Talk, Text, and Tasks in Student Initiated Instructional Interaction

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Abstract: This study examines student-initiated instructional interaction in contexts where students work individually with tasks. The aim is to demonstrate some systematic ways in which the actions of students and teachers are contingent on, shaped by, and oriented to these tasks and the associated texts. Analyses of three encounters situated in different phases of the students' work are presented: in the beginning of the task, students ask open-ended questions about textual instructions and what they are supposed to do; in the midst of reading textbooks and writing texts, students ask the teacher to clarify or confirm some issue; and after having written a text, students request the teacher to read it, and assess whether it is acceptable or needs revision. The analyses show the interplay between talk, text, and task, and how the instructional interaction orients towards what the students have done before the encounters and what they should do next.

Introduction

This study investigates the interaction that takes place when students who sit at their desks and work on various assignments call on the teacher to address some issue or difficulty that they have encountered. The investigated interaction is different from that typically found in whole-class teaching (cf., Mehan, 1979; McHoul, 1978; Payne & Hustler, 1980) in that the teacher is not talking to a cohort of students and it is the students who initiate the interaction with teachers rather than the other way around. While these encounters might be as instructive and asymmetrical as whole-class teaching, they are also responsive to the matters brought up by the students, and they display an orientation toward what the students should do next. Studies of

talk-in-interaction have repeatedly shown how utterances are produced with a "close retrospective attention to the details of what was just said, and with prospective orientation to consequential future courses of action" (Goodwin, 2006, p. 444). In the episodes investigated for the present study, there is also an orientation to courses of actions beyond those immediately prior or next, that is, to what the students have done before the encounters and what they will do afterwards. With this as a starting point, the study aims to demonstrate some systematic ways in which the investigated interaction is contingent on, shaped by, and manifestly oriented to the students' work with tasks and the associated texts.

Instructional sequences that are initiated by students have previously been investigated in the context of whole-class teaching (Garton, 2012; Lindwall & Lymer, 2014; St. John & Cromdal, in press), academic supervision (Park, 2012a, b; 2015; Vehviläinen, 2009), and situations in which students work individually on assignments in classrooms (Ekström & Lindwall, 2014; Koole, 2012). St. John and Cromdal (in press) show how student questions during whole-class lessons set up tensions for the teacher between the relevance of answering individual students and upholding the progression of the classroom agenda, and how teachers, through a "dual addressivity", design their answers to be relevant to both the student who posed the question and to the whole class. This can be contrasted with dyadic supervisory encounters, which have different "opportunities for participation" (Lerner, 1995, p. 111) since there are only two parties involved, and which, at least partly and potentially, are "organizable around the student's initiative and agenda" (Vehviläinen, 2009, p. 163).

Common to both cohort-organized instruction and academic supervision is that the student-initiated sequences are part of longer stretches of interaction that involve several different topics and that they emerge from within this interaction. In other circumstances, in

which students work individually on assignments and call the teacher over to address some problem or issue, the whole encounter is "produced by reference to expectable monotopicality" (Schegloff & Sacks, 1973, p. 308). For instance, in the context of math education, Koole (2012) identifies a three-part sequence consisting of localization, explanation, and acknowledgement. After having requested the teacher's attention, the student localizes the problem, by saying, for instance, "I don't understand C and D", where C and D refer to two elements of a textbook assignment, whereupon the teacher explains how the task should be solved. The encounter is finally closed after the teacher has requested and received acknowledgement of student understanding.

In previous studies, students' sequence-initiating actions have been characterized in a number of ways: as asking questions (Park, 2012a; St. John & Cromdal, in press), seeking or requesting advice (Park, 2012b; Vehviläinen, 2009), or formulating problems (Koole, 2012). These characterizations emphasize different but interrelated aspects of the students' actions: the question that the student poses, the advice that the student requests, or the problem or issue that makes calling on the teacher relevant in the first place. The various formulations also illustrate how general distinctions between different types of actions can be difficult to uphold. As has been repeatedly pointed out (e.g., Drew & Couper-Kuhlen, 2014; Schegloff, 1984), it is not sufficient that the linguistic forms of utterances, such as "how do I do X?" and "can you help with me with X?", are associated with certain types of action in order to claim that the utterance is designed and understood as a question or a request in an actual case. In the literature on talk-in-interaction, questions are sometimes described as actions that are produced and understood to "solicit information" (Ehrlich & Freed, 2010), whereas, requests are described "as one of the ways in which one person recruits another's assistance in some matter" (Drew & Couper-

Kuhlen, 2014, p. 1). On this general level, whether the students in the investigated settings are understood to be asking for information or assistance seems to be a question more about research interest and perspective than about the ways in which actions are produced and oriented to by the members themselves. This is not to say that the composition of the contributions is without sequential implicativeness, only that such general distinctions between questions and requests are hard to make when students are asking for instruction.

