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**KNOWING AND ARGUING IN A PANEL DEBATE: SPEAKER ROLES AND
RESPONSIVITY TO OTHERS**

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Introduction

In current debates on issues of learning and schooling, a rationalist and instrumental perspective on knowledge and skills dominates. The underlying assumption is that learning can be described in quantitative terms as a matter of individuals acquiring 'more' of some defined and clearly delimited body of knowledge or academic subject. Analogously, the development of cognitive skills is conceived in a rather unidimensional manner as the abstract training of the mind to master given intellectual techniques. The dominant metaphor implies that knowledge resides within the individual, and the point of schooling is to master the skills that make it possible for the learner to answer questions referring to the predefined body of knowledge, while, for instance, the ability to formulate interesting questions has seldom been a prominent goal of schooling.

The general background of the research reported below is an interest in how people accommodate to the demands and affordances of the communicative ecologies of present-day society. In particular, we are interested in how they learn to use the resources available when finding out what is interesting to know about a particular

issue, what they need to know to be informed, and, in addition, how to present problems and argue with others. Thus, our ambition is to address issues of how young people develop the communicative and literacy skills necessary to engage in discussions with others about significant social problems. The challenges encountered in such situations have to do with a range of issues such as judging how different stakeholders define a problem, how they account for it and act upon it. What do people need to learn in order to navigate in the modern media world, how do they need to inform themselves so that they can exert agency in such settings?

Currently, many attempts are made to organize teaching and learning activities with a view to developing these kinds of generic skills among students. In the Swedish context, many teachers perceive some kind of project work as one such approach to teaching and learning. Project work is held to be conducive to preparing students for dealing with complex, 'real world', issues, while at the same time it allows them to engage in more scientific types of knowledge seeking (Driver, Newton, and Osborne 2000; Kolstø 2001). Such project work typically includes activities such as: a) independent search for relevant information (in books, journals and digital resources including the Internet), b) analysis and synthesis of information and the evaluation of its relevance, and c) the production of an essay or some other form of documentation that clarifies the issue and expresses an informed point of view (Nagel 2001).

One element of such learning practices is to promote skills of engaging in what Michaels, O'Connor, and Resnick (2008) refer to as accountable talk in classroom dialogue. Such talk is characterized by accountability to the learning community in which the activity takes place, i.e. it responds to and develops what others in the

group have said (Mercer and Littleton 2007; Mercer and Wegerif 1999). Furthermore, such talk is characterized by accountability to accepted standards of reasoning in specific disciplines, i.e. it uses evidence and arguments in ways appropriate to the discipline, such as for instance proofs in mathematics and documentary sources in history (Bazerman 1988, 1994). It is also characterized by accountability to knowledge – or to put it differently – such talk implies assuming epistemic responsibility, i.e. the argumentation presents and builds on knowledge that is accurate and relevant to the issue under discussion (see also Resnick 1999). Thus, the widespread use of project work can *per se* be seen as an interesting response to the challenges posed by media society. Even though pedagogical approaches of this kind have support in research and normative pedagogical ideologies, they, to a large extent, represent a grass-roots' response to the changing conditions of teaching and learning. At least, this seems to be the case among teachers working in a tradition where there is considerable academic freedom when it comes to organizing classroom work to reach politically formulated educational goals.

In the present case, the idea of project work is also related to the ambition of preparing students for articulating their knowing and values in the particular communicative format of a panel debate. Thus, the goal of the activities in the project we have followed is for students to be able to present their case, and defend and argue for it, in a public setting where concerns of different kinds are at stake. In this sense, the panel debate, and the preparation for it, serve as a context for learning how to argue and discuss socio-political issues in a democratic society. In a debate, where several concerns need to be considered, it is not sufficient to ground arguments in disciplinary forms of evidence and argumentation. In addition to the dimensions that

characterize accountable talk as described above, such face-to-face activities also imply that participants are responsive to others and flexible with respect to the multiplicity of concerns potentially displayed by the parties in an ongoing debate.

So-called socioscientific issues are frequently addressed through project work. Such issues concern complex and multidisciplinary problems such as global warming or genetic modification of food (Kolstø 2001), and in society they are interpreted and discussed in partially conflicting, partially overlapping, discourses (Mäkitalo, Jakobsson and Säljö in press). An interesting problem is to explore what learning, knowing and arguing mean in such practices. We will refer to the issue of learning how to argue in this particular setting as the *in situ* production of *accountable knowing*.

