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ABSTRACT

Classroom discussion is frequently proposes as an essential part of democratic citizenship education. Literature, however, pays little attention to what kind of discussion is most effective and how teachers can facilitate a discussion. This study aims to contribute to the development of a framework for analysing the characteristics of classroom discussions and the different roles teachers can adopt in guiding a discussion on controversial issues. In addition, we investigated how the way teachers guide the discussion is related to the structure and content features of the discussion. The framework was used to analyse five classroom discussions in secondary education. Our framework appeared to be useful for revealing differences in the structure and content features of the classroom discussions and in the way teachers guide the discussion. The results also indicated that a high degree of teacher regulation was related to high content quality and more participation from students. A high degree of student regulation was linked to more genuine discussion among students. The study underlines the importance of taking account of the teacher's role in research into the effectiveness of classroom discussions for democratic citizenship education and the study makes useful suggestions for teachers when preparing for a classroom discussion.

Introduction

Educational literature frequently proposes classroom discussions as an essential part of democratic citizenship education, which aims to develop democratic, critical citizens who actively and responsibly participate in society (e.g. Althof and Berkowitz 2006; Bartels, Onstenk, and Veugelers 2016; Haste 2004; Hess and Avery 2008; Knight Abowitz and Harnish 2006; Osler and Starkey 2006; Schuitema, Ten Dam, and Veugelers 2008). The general assumption is that classroom discussions facilitate the development of important skills and attitudes that students need to become participating citizens in a democratic society (Berkowitz et al. 2008; Geboers et al. 2013; Schuitema, Ten Dam, and Veugelers 2008; Solomon, Watson,

and Battistich 2001). However, not every kind of classroom discussion may be equally effective for the development of the skills and attitudes that are important for citizenship education. The quality and depth of classroom discussion are important for the quality of the learning process (Nucci, Creane, and Powers 2015; Schuitema et al. 2011). Yet, only a few studies have investigated the effectiveness of classroom discussions, examining the content and structure of classroom discussions that could achieve the various goals set for citizenship education (Hand and Levinson 2012; Schuitema, Ten Dam, and Veugelers 2008; Solomon, Watson, and Battistich 2001).

Another related issue is the role of the teacher in guiding classroom discussions in such a way that they provide learning opportunities for citizenship education. Guiding a classroom discussion for citizenship education is a very demanding and complex task for teachers (Parker and Hess 2001; Radstake and Leeman 2010) and it is different from the usual educational practices. Engaging students in a classroom discussion means that teachers must change their daily practices, including a shift in power relations (Wolfe and Alexander 2008). Teachers are used to be perceived as authorities on the subject matter at hand (Hand and Levinson 2012) and aim to control the content of classroom interaction (Molinari, Mameli, and Gnisci 2013). However, classroom discussion for democratic citizenship education must deal with controversial social issues, involving moral values and multiple perspectives (Hess and Avery 2008; Schuitema et al. 2009). Teachers need to become less directive and make room for the perspectives of students. Research shows that discussion rarely takes place in most classrooms (Bartels, Onstenk, and Veugelers 2016; Molinari, Mameli, and Gnisci 2013; Nystrand et al. 2003), while many teachers do not feel prepared to engage their students in discussions about controversial issues (Oulton et al. 2004). In addition, the literature pays little attention to essential questions, such as, what kind of discussion is most effective for citizenship education and how teachers can facilitate discussion in their classroom (Hand and Levinson 2012; Nucci, Creane, and Powers 2015; Schuitema, Ten Dam, and Veugelers 2008; Solomon, Watson, and Battistich 2001). Investigating these questions requires a framework to describe the characteristics of a classroom discussion and the various ways teachers can guide it. In this study, we subjected five classroom discussions to a systematic analysis. The aim of the study was, first, to contribute to the development of a framework for analysing the characteristics of classroom discussions in the context of democratic citizenship education. Secondly, we sought to ascertain a better understanding of the different roles teachers adopt and how these roles may be related to the structure and content of classroom discussions.

Classroom discussions in the context of democratic citizenship education

Traditionally, citizenship was understood as a legal political status. However, more recently, citizenship acquired a much broader meaning and refers not only to the political domain but also to everyday social and cultural life (Veugelers 2011). In this study, we confined ourselves to citizenship education in contemporary democracies. Following Dewey (1966), democracy is conceived not only as a form of government but also refers to a way of living together (Althof and Berkowitz 2006; Gutmann and Thompson 2004; Osler and Starkey 2006; Westheimer and Kahne 2004). Citizenship is also not limited to a national identity. Concepts of global citizenship emphasise our common human identity and our responsibility towards humanity (Osler and Starkey 2006; Reilly and Niens 2014; Veugelers 2011). This broader concept of citizenship allows for different interpretations and for a broad conceptualisation

of democratic citizenship education (Althof and Berkowitz 2006; Knight Abowitz and Harnish 2006; Veugelers 2011; Westheimer and Kahne 2004). An exhaustive discussion of the many different aspects of democratic citizenship education is beyond the scope of this article. Objectives of democratic citizenship education include the development of civic knowledge (e.g. knowledge about democratic institutions and the functioning of society; Schulz et al. 2016), fostering the skills and attitudes needed for civic participation (e.g. decision-making skills; Bobek et al. 2009; Manganelli, Lucidi, and Alivernini 2014) and, for example, critical thinking skills for challenging political power relations and injustice in society (Veugelers 2011; Westheimer and Kahne 2004).

Although there are different perspectives concerning democratic citizenship, in most approaches to democratic citizenship education, classroom discussion is considered to be a key element (Geboers et al. 2013; Hess and Avery 2008; Knight Abowitz and Harnish 2006; Schuitema, Ten Dam, and Veugelers 2008). Parker and Hess (2001) distinguish two kinds of purposes for classroom discussion in the context of democratic citizenship education, which they refer to as teaching *with* and teaching *for* discussion. Teaching *with* discussion is the use of classroom discussion as an instructional strategy, as a means to foster a variety of outcomes that are believed to be important for democratic citizenship. For example, classroom discussion is intended to stimulate students to develop their own personal viewpoints on moral and social issues, to recognise multiple perspectives (Schuitema et al. 2009) and to improve their reasoning and critical thinking skills (Chinn, O'Donnell, and Jinks 2000; Ten Dam and Volman 2004; Veugelers 2000). Indeed, research on moral education has shown that classroom discussion on moral dilemmas can enhance students' levels of moral reasoning (Berkowitz et al. 2008; Blatt and Kohlberg 1975; Nucci, Creane, and Powers 2015). In addition, there is a substantial body of literature that indicates that a classroom climate in which students feel encouraged to openly discuss political and social issues promotes civic knowledge (Schulz et al. 2010; Torney-Purta 2002) and civic participation (Godfrey and Grayman 2014; Torney-Purta 2002), via an enhanced belief in their self-efficacy with regard to civic participation (Manganelli, Lucidi, and Alivernini 2015).

From the perspective of democratic citizenship education, classroom discussion is not only a means to an end but is, in itself, a valuable curriculum objective. Parker and Hess (2001) refer to this latter purpose as teaching *for* discussion. The citizenship rationale for teaching *for* discussion is that discussion has a central role in most concepts of (deliberative) democracy (Althof and Berkowitz 2006; Gutmann and Thompson 2004; Haste 2004; Knight Abowitz and Harnish 2006; Osler and Starkey 2006; Parker 2010; Schuitema, Ten Dam, and Veugelers 2008; Veugelers 2007). Discussion is viewed as a democratic practice by which to recognise and bridge differences within a diverse society (Parker and Hess 2001). It is argued that, therefore, it is important for schools to educate students about how to take part in discussions and to equip them with the skills and attitudes to engage in open discussions about controversial issues (Hess and Avery 2008).

Classroom discussions in the context of democratic citizenship education are different from classroom discussions in other subject domains for two reasons. First, in other subject domains, classroom discussions are used to teach students about different arguments and perspectives (i.e. teaching *with* discussion). Although many teachers appreciate it when students learn how to engage in discussion (i.e. teaching *for* discussion), this is usually not a deliberate curriculum objective in other subject areas, whereas in classroom discussions in the context of democratic citizenship education, this is important objective

(Parker and Hess 2001). Second, classroom discussions in the context of democratic citizenship address controversial topics involving societal and moral values that can be of personal relevance to the teacher and the students (Hess and Avery 2008). Different groups in society, with different social and cultural backgrounds, may hold very different opinions and emotional stances on these matters, based on their own personal beliefs and experiences. This also applies to teachers and students. Involving students in an open discussion with other students on controversial issues is a way to teach students to approach others as equals and deal with disagreement through joint reasoning and argumentation.

