is linked to the students' use of their imagination, which in language arts may be said to be a content-specific proficiency since it may be necessary both in fictional writing and reading and in the interpretation of texts.

The fairytale genre involved a situation in which the snowman meets three magic helpers. The students had been through the genre features before, and the teacher included questions coded as *recapping*, closely linked to the academic content for repetition, such as "Do you remember that things are going to happen three times?" (B, q136). To scaffold the students' introduction of the helpers in their fairytales, the teacher had different cards with pictures of three "persons", for instance, the three little pigs and the three Billy Goats Gruff. The students could either draw one of the cards or decide their own helpers. After introducing the genre feature, which represents the academic content, the teacher kept on asking questions with the function of *building on thinking*.

During the students' writing of fairytales about the snowman, the teacher led a whole-class conversation about text response. Here the teacher asked questions with the function of *develop reflection*. The students sent their digital text to the digital black board so they could see each other's texts. The teacher read one text aloud and asked: What can Peter do to improve his text? (B, q182). And she continued to a girl: Do you have a tip for him? (B, q183). At the end of each response sequence, the teacher asked: "What can this mean for your own text to improve the text?" (B, q204).

Open questions during orthography and grammar activities

Data set A included lessons with orthography and grammar activities. We found fewer open questions within orthography and grammar activities than during writing activities, maybe due to the nature of orthography and grammar having more right and wrong answers than, for instance, in fictional writing. Despite this, we observed questions of various kinds during the work with orthography and grammar. Regarding orthography, one of the teachers in data set B frequently used open questions to make the students think for themselves, coded by us as *building on thinking*. One student

asked whether "socks" ("sokker" in Norwegian) is written with an "o" or an "å", but instead of giving the right answer, the teacher returned the question to the student with, "What do you think?" (B, q32). Orthography activities may also be linked to *developing vocabulary*, for instance, when a teacher asked, "Does anyone wonder what 'lobster' ['hummer' in Norwegian] is?" (B, q109). In Norwegian, the word "hummer" is irregularly spelled, and it seems that the teacher was trying to give deeper meaning to the orthography task by including a discussion about what the word means. The development of vocabulary in school is closely related to the function *checking prior knowledge*, which, according to Myhill (2006), is related to the students' knowledge and experience *outside* of school. It may be difficult to know which parts of the student's vocabulary is developed within or outside of a school context, and the teachers may draw on students' knowledge from outside school. We see an example of this in data set A in a discussion about what the word "coin" means. The teacher asked, "Has anyone been abroad and used coins other than the kroner?" (A, q135).

In grammar instruction, we observed questions that *develop reflection* linked to metacognition and generic learning strategies, such as in data set B when the teacher asked: "How can I, at the end of a lesson, be sure that you know what a noun is?" (B, q11). Some open questions in these lessons may also be categorised as *factual elicitation*, for instance when a teacher asked: "John, did you find an adjective?" (B, q98). In the context, the function of this question is to state what an adjective is, and it is thus categorised as factual elicitation even though it has features from *classroom management* with the function of moving the teaching and conversation forward. Furthermore, we found that *checking understanding* was a function that the teachers used in the lessons with grammar instruction.

As the results have shown, teachers used a range of functions of open questions in the observed language arts classrooms. The similarities and differences between the data sets and the different activities, and how the questions mediate an understanding of language arts, will now be discussed.

Discussion

In this study, we have investigated teachers' open questions in depth both to explore the different functions of the questions and to discover how these questions can mediate an understanding of the subject of language arts to the students. Based on Myhill's categorisation (Myhill, 2006), we have explored the functions of open questions as it was considered expedient to investigate the functions of the questions in their context (Mercer, 2010; Sahlström, 2012). The questions were used for academic purposes within Norwegian language arts and also for class management and task management. The results show that the teachers' use of open questions and the functions they have are quite similar through both data sets, including seven teachers in total. This finding can indicate that the language used in school and the teachers' questioning seems to be established very early in the schooling, in line with Mehan (1979) findings from more than 40 years ago.