In the chapter, we draw on an authentic case of project work in a Grade 9 class (students aged 15 to 16) on topics that concern environmental issues. The issue attended to in the debate is climate change, and we will analyze sequences of interaction before and during the panel debate. Our analytical interest concerns how students construe accountable knowledge and what they consider to be acceptable arguments. We are also interested in the issue of how students show epistemic responsibility, i.e. to what extent and in what manner students take responsibility for the arguments they introduce in this kind of activity. An interesting difference, which emerges in our empirical material, is that in some cases the students ground their arguments in relevant literature or other sources, while in other cases they introduce arguments that fit the situation as a debate, but for which they have no substantive evidence. This raises the issue of what it means to be knowledgeable as a participant

in these kinds of educational arrangements, and, more generally, in debates and discussions on controversial issues.

A dialogical approach to the analysis of classroom interaction and argumentation

During the last decades, argumentative skills of students have been highlighted as an important area of research on learning, and several ways of training and assessing students' argumentation skills have been developed. A large part of the studies on classroom argumentation have used Toulmin's (1958) well known model of argumentation skills as an analytical tool for investigating classroom interaction (e.g., Aufschnaiter, Erduran, Osborne and Simon 2008; Driver et al. 1999; Erduran, Simon and Osborne 2004; Jiménez-Alexiandre, Bugallo Rodríguez and Duschl 2000; Osborne, Erduran and Simon 2004; Simon, Erduran and Osborne 2006). Toulmin's model has also served as an inspiration for attempts to design computer supported learning environments intended to train argumentation skills (Baker, Quignard, Lund and Séjourné 2003; Cho and Jonassen 2002; Clark and Sampson 2008). These studies are, among other things, interested in the quality of scientific argumentation and how students' argumentative skills can be enhanced. In most of these studies, learning is viewed as a cognitive process and students' knowledge and argumentation skills are assessed by means of pre- and post-tests. When using Toulmin's argumentation model, or similar models and frameworks, researchers often end up with a comparison where students' performances are compared to, or measured against, a particular norm or model of how they ideally should argue.

In a sociocultural and dialogical perspective, however, learning how to argue cannot be viewed solely as a matter of acquiring and following a model, which *per se* will produce an internally consistent form of argumentation. Rather, argumentation must be viewed as a creative practice, which involves a capacity to articulate ideas and arguments in contextually relevant manners. From a research point of view, this implies that one cannot analyze the activities of the students solely against the standards of a pre-formulated model of what it implies to argue. Instead one needs to ground the understanding of argumentative practices as *accountable knowing* in a dialogic perspective in which issues of what Bakhtin (1986) refers to as responsive understanding are central. From such a perspective, any utterance or claim is shaped by, and crafted in response to, other utterances:

From the very beginning the utterance is constructed while taking into account possible responsive reactions, for whose sake, in essence, it is actually created [...] The speaker expects a response from them, an active responsive understanding. The entire utterance is constructed as it were in anticipation of encountering this response (Bakhtin 1986: 94).

Claims to knowledge, then, are always dependent on, and produced in response to, the alternative perspectives and argumentative positions that are anticipated (Billig 1996). The force of a claim is, accordingly, normatively assessed 'both in the contexts of *in situ* interaction and within the sociocultural practices established over long traditions of indulging in such interactions' (Linell 1998: 54) within a particular activity system. The meaning and relevance of argumentation as an activity, as well as the interpretation of the specific issue addressed, are thus locally negotiated through

communicative formats established in a particular institutional setting. Classroom dialogues, for instance, inevitably 'reflect the values and social practices of schools as cultural institutions' (Mercer 2004: 139). Success or failure in argumentation, in other words, is relative to the normative expectations at work within such institutions of what are productive types of contributions (Bergqvist and Säljö 2004; Edwards and Mercer 1987; Furberg and Ludvigsen 2008).

The challenges of collaborative project work are considerable for students – not only do they imply searching, finding and scrutinizing relevant information, they also challenge participants' abilities to frame problems and to produce adequate descriptions of what is at stake. As Potter (1996) points out, descriptions of events *per se* represent a decisive discursive move:

On the one hand a description will be oriented to action (i.e. it will be used to accomplish an action, and it can be analysed to see how it is constructed so as to accomplish that action). On the other, a description will build its own status as a factual version. For the most part, the concern is to produce descriptions which will be treated as *mere* descriptions, reports which *tell how it is*. (Potter 1996: 108).