Characteristics of classroom discussions in the context of democratic citizenship education

The specific purposes of classroom discussion for democratic citizenship education, outlined above, imply specific characteristics for a prosperous discussion. We argue that a classroom discussion for democratic citizenship education should be "open" in two ways. First, classroom discussions should be open for all students to participate as equals and bring forward their own points of view (Hess and Avery 2008; Veugelers 2000). Equal participation also means that each contribution should be considered by the other participants. Second, a discussion should be open-ended (i.e. open to multiple points of view and without predetermined right or wrong outcomes). On this point, classroom discussion in the context of citizenship education resembles certain dialogic approaches to teaching (e.g. Aguiar, Mortimer, and Scott 2010; Alexander 2008; Burbules 1993; Nystrand et al. 2003; Scott, Mortimer, and Aguiar 2006; Wells and Arauz 2006). Following Bakhtin, in these approaches dialogic teaching refers to teaching that is open to multiple perspectives (e.g. Wegerif 2008). Scott, Mortimer, and Aguiar (2006), for example, make a distinction between authoritative classroom interaction and dialogic classroom interaction. Authoritative interaction is focused on one specific point of view (usually determined by the teacher), whereas dialogic interaction is open to different perspectives. This means that students should have the opportunity to bring in their own points of view and to alter the course of the discussion by bringing in content. This has consequences for the way teachers guide classroom discussion and influence its content. We will further discuss the role of teachers in the next section.

In addition to this, a distinction should be made between classroom discussion and debate. In a debate, the main purpose is to convince others of your point of view. The competitive nature of debate may incite participants to engage in manipulative or selective use of information simply to win the argument (Burbules 1993; Schuitema and Veugelers 2011). In a classroom discussion, the focus is on understanding the perspectives of others and engaging in joint reasoning and in collaborative exploration of ideas. Here we can see another resemblance between citizenship education and particular approaches to dialogic teaching. For example, Mercer, Wegerif, and Dawes (1999) distinguish between "exploratory talk" and "disputational talk". In disputational talk, students compete rather than cooperating with one another, and the interaction is characterised by short exchanges of assertions and counter-assertions. A classroom discussion is more similar to what these authors describe as exploratory talk: interaction in which the participants critically but constructively discuss each other's ideas and engage in collaborative reasoning. Indeed, some studies found that the number of statements that "transform or operate on" the reasoning of others during a

discussion on moral dilemmas was a predictor of improved reasoning ability (see Berkowitz et al. 2008; Nucci, Creane, and Powers 2015).

Finally, to promote reasoning processes and critical thinking we argue that classroom discussions should have a certain content quality. First, it is considered important that students substantiate their viewpoint with arguments, i.e. that they present evidence or reasons to support a particular position, (Chinn, O'Donnell, and Jinks 2000; Kuhn and Crowell 2011; Stegmann et al. 2012). In addition, it is important that different perspectives are explored (Avery, Levy, and Simmons 2013; Schuitema et al. 2009). Verbalising reasoning and explaining themselves to others can help students to integrate their ideas and improve their reasoning skills (Chinn, O'Donnell and Jinks 2000) and they can develop an enhanced understanding of the issues at hand by considering different perspectives (Avery, Levy, and Simmons 2013).

Now that we have outlined the purposes and the basic characteristics of classroom discussion in the context of democratic citizenship education, we will go on to identify observable features of structure and content by which we can evaluate the quality of a classroom discussion. Structure features are aspects of the process and shape of the discussion (namely student participation, students responding to each other, and transformation of ideas). Content features refer to the quality of the argumentation (the number of perspectives brought into the discussion and the complexity of the argumentation). Subsequently we will consider how we can examine the role of the teacher during classroom discussions.

Structure features of discussions

Student participation

In this study, we investigate the active participation of students in discussion in two ways. First, we examine the number of students that participate actively. We consider the number of students who make a verbal contribution to the discussion as an indicator of the extent to which the discussion is open to all participants, and students feel free to share their ideas (Burbules 1993; Kumpulainen and Kaartinen 2003). In addition, active participation may improve students' reasoning skills and discussion skills (Alexander 2008; Brown and Renshaw 2000; Chinn, O'Donnell, and Jinks 2000; Mercer, Wegerif, and Dawes 1999). A second way of looking at student participation is to examine the extent to which students contribute new content to the discussion. Equal participation also implies that there is no one person who dominates the discussion (Burbules 1993; Kumpulainen and Kaartinen 2003). Although, the teacher may still have a prominent role, it is important that students have opportunities to raise topics and influence the course of the discussion. It is therefore also important to examine how much new information is brought into the discussion by students compared to the information contributed by teachers.

Students respond to each other

In an open discussion, in which participants take part as equals, it is important that all participants respond to each other (Alexander 2008; Burbules 1993). Teaching *for* discussion involves students being responsive to different points of view and being able to respond to their fellow students with a different opinion even though they disagree with them (Hess 2009; Scott, Mortimer, and Aguiar 2006). We therefore consider the degree to which students respond to each other as an important characteristic of the discussion.

Transformation

As we have argued above, the quality of the discussion is assumed to be determined by the extent to which participants engage in joint reasoning and build on each other's ideas (Alexander 2008; Berkowitz et al. 2008; Kumpulainen and Kaartinen 2003; Mercer, Wegerif, and Dawes 1999; Van Boxtel 2004; Weinberger and Fischer 2006). We use the term *transformation* to refer to the degree to which participants reflect and elaborate on the contributions made by others and in this way transform the reasoning of others into new meaning (Schuitema et al. 2011).

Content features of discussions

Content features refer to the arguments that are given to support the different positions taken in discussion of a social issue. Several studies have shown that the quality of argumentation in a classroom discussion is important for student learning (e.g. Chinn, O'Donnell, and Jinks 2000; Kuhn and Crowell 2011; Schuitema et al. 2011; Stegmann et al. 2012). A first indication of the quality of the discussion content is the number of perspectives brought into the discussion (Schuitema et al. 2011). A second indicator is the complexity of argumentation (Chinn, O'Donnell, and Jinks 2000). Simple argumentation means that positions are supported by relatively isolated reasons. More complex argumentation occurs when reasoning for a certain position is supported by additional arguments or evidence or rebutted by counter-arguments (Chinn, O'Donnell, and Jinks 2000). These additional contributions may again be supported or rebutted. In this way, arguments link into each other to form more complex, coherent lines of reasoning.

Guiding classroom discussions for democratic citizenship education

The specific purposes and characteristics of classroom discussion in the context of democratic citizenship education have substantial implications for the role of the teachers. In most classroom interaction, the teacher is the primary knower and the expert on the matter under discussion and directs the discussion to a pre-determined conclusion (Molinari, Mameli, and Gnisci 2013; Scott, Mortimer, and Aguiar 2006). Classroom interaction usually has the form of a *recitation*, which is the accumulation of knowledge through purposeful questioning by the teacher with the aim of testing or stimulating recall of specific knowledge (see Wolfe and Alexander 2008). Teachers usually control the content of the discussion by initiating most of the exchanges following an initiation–response–feedback (IRF) pattern (Molinari, Mameli, and Gnisci 2013; Wells and Arauz 2006). Teachers *initiate* the interaction, followed by a *response* from students and then teachers provide *feedback*. In addition, students may also be accustomed to a form of classroom interaction in which teachers expect certain answers. Therefore, students may not be inclined to share their thinking freely (Nystrand et al. 2003; Wolfe and Alexander 2008).

During classroom discussions for citizenship education, teachers have the difficult task of changing the classroom atmosphere so that both the teacher and the students take on different roles from what they usually expect (Buzzelli and Johnston 2001; Veugelers 2000; Wolfe and Alexander 2008). The way teachers guide the classroom discussion influences the extent to which the discussion will be open-ended and open for students to participate as equals, raising issues and questions and exploring multiple perspectives. As Burbules (1993)

has argued, the main threat to equal participation of students in an open classroom discussion is the existence of a "single authoritative point of view that brooks no challenges and tolerates no participation in directing the course of investigation" (80). Therefore, the teacher's role must be less directive in order to make room for the perspectives of students. This poses a challenge for teachers (see, e.g. Hargreaves et al. 2010). Teachers should create the opportunity for all students to express their points of view, leaving more control to the students. At the same time, teachers want to steer the classroom interaction to ensure a certain quality of discussion.

In the present study, we investigated the role of the teachers in two ways. We first examined the degree to which teachers regulate the content of what is being said, i.e. the extent to which they steer the course of the discussion and control the issues and ideas under discussion. Second, we examined the degree to which the teachers' approach is open for multiple perspectives by investigating the type of questions teachers ask.

Regulating the content of discussions

We distinguish three approaches to classroom discussion depending on the degree to which teachers regulate the content of what is being discussed: student regulation, co-regulation and teacher regulation. Teachers do not have to adopt one particular approach. Instead, each contribution teachers make can be characterised by the extent to which it regulates the content of the discussion.