The results show similarities regarding the most common functions of the open questions in the classrooms observed. The fact that the teachers use questions to such an extent for class management is interesting, and this is not in line with the study by

Myhill and Dunkin (2005), who observed very few questions with the function of classroom management. Wragg and Brown (2001), however, found, as did we, that this function is the most common in the classroom. This difference is interesting and can have several explanations; one possible explanation is how Myhill and Dunkin define a question – if their definition, for instance, requires an answer from the student, there will be few class management questions. This discussion is linked to construct validity (Kleven, 2008) and how concepts are used in research. It is, however, challenging to draw clear conclusions based on our data and information. There are probably good reasons for the teachers wanting to be in charge in the classroom, as follows: as they conduct learning activities and drive progress in the conversations and teaching, they seem to use questioning as an organising resource (Macbeth, 2003). One might imagine that clear classroom management would be in the form of directives rather than questions and, as shown, even *open* questions. It would seem that asking questions is a less strict and authoritarian way of leading the young students and the classroom conversation in the right direction, in preference to merely providing directives. The teachers observed appeared to want a good relationship with their students, and this may include their not being too authoritative, which may be another explanation for the high number of classroom management questions.

This class management, including the dominant task management, formed the basis for the students' work in the language arts subject. This applied in both data sets. The large number of questions connected to the management of the class and of the students' activities, together with the questions analysed as *recapping*, could mediate the teachers' expectations of the student role by showing that the classroom is an important area for learning as these questions were often used to guide the students into a topic. The high number of classroom management questions in the digital classrooms (data set B) is in line with other research (Bjørkvold & Svanes, 2021; Gilje et al., 2016). The challenge seems to be how to utilise digital devices even more closely related to subject matter learning while the digital competence of course must be acquired as well.

The differences between the functions of the questions asked in the data sets are challenging to interpret. However, one of the reasons for the differences can be linked to the academic context and the topic of the subject of language arts that was the focus for that particular lesson. For instance, *factual elicitation* was far more common in data set B, and this may be due to the great deal of time spent on factual writing in these classrooms. Here, the teachers often asked the students about the content of the text, mediating what is important within the text. Another interesting category to discuss is questions coded as *developing vocabulary*, which may be seen to be a subject-specific category in this study. These questions were asked regarding both students' writing of texts and during lessons with grammar and orthography instruction. Developing vocabulary is crucial for young students' literacy development, both in reading – regarding both decoding and comprehension (National Reading Panel, 2000; Suggate, Schaughency, McAnally, & Reese, 2018) – and writing (Olinghouse & Wilson, 2013). Vocabulary is also one of the main connectors between the basic skills language arts carry responsibility for as it is a key foundation in children's oral language, reading, and writing. It is therefore crucial that teachers ask questions that may develop the students' vocabulary.

Since developing reading competence is one of the most fundamental activities in the first years of schooling, the lack of reading activities in the observed classrooms is a bit surprising and may have different reasons. One possible explanation is that the teachers work with reading more as an individual activity, or a small group activity, and not through whole-class conversations. It may also of course be a coincidence. The same is the case with the lack of literary activities. We could also imagine that the teachers would not spend time on reading aloud, for instance, from a literary book when a researcher is visiting the classroom. A common practice in Norwegian classrooms is that the teachers read aloud during the students' lunch. This lunch time was not observed in the studies this article builds on.

The different functions of the teachers' open questions, as discussed above, show that the questions mediate to the students, in an implicit way, what is important within the school culture and also different aspects of the subject (Säljö, 2001). In other words, the teacher's questions mediate what the teacher thinks is important for the students to focus on as a type of scaffold and indicate the kinds of skills that are appreciated within a particular lesson or a topic (Wallerstedt et al., 2014). The teachers' questions appear to differ in how deeply they go into the language arts subject. A category that stands out is *building on thinking*, which tends to contain more subject-specific questions than the other functions. To understand these questions in any depth may demand subject-specific and contextual information. For instance, when the teacher asks: "What do you think?" it seems to be quite a generic question, but as the results show, it is in fact subject matter related and a part of the teacher's instruction. The teachers' questions thus mediate reading and writing strategies to the students. The questions categorised as *building on thinking* may mediate to the students that their thoughts, interpretations, and what they understand are all important aspects of their learning.