The narrative organization of descriptions can, for instance, be made to make a specific version of events credible (Potter 1996). From our analytical perspective, the adoption of a neutral stance in producing descriptions is as much an accomplishment as taking an overtly evaluative one. Descriptions may thus be seen as elements in the

accomplishment of specific types of social action; they are made to achieve something in the particular social activity of which they are part (in our case a panel debate).

The stance, which a speaker takes towards what she claims, can be discussed in terms of epistemic responsibility. An important feature of the particular kind of activity we have been studying is the participants' identification with the speaker roles they are assigned. Does for instance a speaker mention that she speaks from a certain standpoint – as a citizen, a student or as an assigned representative of an institution? Being assigned a role in a panel debate implies work to be done in terms of constructing a speaker role (Potter 1996). For instance, one has to realize what the category obligations and entitlements are, and what is at stake for the partners involved in the debate.

Empirical case: the panel debate as a project work assignment

The theme of the project work we followed during seven weeks in the winter of 2007/2008, was 'Resources and industries', and it involved grappling with issues of uses of energy sources and the global environmental consequences. It was planned by two homeroom teachers for a class in Grade 9 (ages 15-16 years). In curricular terms it covered several school subjects, including language (Swedish), science, civics and technology. The students had considerable experience of project work. The project, as a whole, was divided into six sections of different assignments and examinations. The pedagogical goal of the activity, which must be seen as ambitious since the skills to be acquired are rather advanced, implied that students should:

- Investigate and understand historical and current societal relations and contexts, be able to reflect over them and consider implications for the future,

- Develop their ability to use different sources of information and develop a critical attitude to these,
- Develop the ability to see the consequences of their own and others' views and actions,
- Develop insights into, and a responsible attitude towards, the use of natural resources.


After a few weeks of project work, a panel debate followed. The debate was intended to take about two hours, and the students had four to six lessons to prepare. The teachers gave instructions on how to behave in a panel debate (e.g. you do not scream, you listen to what the others have to say, you raise your hand if you want to speak, you must be polite even if disagreeing).

The students worked in pairs (boy/girl). Each pair was assigned a country, continent or the European Union to represent. The countries and regions were chosen by the teachers to offer a wide spectrum of different energy sources and environmental problems. The students were told that they should discuss issues of climate change from the perspective of the country assigned. To find information, the students were encouraged to use different resources: Internet sources, the school library, textbooks and newspaper articles. The students organized the preparatory part of the work, and the teachers supported them by answering questions and by giving advice. In the panel debate, students were expected to be able to use what they had learned in terms of contents but also to show that they had learned how to engage in a panel debate. That is, the contents and the interactional format were equally important to consider for the students.

Data production, transcription and analytic procedures

The data were produced through ethnographic fieldwork over the whole project period of seven weeks. Along with field notes, approximately 50 hours of video were recorded. Written instructions and student essays were collected. For this particular study, we have analyzed seven hours of video recordings. Methodologically we subscribe to the position taken by Jordan and Henderson (1995) when they argue for the complementarity of fieldwork and video documentation. Thus, ethnography ‘furnishes the background against which video analysis is carried out, and the detailed understanding provided by the microanalysis of interaction, in turn, informs our general ethnographic understanding.’ (1995, p. 43). Video data give access to the rich details of participants’ activities and features, such as how they use artefacts, how they move around and co-ordinate with each other; details which are often impossible to document in full through ethnographic records (cf. Heath and Hindmarsh 2002).

For this particular study, we followed a pair of students, Annie and Benny. The data were collected during the preparation phase (five hours of video data) and during the debate (two hours). The conversations were transcribed verbatim (see attached transcript legend), and non-verbal interaction significant for the analysis was added as comments in the transcriptions. The transcripts were used along with the video recordings when analyzing the material. The analysis was done using the notion of dialogicality also at the level of utterances (Linell 1998), i.e. we analyzed consequences of utterances as responsive social actions. As illustrated below, this kind of analysis is done in a back-and-forth manner.

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2. ... it responds to a previous utterance, and in that capacity it shapes the situated sense of what was said
 1. An utterance needs to be crafted to fit the unique circumstances of its performance...
 3. ... simultaneously it anticipates a response in return, and in that capacity it establishes some conditions for the next verbal act

We have approached the activity as *a participant's project and concern*, and then asked ourselves what (dialogically and rhetorically) seemed necessary to get the task done. In the empirical analysis of the interaction, the analytical questions concerned the following:

- 1) What stance do the students take to the information they have collected about their country, i.e. what kind of version do they produce (factual, aligning with, or distancing)?
- 2) How do they position themselves as speakers in relation to this information (i.e. as assigned representatives of their specific country and/or as students)?
- 3) How do they respond to potential critique and arguments from their opponents, i.e. how do they rhetorically incorporate such potential critique in their own argumentation?