Contributions from teachers are characterised as *student-regulative* when these contributions are focused on guiding the discussion process without regulating the content of the discussion (Wells and Arauz 2006). Teachers can, for example, encourage students to participate by giving turns and by asking students to elaborate on their contributions. In this role, teachers do not bring in content themselves but aim to facilitate the optimum conditions for students to contribute content to the discussion and bring in their own perspectives. *Co-regulation* is characterised by contributions in which teachers use the students' perspectives and ideas to regulate the discussion (Kienstra et al. 2015). The teacher may, for example, bring in arguments in response to students' contributions, reformulate students' contributions, or ask students to react to specific points made by other students. As such, the teacher reconstructs what students have brought in and regulates the content of the discussion together with the students, who can still initiate different perspectives and determine the focus of the discussion (Wells and Arauz 2006). Finally, *teacher regulation* means that the teacher predominantly determines and directs the content of the discussion, for example, by bringing in new content or by breaking off certain perspectives put forward by students (Kienstra et al. 2015).

Types of questions

A second aspect that characterises the teacher's role in guiding the discussion is the degree to which the teacher's approach is open to multiple perspectives. Several studies that investigated classroom interaction have made a distinction between the approaches of teachers that are open to different points of view and interactions that aim to reach one specific point of view (e.g. Nystrand et al. 2003; Scott, Mortimer, and Aguiar 2006). Nystrand et al. (2003) make a distinction between monologic episodes in classroom interaction and dialogic

episodes. The interaction during dialogic episodes is open to multiple perspectives, whereas in monologic episodes the teacher aims to reach a specific point of view. Nystrand and colleagues investigated the types of questions teachers ask as an indication of dialogic and monologic episodes. They made a distinction between authentic questions and non-authentic questions (see also Burbules 1993; Molinari, Mameli, and Gnisci 2013). Authentic questions are defined as questions "for which the asker has not prespecified an answer" (Nystrand et al. 2003, 145). They are genuine questions that allow for a range of answers and signal to students that the teacher is interested in their opinions. Non-authentic questions or "test questions" are questions asked with a pre-scripted answer in mind. As such, test questions allow for only one possible correct answer, whereas other answers would be considered as incorrect. Test questions indicate episodes of recitation in which the teacher focuses on one specific point of view that is non-negotiable.

The present study

The first aim of the present study is to contribute to the development of a framework for analysing the characteristics of classroom discussions in the context of democratic citizenship education and of the teacher's role in these discussions. Moreover, we seek to arrive at additional insight into the different roles teachers can take when guiding a classroom discussion and how these roles may be related to the structure and content of the discussion itself. To investigate these issues, we asked five secondary school teachers to prepare and conduct a classroom discussion in the context of democratic citizenship education. Our research questions were:

(1) What are the content and structure features of the classroom discussions?
(2) How do teachers guide the classroom discussion for democratic citizenship education?
(3) How are the different ways in which teachers guide the discussion related to the structure and content features of the classroom discussion?

Because there is little research on the different characteristics of classroom discussions for citizenship education and on how teachers can guide such discussions, our study has a descriptive and exploratory character. With regard to the third question, we assume that the role a teacher takes in a discussion conducted in the context of citizenship education may have important consequences for how the discussion proceeds and for its structure and content features. When, for example, teachers provide strong content regulation they can ensure that a variety of perspectives are explored, which may enhance the quality of the discussion content. Meanwhile, less intrusive teacher regulation of content may allow more room for student contributions and may lead to a more authentic discussion resulting in additional contributions from students and in more students responding to each other (Hess 2009).

Method

Participants

Five teachers (one female and four male) from four secondary schools in urban areas in the Netherlands participated in this study. Alison (female) and John were Social Studies teachers, each with four years of teaching experience. Nick and Jerry were History

teachers with 9 and 11 years' teaching experience, respectively. Rob, with three years of teaching experience, was an Economics teacher. Alison and Jerry worked at the same school.

We asked the teachers about the ethnic composition of their classes. The percentage of students with a non-western background varied between 30% and 60% for each class (we have no information on the precise composition of the classes, but according to the teachers most non-Dutch students had a Moroccan, Turkish or Surinamese background). All teachers worked with a class at a lower secondary level in this exercise: the students in Rob's class were in the tenth grade, while all other teachers led ninth grade classes in the discussion. The students were between 14 and 16 years of age. The two Social Studies teachers, John and Alison, were the most experienced at guiding classroom discussions, indicating that classroom discussions were part of their daily practice. The history teachers, Nick, Jerry and Rob, said they conducted classroom discussion occasionally.

Procedure

We asked the five teachers to prepare and conduct a classroom discussion for democratic citizenship education. One to three weeks prior to the classroom discussion, we met with each teacher individually. During these meetings, we asked the teachers how they usually conducted classroom discussions with the participating classes. In addition, we asked them to prepare a classroom discussion. Citizenship education is a broad concept that allows for many different interpretations; to bring focus to the study, we presented to each of the teachers the idea of teaching *with* discussion and teaching *for* discussion in the context of democratic citizenship education. The teachers were free to choose any topic, provided that it was a social issue that was likely to be controversial among their students. They were also free to choose a specific format and to decide how to prepare students for the discussion, as well as which rules they would apply and how to arrange their classroom. The discussion was to take place as part of one 45-min lesson.

The classroom discussions were video-recorded with the camera directed at the teacher. To gather additional information on students' alertness and participation a researcher was present in the classroom, making semi-structured observations.

Analyses of the classroom discussions

The classroom discussions were transcribed and analysed to establish their structure and content features and the role each teacher played. Most important for the analysis was the coding of communicative acts, i.e. the function of the communication used by teachers and students (see Table 1). The communicative act coding was developed to examine structure features of the discussion and to determine the extent to which teachers regulated the content of the discussion. The exact use of the communicated act coding will be explained in a subsequent section.

We used the turn shifts of the speakers to delineate the unit of coding. We defined a turn as everything a speaker said until another speaker starts talking. Teachers sometimes took relatively long turns, which involved more than one type of communicative act. Teachers' turns could therefore be given more than one code for the same turn. We first identified utterances that contributed to the content of the discussion, i.e. bringing in a viewpoint or

Table 1. Coding scheme for the communicative act coding.

Code	Explanation	Example
(I) Informative content contribution	Contribution of new information (e.g. a perspective, an argument) without responding to former speakers	Student: "I think you cross the line when it gives rise to hatred"
(T) Transformative content contribution (indicator of co-construction)	Contribution that transforms or operates on a contribution from other speakers, such as an elaboration, an example, or a counterargument	Student 1: "this is about killing animals [*for fur*], but they do eat meat themselves" Student 2: "no, you need meat"
(P) Taking position	Taking a position without substantiation	Student: "it's OK to wear fur"
(E) Empty reply confirmation/ opposition	Responding to previous speakers without bringing in new information, such as direct confirmation or opposition	Teacher: "Ok, that's clear"
(A-expl) Ask for explanation	Asking for more explanation without contributing to the content	Teacher: "Can you explain that?"
(R) Reconstructive recap	Interpreting or summarising others' contributions	Teacher: "So what you're saying is that it (*twitter*) isn't something private
(GTU) Giving turn unconditionally	Giving a turn without directing the content of the response	Teacher: "What would you like to say?"
(GTC) Giving turn conditionally	Asking for a reply to a specific contribution from previous speakers	Teacher: "Who doesn't agree with this?"
(B) Breaking off	Breaking off a particular line of reasoning	Teacher: "No, but we've already discussed this
(O) Establishing order	Any contribution to establish classroom order without directing the discussion itself	Teacher: "sssh please just listen to each other"
(Rep) Repetition	Direct repetitions	Teacher: "Dana, do you think you should be able to discuss a different opinion?" Dana: "What?" Teacher: "Do you think you should be able to discuss a different opinion?"
(NS) No score	Unclear statements and unfinished sentences or off task contributions	

argument. We further distinguished between contributions that brought new information into the discussion without elaborating on the contributions of others (informative), and contributions that transformed or operated on the contributions of others (transformative). A transformative utterance could be an extension or refinement of what has been said, but it could also be a counterargument (Berkowitz et al. 2008; Schuitema et al. 2011). Participants also react to contributions made by others by confirming or opposing them, without actually contributing to the content; we refer to these utterances as empty replies (Schuitema et al. 2011). Participants can also take a position without bringing in new arguments or elaborating on the contributions of others (position-taking). Most of the remaining codes in Table 1 are used for communicative acts generally made by the teachers. These include asking for an explanation, reconstructive recaps, breaking off a particular line of reasoning and giving turns (see Table 1 for examples).