Differences in terms of how deeply the questions go into the language arts subject may, of course, also be linked to the categorisation system used in this study. A category such as *class management* is, by definition, not subject related, while *developing vocabulary* is. It is not surprising that the category *building on thinking* goes more deeply into a subject than *cued elicitation*. The category *building on thinking* is also problematic because, to a certain degree, it overlaps with *developing reflection*. To decide whether a question is subject matter related or not may also touch on the tension between learning strategies, basic skills, and subject matter knowledge (Ongstad, 2015). In this study, we see that task-related classroom management, learning strategies, and subject matter-related topics tend to merge and that the distinction between these may, in some cases, be more theoretical than practical. The teacher tries, through the questions, to scaffold the students into different tasks and activities and to keep them there (Wallerstedt et al., 2014). Whether learning happens through the students' participation in the conversation or through their tasks is not investigated in this study.

As outlined in the review, studies frequently advocate the use of open questions in preference to closed questions, and the research in this area takes a highly normative view (Alexander, 2008; Nystrand et al., 2003; Smith & Higgins, 2006; Wells, 1999). As Mercer (2010) argues, a question can be raised in the classroom for several reasons and can serve multiple functions. Mercer's argument becomes especially relevant when one regards open questions as being more valuable to classroom discussion than closed questions. When these questions have a range of different functions, the normative

status of open questions may be problematic. Open questions asked by the teacher to manage the class or to socialise with the students may serve important functions in classroom relations and interactions, but they can hardly all be considered as promoting learning or helping the students to explore their learning. The material this article builds on shows that the use of open questions does not in itself guarantee an academic focus or the mediation of deep subject matter teaching and learning and that the distinction between open and closed questions may thus be a bit theoretical or artificial. We argue that the main challenge for teachers seems to be to centre the classroom discourse on the subject matter and deeper learning and not whether the questions are open or closed. To ask explorative questions that mediate the subject matter seems to be challenging for teachers. This may, however, vary between different topics and activities within the language arts subject. Our material tends to show that it is easier to ask these questions in writing instruction than, for instance, in grammar instruction. And, ultimately, the questions asked is dependent on each individual teacher (Svanes, 2016). However, one can not only see to the individual teacher, as the questions asked in the classrooms also is highly influenced by the school norms and culture (Mehan, 1979). These findings are interesting but need to be investigated in greater depth. It shows, however, that being too normative in this kind of research does not necessarily progress understanding.

Limitations

The fact that we investigated open questions only within a whole-class setting did not provide a complete picture of teachers' use of open questions in a classroom context. However, we will argue that whole-class teaching is an important part of the lesson as it addresses the class as a whole group and socialises young students into the school culture and different subjects. Whole-class teaching is an important area for students, and it enhances the possibility of equality in the classroom (Klette et al., 2018). Despite this limitation, we found the material rich and interesting, showing some of the breadth of the language arts subject and how it is carried out in the first years of schooling.

Conclusion and implications

As demonstrated in this study, teachers' questioning is a fundamental part of the classroom discourse. The results of this study show that teachers' questions serve different functions. Most prominent are the questions related to class and task management, but there are also other types of questions that are more subject specific. Teachers' questions thus mediate to the students what is important, both broadly within the school culture and more specifically within the language arts subject. It seems that the teachers tend to ask different kinds of questions within different areas of the language arts subject. Based on the results of this study, there are good reasons for paying less attention to the distinction between closed and open questions and rather studying in greater depth how classroom conversations, including teachers' questions, can more deeply mediate the subject as tools of deeper learning.

Note

1. The parentheses indicate which data set the question it is taken from, study A or B, and the number of the question in the data material.

Notes on contributors

Ingvill Krogstad Svanes is an associate professor in Norwegian language didactics at the Oslo Metropolitan University. Her research interests are classroom conversation, reading and writing instruction and initial education.

Emilia Andersson-Bakken is an associate professor in education at the Oslo Metropolitan University. Her research interests include classroom conversation, teacher-student interaction, textbook analysis and initial education.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Emilia Andersson-Bakken 🔾 http://orcid.org/0000-0002-5110-6716

References

Alexander, R. J. (2008). *Towards dialogic teaching: Rethinking classroom talk* (4th ed.). Cambridge: Dialogos.