Results

By means of selected episodes, we will first follow Annie and Benny as they prepare for the panel debate. Then we will follow them during the debate. They are aware that they will have to respond to questions posed by the other students about the country

they represent and about environmental issues. They also know that their performance in the debate will be assessed by the teachers.

Accounting for 'facts': Stance and engagement with the task

Annie and Benny represent Russia in the debate. As we enter their preparatory work, they have searched for information about industries and natural and economic resources in Russia on the Internet, and they have printed some of these pages. The information they have found concerns the uses of energy, and they use this information to formulate arguments in anticipation of the upcoming debate on climate change. Annie, who is writing in a note pad, pauses and looks up at Benny while commenting on her own writing about the Russian government having signed the Kyoto protocol:

INSERT FIGURE 1.1 NEAR HERE

Excerpt 1.

101. Annie: we're lucky to at least having signed the Kyoto protocol that's something good ((keeps on writing))
102. Benny: yes
103. ((Benny changes paper))
104. Annie: ((writes and reads out loud)) °the Kyoto protocol°
105. (4 s)
106. Annie: ((reads out loud)) signed the Kyoto protocol (1 s) ((writes and reads out loud)) since we

- ((inaudible))
107. (8 s)
108. Benny: ((stops reading and looks at Annie)) we do have a lot- or we have one fifth of u:hm (.) water power stations as well did we write that?
109. Annie: yea (.) re- so now we have started to realize how eh important it is (.) ((writes and reads out loud)) *how important it is (.)* for the environment ((finishes the sentence in writing)) ((reads out loud)) *started to realize how important it is with the environment* and- wait ((orients towards the printouts and reads))
110. Annie: how important it is with the environment and uhm (3 s) ((contentedly)) our future hm

Starting with the information collected about Russia, Annie points out that at least one thing is positive ‘we’re lucky to at least having signed the Kyoto protocol’ (utterance 101). Benny agrees (102) and continues to read the printouts. Annie then starts formulating a sentence in writing (104) about this piece of information, and she reads it aloud (106). Benny looks up and interrupts Annie in order to make sure that she has noted another positive ‘fact’ about water power that he has found while reading (108). Annie confirms that she has seen this and continues formulating a description of Russia as having realized the importance of environmental issues by signing the Kyoto protocol. She reads it out loud to Benny (109) and then finishes the sentence contentedly (110).

This fragment of interaction is interesting for illustrating how the students handle the task. They are, on the one hand, doing typical project schoolwork: they find, read,

evaluate and write down what they understand as relevant facts. But another dimension of their work, which is visibly present here, is that they do this in anticipation of an upcoming debate where they will be held accountable. It is obvious that they prepare themselves to speak as representatives of Russia, since they use the pronoun *we* when anticipating what they will be accountable for in the debate.

However, Annie and Benny also take an evaluative stance to the information they have collected about Russia and distance themselves from their assigned speaker role. Annie's point about 'we're lucky to at least having signed the Kyoto protocol that's something good' (101) testifies to this evaluative stance, and the expression 'at least' indicates that she does not align with the speaker role she has been given. To represent a country such as Russia may become a problem for Annie and Benny, since they will be assessed as students in terms of their insights into justifiable uses of natural resources. The students initially deal with this particular dilemma by making a description based on a selection of what they regard as positive facts (signing the Kyoto protocol and pointing out that 'we have one fifth of u:hm (.) water power stations as well' (108). This mode of making a description contains elements of alignment and distancing.

However, information speaking in favour of, as well as against, Russia is available to their future opponents as well, and this needs to be attended to in their argumentative strategies. For example, in their description they anticipate critique of Russia as not being environmentally concerned by pointing out that they are starting 'to realize how important it is with the environment' (109). As we shall see in the following, the students – *qua* students – are careful not to align with or lend their voice to a country

that uses what they consider to be destructive energy sources, and that is not prepared to take action for the future.