Three researchers were involved in the coding. Several trainings sessions preceded the actual coding in which the researchers discussed disagreement until satisfactory reliability was achieved. Inter-rater reliability of the communicative act coding was determined by comparing the ratings of two independent raters for one of the discussions (167 utterances, comprising 21% of the total number of utterances). Analyses showed the communicative act coding to be reliable, with a Cohen's Kappa of .75 (see Landis and Koch 1977) and an inter-rater agreement percentage of 80%.

Structure features of discussions

Transformation was investigated using the communicative act coding (see Table 1). To assess the extent to which the discussion was transformative, we compared the number of contributions (of teachers and students together) in which a new point of view was brought into the discussion without elaborating on others (Informative), to the number of contributions that transform or operate on the contributions of others (Transformative).

Student participation was assessed first by the percentage of students who made at least one contribution to the discussion. In addition, the communicative act coding (Table 1) was used to examine the distribution of content contributions (i.e. the informative and transformative contributions) between teachers and students.

To investigate differences among the five classroom discussions in the degree to which *students responded to other students*, we coded all student utterances as "response to student" or "response to teacher". A third category was "response to a student after mediation by the teacher" (Van de Pol, Brindley, and Higham 2017). The turn shifts of the speakers were again used to mark the unit of coding. The following example clarifies this:

> Tracy: …. and they're bred for their fur and when they're already dead, well that's another matter, but if they're killed just for their fur I don't think that's a good thing.
>
> Teacher: Tracy says they are bred for their fur and Alyssa you wanted to say something as well didn't you? Why are you against it?
>
> Alyssa: Well, I'm not against it. Everyone wears it and you can't stop it anyway.

In this example, Alyssa gave a response after the teacher repeated what Tracy had said and asked Alyssa to react to that, although Alyssa's reply is evoked by the teacher and directed at the teacher. With regard to its content, Alyssa's argument is a response to Tracy. If the teacher's mediation was limited to just giving turns, we did not code it as mediation but as responding to other students. A reliability analysis was performed on 98 utterances (24%). The coding of the response of student was reliable, with a Cohen's Kappa of .89 and an inter-rater agreement percentage of 94%.

Content features of discussions

The argumentation in each discussion was summarised to assess the content quality. Arguments were first grouped into different themes representing a different perspective on the issue under discussion. Each theme could include arguments in support of different positions. Within each theme, arguments were arranged in coherent chains of reasoning, including main arguments and reasons for supporting or rebutting those arguments (see Chinn, O'Donnell, and Jinks 2000). This was done by three researchers working independently of one another. The summaries made by the three researchers were compared. The three researchers discussed the differences and adjusted them until all three reached agreement. As examples, the summaries of the argumentation in the classroom discussions of Nick and Alison can be found in Appendix 1. Two ranking scores were given to each classroom discussion as a whole. The scores were based on the final versions of the summaries: the first for the number of themes that were discussed and the second for the complexity of the argumentation. This complexity score was based on the number of supporting or rebutting reasons given within each theme. The ranking scores for the number of themes and for complexity were given independently by three researchers, and there was no disagreement with regard to either ranking score.

Table 2. Clustering of teacher contributions based on the extent to which they regulate the content.

Student regulation of content	GTU	Giving turns unconditionally*
	E	Empty reply
	A-expl	Asking for explanation
Co-regulation of content	T	Transformative content contributions
	R	Reconstructive recap
	GTC	Giving turns conditionally
Teacher regulation of content	I	Informative content contributions
	P	Taking position
	B	Breaking off
Other	O	Classroom order
	Other	Repetitions unscoreable, off task

*See Table 1 for an explanation and examples of the terms used in this table.

Teachers' guidance of the discussion

The extent to which teachers steer the classroom discussion was analysed in two ways. We first examined the extent to which the teachers' contributions regulated the content of the discussion. To do this we used the communicative act coding and focused only on the teachers' contributions. We categorised the codes in three clusters, based on the degree to which they directed the content (Table 2). The first cluster is labelled "student regulation" and includes teachers' communicative acts that are not (very) directive of the content of the discussion. When teachers perform many communicative acts in this cluster they give little guidance to the content of the discussion and focus mainly on facilitating student participation in the discussion. For example, when teachers assign turns to students unconditionally, they let students bring in any content they want. In addition, teachers can encourage students to provide additional detail or support, without directing the content, by asking for an explanation. The second cluster consists of teachers' communicative acts that are moderately directive of the content of discussion. Teachers' communicative acts in this cluster indicate co-regulation of the content by teachers and students together. Transformative content contributions are assigned to this cluster because the teacher brings in new content but as a response to contributions from students. A reconstructive recap and asking students to respond to a particular contribution made by another student are also ways of regulating the content while using student input. The third cluster includes teachers' communicative acts that strongly regulate the content of discussion. Many teacher contributions in this cluster indicate strong teacher regulation, where the teacher determines to a considerable extent the focus of the discussion. Informative contributions, for example, are highly directive of the content because teachers bring in new content without responding to students' input. When teachers give their own position on the issue under discussion or break off certain lines of argumentation these communicative acts also have a strong influence on the content.

A second way we investigated the extent to which teachers steer classroom discussion was to examine the type of questions they asked. Again, the turn shifts of the speakers were used to delineate the unit of coding. Every contribution of the teachers that looked to elicit an answer was coded as a question (see Snell and Lefstein 2011). We made a distinction between authentic questions, i.e. questions for which the teacher does not have a predefined answer in mind (for example: "Wait a minute, he also thinks there should be a limit [*to the freedom of speech*]. Where should the limit be?"), and "test questions" where the question aimed to elicit a predefined answer. The following example illustrates the concept of a test question:

Teacher: … you will have discussions like we have in this classroom. What is another conse-
quence of having discussions?

Student: If it goes wrong, it might end in an argument.

Teacher: It might end in an argument. So … are you running a risk of being offended in a
society where there's so many different opinions?

In this example, both of the teacher's questions were test questions. The teacher tried to
point out that the risk of expressing different opinions is that you might feel offended. The
answer to the first question went in the right direction. However, apparently this was not
quite the answer the teacher was aiming for because the teacher asked a second test ques-
tion, in which the conclusion that students were expected to reach was already given. This
example illustrates how teachers can use test questions to guide students to a prespecified
point of view. Reliability analyses on 60 utterances (15%) revealed a Cohen's Kappa of .74
and an inter-rater agreement of 83%.

Results

Structure and content features of classroom discussions

This section addresses the first research question on the structure and content features of
the classroom discussions, and examines how the classroom discussions proceeded. We use
the discussion coding to describe the structure and content features of the dialogues. We
start with a brief description of the five classroom discussions.

Nick and Alison both chose freedom of speech as the topic for the discussion. Nick
and his students discussed whether they thought a comedian should be allowed to insult
Christians in his performances. Alison's discussion focused on statements made by a
Dutch politician (Geert Wilders), which are considered to be insulting to Muslims. Jerry
chose a topic of current interest: several members of Parliament had been in the news
for having a criminal record, and the discussion focused on whether those members of
parliament deserved a second chance. Rob's discussion was about wearing fur, while
John's discussion addressed the statement, "Internet and mobile phones make people
antisocial".

John was the only teacher who did not retain the usual classroom arrangement of stu-
dents sitting in rows behind one another. During the discussion guided by John, students
who agreed with the statement had to go to one side of the classroom and students who
disagreed to the other side. Students were allowed to change their opinion in the course of
the discussion and move from one side of the classroom to the other. John himself walked
from one side to the other whenever he thought a student on a particular side made a
compelling argument.

All five teachers implemented the same classroom rules during the discussion. Students
had to raise their hand when they wanted to say something and were allowed to talk only
when the teacher assigned them a turn. Not all teachers applied these rules consistently to
the same extent. John and Rob let students have their say without assigning turns as long
as it did not disrupt classroom order too much. It was, in fact, very noisy at times during
these particular discussions. In Nick's classroom discussion it was also very noisy, and stu-
dents frequently talked over each other. Alison and Jerry applied classroom rules more
consistently, and it was actually quieter during these discussions. The length of the discussion

also differed between teachers. The discussions guided by Nick, Rob and Jerry took about fifteen minutes while those of John and Alison were about 25 min in length.

Structure features of discussions

Table 3 summarises the results of the analyses of the structure and content features of the classroom discussions. The table shows the percentages of informative and transformative utterances out of all utterances made by teachers and students in each classroom discussion. When a discussion has many informative utterances and relatively few transformative ones, it means that relatively many contributions were made on the content without operating on the responses of others, whereas a high percentage of transformative utterances means that participants operated many times on the contributions of others. The results indicate that there were no large differences in the number of transformative contributions between Nick, Alison and John. The most transformative contributions, compared with the number of informative contributions, were made in the discussion guided by Rob. By contrast, Jerry's classroom discussion was less transformative than the other discussions, as it featured relatively many informative utterances compared with the number of transformative utterances.