Almeida, P., & Neri de Souza, F. (2010). Questioning profiles in secondary science classrooms. *International Journal of Learning and Change*, *4*(3), 237–251.

Andersson, E., & Sørvik, G. O. (2013). Reality lost? Re-use of qualitative data in classroom video studies. *Forum Qualitative Social Research*, *14*(3), Art. 1doi.org/10.17169/fqs-14.3.1941.

Andersson-Bakken, E. (2015). Når åpne spørsmål ikke er åpne: Hva karakteriserer lærerspørsmål i en litterær samtale? *Nordic Studies in Education*, *34*(3–4), 280–298.

Andersson-Bakken, E., & Klette, K. (2015). Teachers' use of questions and responses to students' contributions during whole class discussions: Comparing language arts and science classrooms. In K. Klette, O. K. Bergem, & R. Astrid (Eds.), *Teaching and learning in lower secondary schools in the era of PISA and TIMSS* (pp. 63–84). Chapter 5. Dordrecht: Springer Publishing Company

Applebee, A. N., Langer, J. A., Nystrand, M., & Gamoran, A. (2003). Discussion-based approaches to developing understanding: Classroom instruction and student performance in middle and high school English. *American Educational Research Journal*, *40*(3), 685–730.

Barnes, D. (1976). *From communication to curriculum*. London: Penguin.

Barnes, D., Britton, J. N., & Torbe, M. (1986). *Language, the learner and the school* (3rd ed.). London: Penguin.

Bjørkvold, T., & Svanes, I. K. (2021). Writing practices on tablets with speech synthesis in grade 1 and 2. *International Journal of Educational Research*, 107. doi:10.1016/j.ijer.2021.101742

Blikstad-Balas, M., & Sørvik, G. O. (2015). Researching literacy in context: Using video analysis to explore school literacies. *Literacy*, *49*(3), 140–148.

Boyd, M. P., & Markarian, W. C. (2011). Dialogic teaching: Talk in service of a dialogic stance. *Language and Education*, *25*(6), 515–534.

Cazden, C. B. (2001). *Classroom discourse. The language of teaching and learning* (2nd ed.). Portsmouth: Heinemann.

Chin, C. (2007). Teacher questioning in science classrooms: Approaches that stimulate productive thinking. *Journal of Research in Science Teaching*, 44(6), 815–843.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. Theory Into Practice, 39(3), 124-130.

Corti, Louise & Thompson, Paul (2004). Secondary analysis of archive data. In Clive Seale, Giampietro Gobo, Jaber. F. Gubrium & David Silverman (Eds.), Qualitative research practice (pp.327-343). London: Sage.

Corti, L. (2007). Re-using archived qualitative data where, how, why? Archival Science, 7 (1) 37-54. doi:10.1007/s10502-006-9038-y

Croom, B., & Stair, K. (2005). Getting from q to a: Effective questioning for effective learning. *Agricultural Education Magazine*, 78(1), 12.

Fleiss, J. L., Levin, B., & Paik, M. C. (2003). *Statistical methods for rates and proportions* (3rd ed.). N.J: Wiley.

Gilje, Ø., Ingulfsen, L., Dolonen, J. A., Furberg, A., Rasmussen, I., Kluge, A., ... Skarpaas, K. G. (2016). *Med ARK&APP. Bruk av læremidler og ressurser for læring på tvers av arbeidsformer [Use of means for learning and resources for learning across work formats]*. Universitetet i Oslo.

Gillies, R. M. (2014). Developments in classroom-based talk. *International Journal of Educational Research*, 63, 63–68.

Hammersley, M. (2010). Can we re-use qualitative data via secondary analysis? Notes on some terminological and substantive issues. *Sociological Research Online*, 15(1), 1–7.

Hawkins, L. K. (2015). Purposeful talk: Conceptualizing narrative writing conference genres and how they shape teacher-student interactions in primary-grade classrooms (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses A&I database. (UMI No. 3719066)

Heritage, M., & Heritage, J. (2013). Teacher questioning: The epicenter of instruction and assessment. Applied Measurement in Education, 26(3), 176-190.