Narrative organization of the description: Producing credibility as speakers

Representing Russia is, for reasons we have already alluded to, not an easy task for Annie and Benny. They have trouble finding what they see as positive information about the country. Instead, they have to deal with what they perceive as a set of negative circumstances. Looking through the printouts, Benny notices aspects of Russia's energy consumption that he finds disturbing:

Excerpt 2

201. Benny: this is not particularly good ((points to a printout)) really (.) that we have uhm (.) a lot of oil and that it's like (1 s)
202. Annie: n[o:: but uhm]
203. Benny: [one of our most impor]tant sources of income
204. Annie: uh(h)m nope (.) uhm ((reads her notes)) (2 s) but I have written like this ((reads out loud from her notes)) *over the years we have unfortunately built up a large nuclear and oil indust-* (.) nuclear a- and oil industry or something like that
205. Benny: yes
206. Annie: nuclear ((hesitates and puts down the pencil)) and ((takes a rubber in her hand)) oil industry ((erases something in her notes)) nuclear ((takes the pencil and writes)) *power and o[il]*
207. Benny: [we]

can say that we will raise the prices like uhm:
the prices on it then fewer will buy [it]

208. Annie: [mm] (1 s)
((reads out loud)) *this is not something we are
proud of and we will of concern for the
environment from now on try to (.) cut down on
that* ((marks in her notes where to insert
Benny's proposal)) uhm: we- we're going to raise
((starts to write))

Benny draws attention to the Russian oil and nuclear industry (utterance 201), and Annie agrees that this is a problem (202). Benny then adds an even more aggravating circumstance: that oil is one of Russia's most important sources of income (203). Annie confirms this by responding with faint laughter in her voice (204). She then turns back to her notes and reads out loud how she has taken this into consideration when describing Russia. Benny is positive about Annie's description (205), and she continues to write (206). Benny then contributes to the version they are co-producing by adding a made up, but potentially useful, argument about raising the price of oil to reduce consumption (207). Agreeing with Benny that this is a useful argument, Annie continues to elaborate her own formulations and then adds Benny's contribution to their notes (208).

In this excerpt, Russia's dependence on oil and nuclear energy is addressed as a problem – both in its own right (since both are considered problematic energy sources and since the Russian economy is dependent on oil) and rhetorically for them to defend during the upcoming debate. The faint laughter by Annie (204), as she responds to Benny's concerns, is a sign of acknowledging that they face a dilemma.

The description Annie and Benny produce contains relevant and problematic information about Russian energy production, and simultaneously makes Russia appear as a country that is *aware of environmental issues* and willing to take action *for the future*. In our interpretation, this construction responds to the dilemma of the double accountability as representatives of Russia and of appearing as environmentally concerned and informed students.

The narrative organization functions to respond to the students' concerns. In the narrative, the negative information is described as a thing of the past. The formulation 'over the years we have unfortunately built up a large nuclear and oil industry' (204) reports the history in such a manner that it makes it possible for the students to distance themselves from what has evolved. A complementary way of displaying their evaluative stance as students is to prepare formulations about the future claiming that Russia 'will of concern for the environment from now on try to cut down' its dependence on nuclear power and oil (208). By organizing the narrative of past events and future action in this way, they are able to display their environmental understanding as students while at the same accounting for Russian energy production and use.

Making claims: Anticipating and incorporating critique in the production of arguments

Annie and Benny then try several different ways of constructing their arguments. Annie reads out loud what she has written, and together they test possible formulations. While the final sentence in this part of their work (utterance 301) is

formulated aloud by Benny and finished in writing by Annie, she picks up an additional problem that they need to address:

Excerpt 3

301. Benny: so that fewer uhm countries or fewer people or
what to say fewer=
302. Annie: =but we'll still be needing them but uhm ((reads
out loud from her notes)) *we are going to raise
the prices on oil and the gas so that* uhm
303. Benny: but they'll continue to buy from us and so we'll
still make a profit on it so (.) there surely will
be fewer buyers
304. Annie: but if it is as many buyers
305. Benny: mm
306. Annie: then we still will get more mo- money
307. Benny: mm
308. Annie: and that money could go to research within like
309. Benny: new uhm fuel
310. Annie: to new [uhm]
311. Benny: [yeah] yeah we can write that
312. Annie: yes or like to- yeah research on electric cars or
some[thing]
313. Benny: [yeah] something like that
314. Annie: yeah

Annie objects to Benny's suggestion (302) about having fewer buyers as a sufficient argument for how Russia should act in the future. Benny argues that there will be enough buyers even if prices are raised (303). However, there is nothing in this argument which demonstrates environmental concerns on the part of Russia. The idea

Annie comes up with in response to this potential argumentative dilemma is that the increased margin from higher prices could be used for funding research on environmental issues (306 and 308). Benny contributes by saying that research could produce ‘new [...] fuel’ (309). Annie agrees (310) and Benny asks her to write down what they have agreed upon (311). Annie adds another concrete example of electric cars (312).