We examined *student participation* in two ways. Table 3 first presents the number and percentage of students who contributed at least once to the discussion. There appeared to be substantial differences in active student participation. Student participation was highest in the discussions guided by Jerry (79%) and Alison (71%) and lowest in Rob's (50%) and John's (59%) discussions. A second way to examine student participation was to look at the percentage of content contributions made by students, i.e. the informative and transformative contributions. This reveals a different picture. Students in the classroom discussions

Table 3. Structure and content features of the five classroom discussions.

	Nick	Alison	Jerry	Rob	John
Topic under discussion	Freedom of speech	Freedom of speech	Second chance members of parliament	Fur	Antisocial behaviour on internet and with mobile phones
Structure features					
Transformation (contributions made by both teachers and students)					
Percentage informative	16	14	16	6	12
Percentage transformative	39	35	19	37	27
Student participation					
Number and percentage of actively participating students	16 (66%)	17 (71%)	15 (79%)	12 (50%)	13 (59%)
Percentage of content contributions made by students compared with teachers — Informative	18	50	65	70	87
Percentage of content contributions made by students compared with teachers — Transformative	76	65	87	91	90
Students responses (as a percentage)					
To students	0	7	39	50	55
Mediated by teacher	0	3	16	6	11
To teacher	100	91	45	44	34
Content features					
Score for number of arguments*	3	5	4	2	2
Score for complexity*	1	5	4	3	2
Number of students in class	26	24	19	24	22
Duration of the discussion in minutes	15 min	25 min	15 min	15 min	25 min

*These are ranking scores with 1 as the lowest score and 5 as the highest.

guided by Rob and John contributed a large proportion of the content to the discussion. Students made 70% and 87%, respectively of the informative contributions, and 91% and 90% of the transformative contributions. In Nick's and Alison's discussions, students contributed much less of the content: only 18% and 50% of the informative contributions and 76% and 65% of the transformative contributions. The most striking differences concern the percentages of informative contributions. In Nick's discussion, 82% of the all new information was contributed by the teacher, while John contributed only 13% of the new information in his classroom discussion. These results show that compared with the other teachers, fewer students were actively involved in the discussions guided by Rob and John, but the students who did participate made a greater contribution to the discussion content.

There were also considerable differences regarding the extent to which students *responded to each other*. All student contributions in Nick's classroom discussion were responses to the teacher. The discussions guided by Rob and John were at the other end of the spectrum, with 50% and 55% of the students' contributions directed at other students, respectively.

Content features of discussions

Alison and Jerry had the highest scores for the quality of the content – both the quantity and the complexity of the argumentation. A substantial number of arguments also came up in Nick's classroom discussion, but his discussion had the lowest score for complexity, which means that positions were supported by relatively isolated reasons. Relatively few arguments were brought into Rob's and John's classroom discussions, and the degree of complexity was also moderate compared with the discussions held by Alison and by Jerry. When interpreting these results, it should be noted that Alison's and John's classroom discussions lasted longer than those of the other three participants. Summaries of the argumentation in Nick's and Alison's classroom discussions can be found in Appendix 1, illustrating the meaning of the two scores for content quality. Nick's discussion contained fewer lines of argumentation than Alison's discussion. The greatest difference between the two discussions is in the complexity score: Alison's discussion obtained the highest score for complexity, while Nick's received the lowest score. The summaries in the appendix show that Alison's discussion contains many sub-arguments and refinements. The structure of the summary contains three levels most of the time and sometimes even four. Many lines of argumentation contain arguments both for and against. By contrast, Nick's discussion is usually structured in only two layers, and only now and then does it include counterarguments.

The teacher's role in guiding the discussion

Our second research question concerned the role of the teacher in the discussion and how teachers regulate the discussion. We explored the teacher's behaviour in the discussion in two different ways. We first used the relevant parts of the communicative act coding to examine the extent to which teachers regulated the discussion content. Secondly, we examined the type of questions the teacher asked, to examine the degree to which the teachers' approach was open to multiple perspectives.

Regulating the content of the discussions

Table 4 shows the distribution of the communicative acts made by the teacher for each classroom discussion. We clustered the communicative acts in line with the degree to which

Table 4. Teacher communicative acts (as a percentage of the total number of communicative acts by teachers).

			Nick	Alison	Jerry	Rob	John
Student regulation	GTU	Giving turn unconditionally	13	19	25	17	31
	E	Empty reply	9	9	10	19	12
	A-expl	Asking for explanation	13	19	19	26	20
		Total	35	47	54	62	63
Co-regulation	T	Transformative	18	24	6	11	8
	R	Reconstructive recap	13	10	2	21	2
	GTC	Giving turn conditionally	9	4	17	0	4
		Total	40	38	25	32	14
Teacher regulation	I	Informative	25	13	15	6	10
	P	Taking position	0	0	0	0	4
	B	Breaking off	0	2	6	0	8
		Total	25	15	21	6	22

they are content directive. Contributions to maintain order in the class, direct repetitions, off-task contributions and contributions without a score were not included. Table 4 shows substantial differences in the way teachers guided the discussion. The communicative acts by Rob and John were generally student-regulated. More than 60% of their utterances facilitated the discussion among students. In contrast, the discussion held by Nick, and to a lesser degree that of Alison, were more teacher-regulated. Over half of these teachers' contributions could be characterised as teacher or co-regulation. Jerry is more average with 54% student regulation and relatively high percentages in both the co-regulation cluster and the teacher regulation cluster.

Type of questions

We explored the types of questions the teachers used, to examine the degree to which the teachers' approaches were open to multiple perspectives. Table 5 gives the percentages of the teachers' contributions made in the form of a question. We made a distinction between authentic questions and test questions. Authentic questions are those to which there is no pre-specified right or wrong answer. Test questions on the other hand are recitation questions with a presupposed right or wrong answer. The results showed that 40 to 63 per cent of the contributions of each teacher were questions (Table 5). Authentic questions could have different functions: content contributions, but also asking for an explanation and giving turns. By contrast, test questions were almost always informative or transformative content contributions. With regard to authentic questions, there were no large differences among the teachers. Rob asked the fewest authentic questions (34%) and Jerry the most (48%). The differences in test questions were more substantial; Nick and Alison asked many non-authentic questions compared to the other three teachers.

Different ways of guiding discussions

Combining both ways of looking at teachers' contributions i.e. looking at the communicative acts and the type of questions, reveals how teachers differed in the ways in which they guided the discussion. Nick, and to a lesser extent Alison, strongly regulated the discussion and determined its focus to a relatively large extent. Both teachers had a relatively low

Table 5. Type of questions as a percentage of total contributions made by teachers.

	Nick	Alison	Jerry	Rob	John
Authentic questions	40	37	48	34	41
Test questions	23	19	5	6	8
Total	63	56	53	40	49

percentage in the student regulation cluster and high percentages in the co-regulation cluster. Nick also had the highest percentage in the teacher regulation cluster. Both Nick and Alison made many content contributions, often in the form of non-authentic questions. However, they directed the content of the discussion in different ways.

Nick regulated the content mostly through informative contributions. He kept on asking the students new questions without responding to what students were saying. In this way he repeatedly introduced a new direction into the discussion (see Table 6). Moreover, many of his questions were test questions. Nick's fragment is an example of a teacher-regulated discussion that was not genuinely open for students. At some points it was more of a lecture, and the students were only expected to confirm what the teacher was saying.

Alison also regulated the discussion strongly. However, compared to Nick's, Alison's discussion was more co-regulated. She also made many content contributions, but in her case these were mostly in response to students. She made a considerable number of transformative contributions, and many of her content contributions were authentic questions. By responding to students' contributions with critical questions, Alison made different positions visible. Table 7 presents a fragment of Alison's discussion, which shows that some students thought that there should be a limit to freedom of speech. Alison attempted to demonstrate that it is very difficult to say where the limits of freedom of speech might be, by repeatedly asking students to specify those limits.

The fragment presented in Table 7 is an example of a co-regulated discussion. The teacher is directing the content of the discussion through the students' responses. Because Alison reacted in this fragment with authentic questions, the discussion remained open to student perspectives. However, Alison also asked many test questions throughout the course of her discussion. At some points she used a series of test questions in an attempt to lead students towards a specific understanding. Table 8 presents a fragment of Alison's discussion where there is less room for multiple points of view.

Wolfe and Alexander (2008) would characterise this kind of interaction as recitation: a series of questions aimed at prompting students to derive answers from the clues given in the questions. To counter the opinion of Dana and other students that freedom of speech should be limited when an opinion opposes the majority view, Alison attempted to demonstrate that the majority can actually be wrong, which she accomplished through a series of test questions. In the end, Dana had no option but to agree with the teacher, although she still seemed to hold a differing opinion.