Irwin, S. (2013). Qualitative secondary data analysis: Ethics, epistemology and context. *Progress in Development Studies*, 13(4), 295–306.

James, I., & Carter, T. S. (2007). Questioning and informational texts: Scaffolding students comprehension of content areas. *Forum on Public Policy*, (2007)(1), 1–13. http://files.eric.ed.gov/fulltext/EJ1099153.pdf

Klette, K. (2009). Challenges in Strategies for Complexity Reduction in Video Studies. Experiences from the PISA + Study: A Video Study of Teaching and Learning inNorway. In T. Janík & T. Seidel (Ed.), The power of Video Studies in Investigating Teaching and Learning in the Classroom. (s. 61-82). Münster: Waxman.

Klette, K. (2010). Blindness to change within processes of spectacular change? What do educational researchers learn from classroom studies? In A. Hargreaves (Ed.), *Second international handbook of educational change* (pp. 1001–1015). Dordrecht: Springer.

Klette, K., Sahlström, F., Blikstad-Balas, M., Luoto, J., Tanner, M., Tengberg, M., ... Slotte, A. (2018). Justice through participation: Student engagement in Nordic classrooms. *Education Inquiry*, 9(1), 57–77.doi:10.1080/20004508.2018.1428036.

Kleven, T. A. (2008). Validity and validation in qualitative and quantitative research. Nordisk pedagogik, 28(3), 219-233.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174. doi:10.2307/2529310

Langer, J. A., & Close, E. (2001). *Improving literary understanding through classroom conversation*. National Research Center on English, Learning Achievement.

Lee, Y., & Kinzie, M. B. (2012). Teacher question and student response with regard to cognition and language use. *Instructional Science*, 40(6), 857–874.

Lindblad, S., & Sahlström, F. (1999). Gamla mönster och nya gränser: Om ramfaktorer och klassrumsinteraktion [Old patterns and new framing: On framefactors and classroom interaction]. *Pedagogisk Forskning I Sverige*, 4(1), 73.

Lombard, M., Snyder-Duch, J., & Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communication Research*, *28* (4), 587–604.

Long, M. H., & Sato, C. J. (1983). Classroom foreigner talk discourse: Forms and functions of teachers' questions. In H. W. Seliger & M. H. Long (Eds.), *Classroom oriented research in second language acquisition* (pp. 268–285). Cambridge: Newbury House.

Macbeth, D. (2003). Hugh Mehan's "Learning lessons" reconsidered: On the differences between naturalistic and critical analysis of classroom discourse. *American Educational Research Journal*, *40*(1), 239–280.

Maxwell, J. A., & Chmiel, M. (2014). Generalization in and from qualitative analysis. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 540–553). Los Angeles: Sage.

McKeaney, E. C. (2009). *Teacher-student writing conferencing in an era of measurement-driven reform: Are we developing a generation of voiceless authors?* University of Pennsylvania. Retrieved from http://repository.upenn.edu/dissertations/AAI3358454

Mehan, H. (1979). *Learning lessons*. Cambridge: Harvard University Press.

Mercer, N. (2010). The analysis of classroom talk: Methods and methodologies. *British Journal of Educational Psychology*, *80*(1), 1–14.

Mercer, N., & Littleton, K. (2007). *Dialogue and the development of children's thinking: A sociocultural approach*. London: Routledge.

Ministry of Education and Research. (2006/2013). *Kunnskapsløftet [Knowledge promotion]*. Author Oslo.

Myhill, D. (2006). Talk, talk, talk: Teaching and learning in whole class discourse. *Research Papers in Education*, *21*(1), 19–41.

Myhill, D., & Dunkin, F. (2005). Questioning learning. *Language and Education*, *19*(5), 415–427.

National Reading Panel. (2000). *Report of the national reading panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. National Institute of Child Health and Human Development.

Nunan, D. (1996). *The self-directed teacher: Managing the learning process*. Cambridge: Cambridge University Press.

Nystrand, M. (2006). Research on the role of classroom discourse as it affects reading comprehension. *Research in the Teaching of English*, *40*(4), 392–412.

Nystrand, M., Gamoran, A., Kachur, R., & Prendergast, C. (1997). *Opening dialogue: Understanding the dynamics of language and learning in the English classroom. Language and literacy series*. New York: New York Teachers College Press.