By preparing this kind of formulation the students will be able to more firmly ground their forthcoming argumentation in a specific normative environmental discourse. If the issue of economic stake for Russia appears in the debate, they now have formulated a counter-argument. This hypothetical line of reasoning allows them to display their own understanding of environmental issues. They are, in other words, well prepared to succeed as being knowledgeable of facts about Russia, while simultaneously displaying their understanding of and concern for environmental issues.

Put to the test: The panel debate as a discursive activity

Above we illustrated parts of the preparatory work that Annie and Benny engaged in. Below we will present parts of the panel debate activity. The debate took place in the assembly hall of the school. A podium with spotlights was used as a stage (see Figure 1.2). The students who were not on stage served as audience. Before they started the activity, the teachers repeated some rules: members of the audience were not to ask questions during the debate, the debaters should speak in a loud voice, they should raise their hand to get the floor and only one person should speak at a time. The students were allowed to have written notes as support, but each party in the debate

was given only five minutes to speak. One of the teachers timed all verbal activity. Immediately before starting the debate, one of the teachers told the students to address how they were going to reduce the greenhouse effect. Then the students could start asking each other questions.

INSERT FIGURE 1.2 NEAR HERE

The excerpts below are taken from the beginning of the debate activity. The parties represented on stage are Russia (Annie and Benny), Bangladesh (Daniel and Peter), Sweden (Ellie) and China (Jacob and Frida). This is the first and only time during the debate that Russia's environmental measures were questioned. As we enter the debate, Daniel representing Bangladesh has raised his hand. The teacher gives him the floor:

Excerpt 4

401. Teacher: Daniel
402. Daniel: yes Russia uhm you have quite many nuclear powerstations and uhm the safety is considered poor (.) what are you going to do about that?
403. Annie: safety? ((clears her throat))
404. Daniel: yes
405. Annie: well u:hm well we concentrate on improving safety
- 406 (1 s)
406. Benny: and [reduce] nuclear power

407. Annie: [but we] (1 s) yeah uhm first of all we'll try to reduce it (.) and then uhm (.) it won't go- it will not be done in a year that we get (.) it- it will take- it will take time but we concentrate on making more environment friendly (.) yeah
408. Peter: ((raises his hand)) uhu so what were you thinking would replace nuclear power then?
409. Benny: water power- uhm stations and wind power turbines is what we have thought of
410. Annie: yep

Daniel opens the debate. He points out that Russia has a lot of nuclear power and that there are safety problems. He asks Russia how they are going to solve this alleged problem (402). This question was probably unexpected, as Annie's first response seems to be a request for clarification: 'safety?' (403). This interpretation that she is taken by surprise is supported by her hesitation when answering (405). As she responds that they 'are concentrating on improving the safety' (405), she simultaneously accepts the claim Daniel has made. Thus, as a participant in a debate speaking on behalf of Russia she is obliged to answer. Denying that there are issues of safety would be speaking against what they should know from the information provided. It would also risk making her appear ignorant of the significance of these kinds of problems. In 406 and 407, Annie and Benny continue along the line of argumentation they have prepared about how to improve the situation.

In dealing with this dilemma about the safety problems, they invoke claims for which they have no substantive evidence. In their preparations they have not considered if

Russian *policy* is in the direction they suggest. Their response displays their own evaluative stance – as students - about what is the expected argument. In other words, they improvise and create claims that follow the logic of debate but which are not grounded in arguments they have formulated. This illustrates the complexity of the project work and the debate format. In their preparations, and in their argumentation, Annie and Benny are researching and describing Russia's energy sources and they account for these sources in a factual manner. They are in a preparatory phase, however, not attending to Russian policy or developmental plans and problems. As can be seen, the questions they receive are primarily about Russian policy and not about their energy production *per se*.

The answers Annie and Benny give are, for the time being, accepted. Peter then raises his hand and the teacher gives him the floor. Peter continues with another question (408) pointing out that Russia cannot abandon one energy source without substituting it for a different one. In line with their preparations, Annie and Benny respond to this with the claim that they will replace nuclear power with water power and wind power. One interesting aspect of this particular activity is that none of the other students objects to or questions Annie's and Benny's construction of the alleged Russian position. It is unclear whether this kind of questioning was not considered as part of the task, or if the strict time limits or the rules of the debate were perceived as preventing such scrutiny.