Compared with Nick and Alison, the discussion guided by Jerry was more student-regulated. However, Jerry also made a high percentage of teacher regulation contributions. Compared with Nick and Alison, he made fewer content contributions, though many of the ones he made were informative, hence the high score on teacher regulation. Jerry made a moderate number of contributions that we characterised as co-regulation. It is noteworthy that Jerry co-regulated the discussion differently from other teachers' approaches. Rather

Table 6. Fragment from the classroom discussion led by Nick.

		Com-municative act coding	Type of questions
Teacher:	Lydia: where does freedom of speech end for you?	GTC	AQ
Lydia:	When it goes too far.	T	
Teacher:	And when's that?	A-expl	AQ
Lydia:	When there is no respect for each other anymore.	T	
Teacher:	Okay, do you really think that this comedian is serious?	I	TQ
Students:	No.	E	
Teacher:	No because that's what a comedian does. A comedian uses the stage to make fun of everybody. If you go to his show everybody will come under fire at some point. But the point is that you understand that it is a comedian and that it's his job to make jokes.	I	
	Okay, who thinks that freedom of speech is more limited nowadays than it used to be? Who thinks you cannot express your opinion as freely as in the past?	I	TQ
Nasr:	You can say much more nowadays.	T	
Rens:	If you express an opinion today and they don't agree with you, then they stab you ….	T	
Teacher:	Then what?	A-expl	AQ
Rens:	They stab you to death.	T	
Teacher:	You get stabbed to death?	R	
Rens:	No, but when you say for instance: "I hate those people", they start to threaten you.	T	
Teacher:	Okay, today it is.. you can see it in the papers, … well the best known example is of course Theo van Gogh* who was killed because he held certain opinions.	T	
	But don't you think that there's a difference between certain people who express their opinions?	I	TQ
Students:	Yes.	E	
Teacher	For example, do you think there's a difference between a politician, a comedian and a normal person?	I	TQ
Students	Yes.	E	

GTC = giving turn conditional, T = transformative, I = informative E = empty reply, A-expl = asking for explanation, R = reconstructive recap, AQ= authentic question, TQ = test question.
*Dutch writer and movie director.

than responding to students with transformative contributions, instead he assigned turns conditionally, asking students to respond to contributions made by other students.

The most student-regulated discussions were those guided by Rob and John, who made fewer content contributions than the other teachers, so that more input could come from the students. They let students discuss the topic with each other without interference. We also see substantial differences between Rob's and John's approaches. Rob scored highly on co-regulation, primarily due to the large number of reconstructive recaps he employed. Rob attempted to regulate the content of the discussion by frequently summarising what had been said by students. In addition, students in his discussion could respond to each other without interference from the teacher. The discussion became very animated among some of the students, with many students frequently talking over each other. By summarising what students had said, Rob attempted to maintain the focus of the discussion, but could not prevent most of the discussion taking place between two students.

As was mentioned previously, in John's class the students mostly regulated the content of the discussion, with John, especially at the beginning, primarily focused on facilitating

Table 7. Fragment from the classroom discussion led by Alison.

		Communicative act coding	Type of questions
Sam:	I do think that there should be a limit [*to freedom of speech*]. You can't just put "I think" in front of everything you say. I think you are ugly or I think you are stupid.	I	
Teacher:	So what you're saying is that if you think something and it is insulting, you cannot put "I think" in front and then it's suddenly alright to say it.	R	AQ
Sam:	Yes.	E	
Teacher:	What do you want to say?	GTU	AQ
John:	I also think there should be a limit.	P	
Teacher:	Wait a minute, he also thinks there should be a limit. Where should the limit be?	T	AQ
John:	It must end somewhere, … if it's something bad like with Geert Wilders, you should keep it to yourself and not say it because then it can lead to these sorts of things.	I	
Teacher:	So, if you have extreme views, you had better keep them to yourself.	R	
Teacher:	Usha.	GTU	
Usha:	I also think there should be a limit because Geert Wilders for example, he doesn't know his limits. Because he says for example, the Netherlands is a country where you can express your opinion and now he insults people because of their religion.	I	
Teacher:	Yes, I'll get to that later. (*points*)	B	
Sam:	I think there's a limit when it gives rise to hatred.	I	
Teacher:	But how does he give rise to hatred?	T	AQ
Sam:	Then he says they should go back to their own country and get work or whatever.	T	
Robert:	He doesn't say that.	T	
Sam:	No, not get work, but like go back to your own country.	T	
Teacher:	But he says, just like you're saying, if you have an opinion like Geert Wilders, you had better keep it to yourself.	R	
Teacher:	Is that right? Do you think that's okay?	GTC	AQ
Sam:	You don't have to keep it to yourself but not like Geert Wilders, that you spread it around in America or England.	T	

GTU = giving turn unconditional, GTC = giving turn conditional, T = transformative, I = informative P = Taking position, B = breaking off, A-expl = asking for explanation, R = reconstructive recap, AQ= authentic question.

the discussion. He co-regulated the content by asking questions most of the time in an authentic way. However, John also had another way of guiding the discussion: he was the only teacher in our study who occasionally assumed a position in the discussion, expressing his opinion by walking from one side of the classroom to the other (see Table 9). The students had to stand on the side of the classroom that corresponded with their position, either for or against. When John found an argument convincing he would walk to the corresponding side of the classroom. This is how he rewarded good argumentation and challenged the students on the other side to come up with better arguments. However, as the discussion progressed the students kept returning to the same issue. Three students dominated the discussion and kept on arguing about whether conflict originates more often on the internet than in real life. John tried to steer the discussion in other directions. He broke up certain lines of reasoning and started to bring in more new content himself. As a result, John also has a high percentage of contributions in the teacher-regulated cluster.

Table 8. Fragment from the classroom discussion led by Alison.

		Communicative act coding	Type of questions
Samira:	I think it's strange because Geert Wilders knows he's wrong.	I	
Teacher:	He *knows* he's wrong. How does he know he's wrong?	A-expl	AQ
Samira:	He's scared.	I	
Dana:	He gets a lot of criticism.	T	
	(*Students all talking at the same time.*)		
Teacher:	Wait a minute, now you're making a connection, between …. If everyone else thinks what I say is wrong, then my opinion is also wrong, then you should not express your opinion. Is that the limit to freedom of speech? The majority must approve of it?	T	TQ
Some students:	Yes.	E	
Some students:	No.	E	
Teacher:	Brian, they said if the majority doesn't agree with it, your opinion is wrong. But you said no. Why do you think that?	A-expl	AQ
Brian:	It's your opinion, your opinion can't be wrong.	T	
Teacher:	He says an opinion can't be wrong.	E	
	Sam?	GTU	
	(*Students all talking at the same time.*)		
Teacher:	Wait a minute, I'm hearing some good stuff here, I want to hear it all, but only when it's quiet.	O	
Sam:	When the majority has an opinion that's different from yours, I don't think that your opinion is necessarily wrong, but ….	T	
Teacher:	Wait a minute, have you ever heard of Galileo?	I	TQ
Students:	Yes.	E	
Teacher:	Who is he? What did this man once say?	I	TQ
Brian:	Even if it's your opinion against thousands of others, it doesn't mean you're wrong.	T	
Teacher:	Right. Can you explain that to the class?	A-expl	
Brian:	Even if the whole world is against you, it doesn't mean you're wrong. It's your own opinion, it's your own truth.	T	
Teacher:	People used to think the earth was flat, right? And then he said that the earth wasn't flat, but …?	T	TQ
Students:	Round.	E	
Teacher:	And everyone was against him.	T	
Brian:	But he was still right.	T	
Teacher:	So Dana, is your opinion wrong if everyone is against you?	GTC	TQ
Dana:	Yes, but this is a different case.	I	
Teacher	Is it? Tell me.	A-expl	
Dana	That was about the earth and this is about people.	I	
Teacher:	But isn't this also about the world, isn't what's going on in society important?	T	TQ
Dana	Yes, but this is different.	T	

GTU = giving turn unconditional, GTC = giving turn conditional, T = transformative, I = informative, E = empty reply, A-expl = asking for explanation, O = establishing order, AQ= authentic question, TQ = tes question.

Relationship between teachers' guidance and the structure and content features of discussions

The results discussed above have shown substantial differences in the ways the five teachers guided classroom discussion. We also saw differences in how the discussion proceeded and in the structure and content features of the discussion. How do these relate to one

Table 9. Fragment from the classroom discussion led by John.