Nystrand, M., Wu, L. L., Gamoran, A., Zeiser, S., & Long, D. A. (2003). Questions in time: Investigating the structure and dynamics of unfolding classroom discourse. *Discourse Processes*, *35*(2), 135–198.doi:10.1207/S15326950DP3502_3

Ødegaard, M., & Klette, K. (2012). Teaching activities and language use in science classrooms: Categories and levels of analysis as tools for interpretation. In D. Jorde & J. Dillon (Eds.), *Science education research and practice in Europe: Retrospective and prospective* (pp. 181–202). Rotterdam: Springer.

Olinghouse, N. G., & Wilson, J. (2013). The relationship between vocabulary and writing quality in three genres. *Reading and Writing*, *26*(1), 45–65.

Ongstad, S. (2015). Competing disciplinarities in curricular L1. A Norwegian case. In S. Penne & E. Krogh (Eds.), *Paradoxes and negotiations in Scandinavian L1 research in languages, literatures and literacies* (Vol. 15, pp. 1–28). International Association for the Improvement of Mother Tongue Education (IAIMTE) Oslo.

Osborne, J., & Chin, C. (2010). The role of discourse in learning science. In K. Littleton & C. Howe (Eds.), *Educational dialogues* (pp. 100–114). New York: Routledge.

Sahlström, F. (2012). "The truth lies in the detail": On student and teacher epistemic-stance displays in classroom interaction. In B. Kaur (Ed.), *Understanding teaching and learning: Classroom research revisited* (pp. 79–90). Rotterdam: Sense Publishers.

Säljö, R. (2001). *Læring i praksis : Et sosiokulturelt perspektiv [Learning in practice: A sociocultural perspective]*. Oslo: Cappelen akademisk.

Säljö, R. (2005). *Lärande och kulturella redskap: Om lärprocesser och det kollektiva minnet*. Norstedts akademiska förlag, Stockholm.

Smith, H., & Higgins, S. (2006). Opening classroom interaction: The importance of feedback. *Cambridge Journal of Education*, *36*(4), 485–502.

Statistics Norway. (2021, 2 March). Kindergartens. Retrieved from https://www.ssb.no/en/utdanning/statistikker/barnehager

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management Decision*, *39*(7), 551–556.doi:10.1108/EUM0000000005801

Stevens, R. (1912). *The question as a measure of efficiency in instruction: A critical study of classroom practice*. Teachers College, Columbia University, New York.

Suggate, S., Schaughency, E., McAnally, H., & Reese, E. (2018). From infancy to adolescence: The longitudinal links between vocabulary, early literacy skills, oral narrative, and reading comprehension. *Cognitive Development*, *47*, 82–95.

Svanes, I. K. (2016). Individuell veiledning på barnetrinnet - Hva gjør læreren når elevene arbeider individuelt i norsktimen? (Doktorgrad). Universitetet i Oslo, Oslo

Trageton, A. (2003). *Å skrive seg til lesing: IKT i småskolen [Write to read: ICT in the initial education]*. Oslo: Universitetsforlaget.

Twiner, A., Littleton, K., Coffin, C., & Whitelock, D. (2014). Meaning making as an interactional accomplishment: A temporal analysis of intentionality and improvisation in classroom dialogue. *International Journal of Educational Research*, *63*, 94–106.doi:10.1016/j.ijer.2013.02.009

Vaish, V. (2013). Questioning and oracy in a reading program. *Language and Education*, *27*(6), 526–541.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wallerstedt, C., Pramling, N., & Säljö, R. (2014). Learning to discern and account: The trajectory of a listening skill in an institutional setting. *Psychology of Music*, *42*(3), 366–385.

Wells, G. (1999). *Dialogic inquiry: Towards a socio-cultural practice and theory of education*. New York: Cambridge University Press.

Wragg, E. C., & Brown, G. (2001). *Questioning in the secondary school*. London, UK: Routledge Falmer.

Wu, K.-Y. (1993). Classroom interaction and teacher questions revisited. *RELC Journal*, *24*(2), 49–68. doi:10.1177/003368829302400203