What is striking about the panel debate is that all students, when discussing environmental issues, seem to identify with a similar stance to such concerns, even though the choice of countries to represent has been done in order for different types

of arguments to surface in the debate. One example of this is the evaluative stance they take as they discuss nuclear energy. For instance, Russia could have used the argument that nuclear power is an acceptable energy source at present, because it is *not* contributing to the “green house effect.” This argument, however, is not used; nuclear energy is considered a problem throughout.

After Annie and Benny have answered the questions about the alleged Russian position towards nuclear power, Ellie (representing Sweden) raises her hand to get the floor. Ellie points out that oil production is Russia’s primary source of income. By framing the issue in economic discourse, she implicitly challenges the credibility of Russia as being environmentally responsible. However, this is a challenge for which Annie and Benny have prepared (see Excerpt 3), and they respond within the same discursive framing:

Excerpt 5

501. Ellie: uhm Russia since your principal uhm source of income is export of gas and oil how will you: change cause it’s it’s from there you get your economy?

502. Annie: mm u:hm we will raise- we will of course raise- ((turns and points to Benny)) °and then you can°=

503. Benny: =yes we will raise the price on oil gas and uhm (.) if they buy as much the money will go to (.) environment- environment friendly fuels and (.) green energies

504. (9 s)

505. Teacher: mm?
506. Jacob: mm ((reluctantly raises his hand)) I'll say something then
507. Teacher: mm Jacob
508. Jacob: that uhm Russia discharge uhm (.) or what will you do to not let- or you discharge most (.) tons of carbon dioxide per person of these countries (.) what will you do (.) for this not to continue like that?
509. Benny: yeah we are doing research on more environment friendly cars and things like that- (.) yea=
510. Annie: =mm you see in the future we concentrate on uhm what's it called (.) to- reduce the discharge of carbon dioxide (.) we do (.) we make an effort with more environment fri(h)endly methods

Annie starts responding to the issue of having an oil dependent economy but hesitates and lets Benny take over (utterance 502). Benny presents the line of argument for which they have prepared but have no evidence. The solution is that they 'will raise the prices on oil gas'. Benny continues by saying that if there is still a profit the money should go to 'environment friendly fuels and (.) green energies' (503). Their argumentation effectively closes the discussion on this topic. After a pause of nine seconds, one of the teachers encourages the students to continue by saying: 'mm?' (505). Jacob responds and, rather reluctantly, raises his hand (506). He seems to struggle somewhat with the formulations about what to do with Russia's discharge of carbon dioxide (508). Benny introduces an argument they have prepared about how Russia is handling this problem (509). Again, Benny is making a claim for which they

have no evidence. Annie contentedly contributes by pointing out that they will reduce the discharge of carbon dioxide, and she reassures the panel that they are investing in more environment friendly methods (510).

All questions that the students ask are grounded in information about Russia that they have read. They are not challenging Annie's and Benny's arguments or directly testing the grounds on which they are making their claims. Instead they all seem to respond to the situated task given by the teachers to discuss how they are going to reduce the greenhouse effect. Students' knowledge about this issue, and their knowledge about how to respond in the debate format, determine the logic of the argumentation. Thus, the speaker position of Russia disappears in favour of responding to the issue of climate change in their capacity as students demonstrating their insight into the normatively expected discourse.

Discussion

The basic interest of this study is how students learn to argue and how they prepare themselves for engaging in such activities. Our argument has been that learning to argue is more than mastering a given intellectual technique and the ability to use disciplinary forms of knowledge in accountable manners. What we have referred to as accountable knowing, in addition, stresses responsiveness to the perspectives of others and *in situ* rhetorical flexibility in argumentation. Thus, in relation to complex 'real world' issues, the conception of what it means to be accountable also incorporates issues of responsiveness to the perspectives of others.

In the classroom we have followed, the particular communicative activities of preparing for and engaging in a panel debate are introduced for pedagogical purposes. This implies that the activity is situated in an activity system with specific communicative traditions and with a specific speaker role for students. The activity differs in several respects from traditional instructional formats. Students are not just accountable for responding to questions about facts. Rather, they have a broad set of obligations including activities such as searching, selecting and evaluating information in terms of its relevance and validity for the issue to be addressed. They have to organize the information in writing so that it expresses an informed and well-argued point of view. In the present case, students also have to perspectivize the information and the issues in terms of the participant role assigned to them in the debate as representatives of a country or a political body, and as we have shown, throughout their discussion there is tension over which speaker roles to adopt.