		Communicative act coding	Type of questions
Pascal:	You can't hear intonation on the internet, so just suppose you say something and you think it's quite unpleasant while that person actually means to be nice.	T	
Teacher:	So people may interpret something differently from what was actually meant.	E	
	Okay, wait a minute. Kimberly, too bad you didn't raise your hand.	O	
	Can you explain what you mean by "you can add a smiley".	A-expl	AQ
Kimberly:	If you mean it in a bad way you should add an angry smiley, and if you don't mean it in a bad way you add a happy one. (*Students all talking at the same time.*)	T	
Teacher:	Okay, clear.	E	
	You're all starting to shout at the same time.	O	
	But I did see that Jeffrey raised his hand.	GTU	
Jeffrey:	Look, you think fighting on the internet is antisocial, but it's also antisocial when you're at the market shouting at each other and everyone can hear it. (*Students all talking at the same time.*))	I	
Pascal:	(*Above the noise*) That is antisocial but internet is also antisocial!	T	
Teacher:	(*walks to the 'against 'side of the classroom*) I think what Jeffrey says makes me lean towards this side.	P	
	Can I ask you a question to clarify that? Jeffrey says that if you start shouting at each other outside, and that happens, then that's also antisocial. Is that the same thing? Because it's a public place. But you say (*comment directed at the "for" side of the classroom*) on the internet that it's also antisocial. Pascal.	GTC	AQ
Pascal:	Let's say you're having an argument on the internet, it seems to me that people go further than in real life. On the internet you say, yes I'm going to beat you up, but if that person is standing right in front of you …..	I	
Jeffrey:	You'll be beaten up! (*laughter*)	T	
Pascal:	….. Nine out of ten people will do nothing at all.	I	
Teacher:	Eric do you agree with that?	GTC	
Eric:	Yes.		
Teacher:	But how does it work, because don't you also know the people you're talking to on the internet?	A-expl	AQ
Several students:	No.	E	
Teacher:	No? Don't you know those people at all? Oh, is this a generation gap? Do you really have people on your MSN list you don't know?	A-expl	AQ
Several students:	No, but we do on Twitter		
Teacher:	Ok, so that's a big difference. Clear.	E	
	Now I'm beginning to have doubts. (*walks to the 'for 'side of the classroom*)	P	

GTU = giving turn unconditional, GTC = giving turn conditional, T = transformative, I = informative, E = empty reply, A-expl = asking for explanation, O = establishing order, P = taking position, AQ= authentic question.

another? We will now discuss, in an exploratory manner, possible relationships between the ways teachers guided their classroom discussions and their structure and content features.

With respect to *student participation*, the connection between the number of content contributions made by teachers and the proportion of content contributed by students is most obvious. Nick and Alison made many informative and transformative content contributions, meaning that students in these two teachers' discussions contributed proportionally less to the discussion than in the other three teachers' discussions. If we examine the number of students who participated actively in the discussion (i.e. students who made at least one verbal contribution) the relationship seemed to be the opposite. Teachers who strongly regulated the discussion had a higher percentage of students who participated actively. The classroom discussions characterised as the most student-regulated, namely those guided by Rob and John, had the lowest percentages of student participation. Rob and John allowed students to react to each other without teacher interference, which resulted in authentic and sometimes very animated discussions among students. However, it also appeared that these discussions were mostly concentrated among a small number of students who were highly motivated to contribute. Meanwhile, teachers who regulated the discussion strongly and assigned turns consistently were able to ensure that other students also participated. In addition, because John and Rob left more regulation to the students, the classroom environment was noisy at times which may have distracted some students from the discussion, and could have made it easier for students to start talking about something else and lose interest in the discussion at hand. Teachers with more teacher regulation may have been better able to keep most of the students focused.

As expected, a relationship appears between the degree to which teachers regulate the discussion and the extent to which students *respond to each other*. The students of the two teachers who regulated the discussion the most, Alison and Nick, generally responded to the teacher. This is in stark contrast to the least regulating teachers, Rob and John, where students responded to other students in more than 50% of their interventions. Although Jerry was moderately regulating the discussion, students in his discussion frequently responded to each other (39%); he also had the highest number of students responding to each other mediated by the teacher. This may be related to the large number of conditional turns assigned by Jerry, who frequently explicitly asked a student to reply to a specific point made by another student.

The relationship between the ways teachers regulated the discussion and the extent to which the discussions as a whole were *transformative* was not straightforward. The discussions guided by those teachers who regulated the discussion strongly were just as transformative as the discussions held by teachers who allowed for more student regulation. What is noteworthy is that, despite his efforts to encourage students to respond to each other, Jerry's discussion was less transformative than the other four teachers. His actions did not result in students actually operating more on what other students said.

Finally, the extent to which teachers regulated the discussion seemed to be related to the *quality of the discussion content*. The teachers who exerted the least regulation over the discussion had the lowest scores for content quality. On the other hand, the two teachers who steered the discussion most strongly, Alison and Jerry, had high scores for content quality. Nick seemed to be an exception; although he regulated the discussion most strongly, the quality of his discussion was lower than that of Alison and Jerry.

Discussion

This study contributes towards the development of a framework to analyse classroom discussions in the context of democratic citizenship education. This is important because different kinds of classroom discussions may create different learning opportunities for democratic citizenship. Using this framework enabled us to reveal substantial differences in the structure and content of these discussions and in the ways teachers guided classroom interactions. We found that the classroom discussions differed in what we have specified as important structure and content features of classroom discussion. There were differences in student participation (e.g. Burbules 1993; Kumpulainen and Kaartinen 2003), in the extent to which students responded to each other (Alexander 2008; Burbules 1993) and in the quality of the discussion content (e.g. Chinn, O'Donnell, and Jinks 2000). We also found differences in the extent to which teachers regulated the content of the discussion (Kienstra et al. 2015) and the type of questions teachers asked (e.g. Nystrand et al. 2003). For example, some teachers regulated the discussion strongly by contributing their own points of view, while other teachers left more regulation to the students and generally facilitated a discussion among them. In addition, the results of our study suggest that the quality of a classroom discussion for citizenship education cannot be determined by examining the separate indicators for structure, content and teacher guidance. If we look at the combinations of the different characteristics certain patterns become visible and it seems that the different structure and content features and teacher guidance are interrelated. Although it is difficult to draw hard conclusions based on five classroom discussions, we see, for example, that the results support our assumption that the extent to which teachers regulated the discussion is related to the structure and content features of the discussion.

Balancing content regulation and student participation

When teachers guide discussion strongly, they can improve the quality of the content of the discussion by, for example, introducing more perspectives or by asking students critical questions. It also appears that more students can participate when the teacher strongly regulates the content of the discussion. However, when teachers strongly regulate the content of the discussion, there is less room for students to put forward their own perspectives. Moreover, we observed that teachers who strongly regulated the discussion asked more test-questions: strong regulation of the content seems to bring along the risk that the interaction starts to resemble a lecture or recitation instead of an open-ended discussion, and students become more inclined to respond to the teacher and not to other students. To create a more authentic and open-ended discussion between students it seemed better to allow for more student regulation. When teachers exert little regulation over the discussion, students have more room to advance their own opinions, and students are more likely to respond to each other. However, in this case the teacher has less control over the content and it is consequently more difficult to achieve a high content quality of content. In addition, we also saw that when the discussion is student-regulated there is a risk that a small number of students will dominate the discussion.

In this respect, this study addresses a central topic in literature on dialogic approaches to learning and teaching (Howe and Abedin 2013). In this research domain, it is generally understood to be beneficial for learning when students express their own ideas and

comment on those of others (e.g. Alexander 2008; Mercer, Wegerif, and Dawes 1999; Wells and Arauz 2006). However, concern has also been expressed that less teacher control on the content of the discussion might be detrimental to student learning (Emanuelsson and Sahlström 2008). The present study seems to support this concern as it indeed shows that the extent to which teachers regulate the discussion may be important for the quality of the discussion content.

Teaching with and for discussion and teachers' guidance

The results of our study show that the differing approaches of the participating teachers each have their strengths and weaknesses. Choosing the right balance between content regulation and room for students to participate may also depend on the specific goals teachers have for classroom discussion. In this study, we have made a distinction between teaching *with* and teaching *for* discussion. It may be that stronger regulation of the content of the discussion is more appropriate for teaching *with* discussion, while teaching *for* discussion is better served when the discussion is more student-regulated. When the teachers' main goal is the development of critical thinking and reasoning skills (teaching *with* discussion), it may be important that the discussion is of high quality, that a large number of arguments are discussed and that many students have the opportunity to verbalise their thoughts (Chinn, O'Donnell, and Jinks 2000; Schuitema et al. 2011). However, for teaching students how to take part in a discussion as a democratic practice (teaching *for* discussion) and developing the skills and attitudes needed for democratic participation it may be more important that a genuine discussion take place among students, in which students respond to each other and regulate the content of the discussion (Hess 2009).