The complexity of the task is illustrated, for instance, by the observation that Annie and Benny in their preparatory work concentrate on how to account for 'facts' about the use and production of energy in Russia. They do not inquire into Russian *policy* on energy and environmental issues. This is a kind of category mistake, which forces them to invent arguments and make claims about future initiatives and measures. In the debate, and when responding to challenges about policy (regarding nuclear safety and having an oil dependent economy), they improvise by invoking arguments from the normatively preferred discourse about energy use (e.g., reducing dependence on oil) they know as students. As in many debates, it is the policy issues which are primarily focussed; causes and consequences are more interesting than mere

descriptions of states of affair, and maybe this is what Annie and Benny are learning as part of this exercise.

The debate element of the project represents a communicative format which presents specific challenges both in the preparations and in the *in situ* performance. The format implies presenting accountable knowing, but it also requires considerable creativity and rhetorical flexibility. Like all face-to-face interaction, debates are dynamic and unpredictable in terms of how they evolve, and the students in their preparations have to anticipate what arguments and claims they may face on the podium. However, in a debate one also has to be able to respond to the unexpected and to improvise, as we saw in Excerpt 4 when Annie faces the question about safety in the context of nuclear energy. But even such improvising has to be done in a relevant and accountable manner. Responsiveness is a prominent feature of how the students organize their work, and how they contribute to the debate. What is obvious is that they engage in producing descriptions that are relevant and at the same time rhetorically convincing in the sense that they may successfully defend a position or win a debate against adversaries. What is at stake in this context is thus not just knowing but to some extent also winning or losing.

In terms of learning, the panel debate generates activities which touch the core of citizenship and knowing in a democratic society. The students are expected to recognize what are valid arguments and substantiated claims, while at the same time they need to show rhetorical flexibility and accommodate to the dynamics of debating. From an analytical perspective, introducing this communicative format in this particular field with a range of disciplinary perspectives and highly contested

views represents a considerable challenge. From a historical point of view, the type of literacy skills required to deal successfully with such tasks go far beyond the conventional expectations of what it means to read, interpret and produce texts in the school setting. In their work, the students are accountable for producing contextually relevant and appropriate versions of an issue, where there are many possible positions and conflictual perspectives. Thus, what they say and write must be accepted as a valid description fitting the occasion in a highly complex field.

Debates represent a specific communicative format in contemporary society. There is a normative order when it comes to entitlements and obligations on the part of the participants. This format is what is introduced into the educational setting, and the instructions students receive specify how to act and behave in the situation. But, even within such a format students are still primarily accountable as students. Even though the students were assigned specific positions in the debate, and even though they were obliged to build their argumentation on ‘facts’, the activity was clearly carried through in ‘a peculiar hybrid context of interaction that is [...] somewhat “nebulous” in character’ (Heritage and Sefi 1992: 412). Thus, the students respond to several situated forms of accountability. They have to give voice *to* their assigned country, while at the same time they are expected to show their awareness of the environmental problems *of* their assigned country, and this is a dilemma for them.

In this educational context, there is a recognizable and normatively preferred environmental discourse that the students are aware of and feel obliged to follow in their role as competent students. When approaching the task, for instance, they make a clear distinction between what are considered as ‘positive’ and ‘negative’ facts to be

accounted for. This normative discourse frames how they make the description of Russia in terms of past events and future actions. When describing the past, and Russia's dependence on oil and nuclear energy, they show that they are knowledgeable about Russia's energy production: they account for 'facts'. In order to account for their own evaluative stance as students, they invent supporting arguments by formulating future policies of raising prices and investing in research.

The results show that the debate format has clear implications for how the students engage in the project theme. There are many signs of this orientation during their work. Even when discussing with each other, they anticipate their position in the upcoming debate. When organizing teaching and learning practices in this manner, students have to respond to the complexities of producing knowing relevant to a situation; a process which includes a range of discursive and evaluative activities which traditional pedagogy has often kept out of view. What we have seen is a glimpse of a complex and extended socialization process in which the students are familiarized with how to craft descriptions and arguments in a world characterized by a multitude of potentially relevant sources of knowledge. To what extent this will empower students and make it possible for them to exert agency in media society is an empirical question. What is intended as regards pedagogical practice is to provide students with opportunities to engage in tasks which give them some ownership of the process of producing knowing in contemporary society. This is an obligation for schooling and such complex socialization is hard to achieve without productive support from teachers and schools

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