   As we have seen, both approaches also have their pitfalls that teachers should be aware of. When teachers are focused on regulating the content of the discussion to ensure content quality, it is important that teachers still make room for students to bring in their own perspectives and not fall into lecturing. The challenge is to enhance the content quality through co-regulation (i.e. responding to students' contributions with transformational contributions and reconstructive recaps) and to keep asking authentic questions. When the focus is on creating a genuine discussion among students, the challenge is to guide the process in such a way that all students can participate so the discussion is not dominated by a small number of students. For example, the teacher – or the students and the teacher together – can set rules for participation. One of those rules may be that students have a fixed number of turns for the whole discussion. This may not only prevent a few students from dominating the discussion, but also force students to think more carefully when they want to say something.

Limitations

Evidently a study of only five classroom discussions has its limitations. Further research that includes a higher number of classroom discussions is necessary to make valid generalisations about the relationship between teachers' guidance and the structure and content features of classroom discussion. In addition, other factors that are important for the structure and content features of classroom discussion were not systematically investigated in this study. The topic to be discussed, for example, may affect not only the structure and content of the

discussion but also the guidance provided by the teacher. When a topic is controversial among students and students can identify with different positions and arguments, it is more likely that discussion will arise spontaneously among students. This would make it easier for teachers to focus on facilitating the discussion and would allow students to respond to each other. It seems plausible to assume that the discussion topic is also important for the content quality. When a topic is close to the students' lived experience and students are familiar with it, students may more easily identify with different perspectives and produce arguments for their opinions. In the present study, each teacher was free to choose a topic, so the discussions had different topics. To investigate the effects of teacher regulation on the structure and content features of the discussion, it might also be important to know beforehand what students already know about a topic and what their opinions on that specific topic are.

How students are prepared and the way the topic is introduced is also important for the way classroom discussions proceed. This is particularly pertinent when a topic is not familiar and part of students' lived experience; in this case it is important to allow students to prepare for the discussion so that they have enough information about the topic. In our study, there were differences in the extent to which students were prepared for the classroom discussion, but in all five cases students had little time to prepare.

Another aspect that may influence the structure and content features of the discussion is the specific working format employed, such as the rules and the classroom arrangement used. Four teachers used the same classroom arrangement, with students sitting in rows one behind the other. Only one teacher used a classroom arrangement where students faced each other. Other classroom arrangements are also possible, such as a circle. It would be interesting in future research to investigate the influence of classroom rules and arrangements on the course followed by classroom discussions and the ways teachers guide them.

Future research and implications for educational practice

This study addresses the lack of research on democratic citizenship education that takes the quality of classroom discussions, and the way teachers guide classroom discussions, into account. The analytical framework presented here can be used as a starting point for future research to study the effectiveness of curricula for democratic citizenship education that have classroom discussion as a central element (Schuitema, Ten Dam, and Veugelers 2008; Solomon, Watson, and Battistich 2001). Further research that includes learning outcomes must demonstrate whether the differences between classrooms discussions revealed by this framework are truly important for learning.

Future research could also address the further development of the analytical framework. The focus in this study was to verbal contributions to the central dialogue during classroom discussion. It might be important to look at other forms of participation, including non-verbal communication and also active listening. Furthermore, an approach for further research would be not only to investigate how many students are participating but also to examine the characteristics of those who participate. This may give an insight into whether the discussion is accessible to all groups of students or whether a particular group of students (e.g. those of a particular ethnic background) is dominating the discussion (Howe and Abedin 2013). In addition, it might be worthwhile to examine in detail the processes of

co-construction during classroom discussions. We did not find any indications of a relationship between the way teachers guided the discussion and transformative contributions. It may, however, be important to examine other aspects of co-constructive processes. Mercer, Wegerif, and Dawes (1999), for instance, argue that it is not only important that participants respond to the contributions of others, but also that they seek to reach agreement.

The analyses of the content quality could also be developed further. In this study, we described the quality of the content in terms of simple versus complex argumentation. Previous research has shown that more complex argumentation enhanced students' ability to draw conclusions (Chinn, O'Donnell, and Jinks 2000). This approach could be supplemented with other approaches. Moral values for example are important in many discussions for democratic citizenship education (Weyringer, Patry, and Weinberger 2012). It may be interesting to investigate in further research how students refer to moral values in these discussions (Schuitema et al. 2011) or to examine the quality of moral reasoning when moral issues are discussed (Tichy et al. 2010).

Further research could also focus on different social and cultural background of teachers and students and their emotional involvement with the discussion. As we have argued, classroom discussion for citizenship education is about controversial issues affecting personal beliefs and values of both teachers and students (Hand and Levinson 2012; Hess and Avery 2008). Dealing with this personal and sometimes emotional dimension in classroom discussion may be the most difficult task for teachers. In relations to this it could be interesting to investigate teacher-student interpersonal relations (e.g. Roorda et al. 2011; Wubbels and Brekelmans 2005) and how these affect classroom discussions on controversial issues or to examine teaching styles in terms of autonomy-supportive behaviour (see e.g. Reeve and Jang 2006). Autonomy-support from teachers enhances students' feeling that they are acting in accordance with their own personal values and interests (Assor, Kaplan, and Roth 2002).

We conclude by pointing out that these results may be useful for teachers interested in conducting a classroom discussion. Engaging students in dialogue is a demanding and complex task. Research shows that teachers do not conduct classroom discussions often (Hess and Avery 2008; Nystrand et al. 2003) and when they do, they experience difficulty guiding it (Howe and Abedin 2013). Nystrand and colleagues argue that teachers' main focus is understandably on their teaching and on what students are learning. They tend to concentrate less on the way they organise a discussion in the classroom. This study provides teachers with useful suggestions for preparing and conducting a classroom discussion for democratic citizenship education and makes them aware of certain pitfalls. The results of the study underline the importance for teachers to think carefully about what they want to achieve with a classroom discussion, and to be aware of the different ways they can conduct a classroom discussion, the different roles they can take, and what the consequences of their behaviour may be for how the discussion proceeds. A discussion aiming to confront students with different perspectives on controversial issues may demand a different approach from a discussion that aims to foster authentic discussion among students.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix 1.

Summary of the argumentation in Nick's classroom discussion

The statement was: *a comedian is allowed to insult Christians in his show*

(1) Agree, you are allowed to give your opinion
    (a) It is his job, he does this for a living

(2) There are limitations to the freedom of speech
    (a) Inciting violence
    (b) Offending people
    (c) You should not go too far
    (d) You should have respect for others

(3) Why is freedom of speech important?
    (a) Because you may not agree with decisions made by others and together you can arrive at a better solution.
    (b) To improve government. The government will know what to do.
    (c) Otherwise you will just bottle up your feelings.

(4) Limits to the freedom of speech vary over time
    (a) Currently there is less freedom of speech than there used to be.
        (i) If you say something now, you get shot.

(5) Freedom of speech depends on the role you have in society
    (a) Yes, a comedian has more freedom because:
        (i) He is only being funny.
        (ii) Does not have to mean what he says.
        (iii) Has a message and wants to get people thinking.
        (iv) Politicians want to translate their opinions into legislation.
    (b) No because everyone is equal.

Summary of the argumentation in Alison's classroom discussion

The statement was: *"There is no limitation to freedom of speech"*

(1) The role of the opinion of others

    (a) Agree: You may have a different opinion, freedom of speech is not limited by what other people think.
        (i)   An opinion cannot be wrong
    (b) Disagree: You must take other people's opinion into account
        (i)   If the majority do not approve of your opinion, your opinion is wrong.

(2) Offending people
    (a) Disagree: There is a limit to the freedom of speech; you must be careful that you do not offend anybody and you must show respect for other people.
        (i)   You must choose your words carefully.
        (ii)   You must first empathise with the others and put yourselves in their position before you give your opinion.
        (iii)   If what you are saying is the truth, it does not offend.
        (iv)   It should not be your intention to offend someone.
            (1)   You must realise that you live in a society in which you run the risk of being offended, but you do not have the right to offend other people.

(3) Stereotyping and stigmatising/social consequences
    (a) Disagree: you should not stigmatise or stereotype other people
        (i)   You should not give only one side of the story and say only negative things about people.
        (ii)   You should not stir up hatred.
        (iii)   You may give your opinion even if it stigmatises, but you may not spread it on a wide scale.

(4) Your opinion may not be too extreme

(5) Distinguish between opinions and facts
    (a) Disagree: you should not present your opinion as a fact.
        (i)   You must clearly state: 'I think' before you give your opinion.
        (ii)   You should not try to persuade other people and use the media.
    (b) There is a difference between statements about the world and statements about people.

(6) You must distinguish between opinions and taking measures based upon those opinions.

(7) Agree: someone may observe a problem and you must be able to say so.

(8) You may have discussions about opinions as long as it does not lead to an argument.