In studies of academic supervision, the composition of students' sequence initiating actions has been examined in relation to the sequential environments of the actions and the responses the actions solicit from teachers. Vehviläinen (2009) makes a distinction between question formats that "invoke incompetence" and those that "propose candidate solutions or potential problems". The former mainly consist of open-ended questions and are "usually successful in eliciting extensive advice and help from teachers" (p. 187), whereas the latter consist of polar (yes/no) questions and are regularly responded to with minimal confirmation or disconfirmation followed by advice in the form of expansions that account for the initial response. Investigating a similar type of setting, Park (2012a) takes an interest in the sequential environment of various types of polar questions. According to Park, interrogatively formed questions are typically used to launch a new topical sequence and are responded to in extended turns. In contrast, declaratively posed questions are used to provide upshots of what the teacher said, and their immediate responses are typically simple confirmations. However, as Park notes, the teachers often expand on their initial responses after the students have acknowledged the confirmations. In a study of the "agenda setting" part of academic supervision, Park (2015) investigates the difference between two request forms that she glosses as "I don't know X" and "I want X". She points out that both forms are produced and treated as requests for help: the

former is produced with many mitigations and taken to be broad and vague in scope, whereas the latter is produced straightforwardly and involves a more specific problem.

Like the previous work on academic supervision, the present study takes an interest in the relationship between the students' sequence-initiating actions, their sequential environment, and the responses that they solicit from teachers. In contrast to previous studies, however, the present study does not focus specifically on the composition of sequence-initiating actions and their immediate responses. Instead, it provides an analysis of three longer encounters from beginning to end. The material for the study consists of 37 video recorded and transcribed episodes, each lasting between 30 sec and 8 min, in which students have called on the teacher to address some problem or issue. As pointed out earlier, the study directs its interest to the ways in which the investigated sequences are contingent on, shaped by, and manifestly oriented to the students' work on the task. Within this interest, the video-recorded encounters are organized into three broad categories: students asking about the textual instructions and what they are supposed to do next; students asking the teacher to clarify or confirm some issue that has emerged while reading textbooks and writing texts; and students asking the teachers to read and check what they have written so far.

Method

This study is based on video material recorded in a Grade 9 class of 15- and 16-year-olds in Sweden for five consecutive weeks. During this time, the class was engaged in a so-called thematic project about "Industries and Resources", and students were supposed to read and write about various types of energy sources and the causes and effects of global and local environmental problems. The project was initiated and planned by the two homeroom teachers, one of whom taught natural science (TeN) and the other social science (TeS), and it was divided

into sections, each of which consisted of several assignments. The teachers initially introduced the theme, goals, sections, and assignments, and the students were provided with written instructions. The students then worked individually, in pairs, or in groups, while the teacher moved among students and groups of students. The assignments were structured so that they did not have simple or straightforward solutions. For example, the students were asked to discuss whether the greenhouse effect is a natural phenomenon or caused by humans, whether and how different natural resources (such as oil, coal, and wind energy) affect the environment, how the environmental policies of various countries change local and global ecosystems, and whether students, individually, can help prevent future environmental damage.

The analysis of this study focuses on the interaction that took place between the initial introduction and the final examination, that is, the phase when the students were working with the assignments. During the five weeks that the educational project lasted, fieldwork was conducted, and 30 hours of video were recorded. In total, 37 instances of student-initiated interaction during project work were transcribed using the system developed by Jefferson (1984). In this study, the transcriptions of the Swedish recordings are supplemented with English translations and descriptive texts concerning the embodied actions of the students and teachers. Analytically, the study builds on prior ethnomethodological work on instruction and instruction-following (e.g., Amerine & Bilmes, 1988; Garfinkel, 1967), and sequential analyses of classroom interaction (e.g., Lee, 2004, 2007, 2008; Lerner, 1995; Macbeth, 1994, 2002; Margutti & Drew, 2014). What these studies repeatedly show is that the sense of words and instructions are "hopelessly tied to local settings, indefinite horizons of meaning, and practical purposes" (Macbeth, 1994, p. 322). Following this, the task of the sequential analysis is to explicate the natural records of interaction with "attention to the details of classroom contexts, bringing into

view the orderly, discursive and competent practices of worldmaking by teachers and their students" (Lee, 2004, p. 102).

Analysis

An initial noticing, which is connected to the organization of the material and the findings of the study, is that the students' difficulties are routinely grounded in various texts: in written instructions, in books and other printed sources, and in the students' own writings. To some extent, this reflects the general organization of the tasks in the setting (see also, Greiffenhagen, 2008, p. 56). Initially, the students are provided with a set of instructions that give an outline of what they should do. Then, the students begin to search for and read various published resources to formulate a text of their own. Finally, students hand in their work to the teacher, who evaluates what they have done. Each of these steps might occasion the relevancy of calling on the teacher: the teachers are requested to specify the instructions, to address some problem that has emerged in the process of doing the task, or to read and assess what the students have done so far. The following sections present three episodes that demonstrate such differences.

- The analysis of Fragment 1 shows an instance that takes place at the beginning of a task. The student points to the written instructions and asks an open-ended question about what the teacher means by them. The teacher responds by posing a series of instructional questions that specifies the written instructions and provides examples of how the students can proceed with the task.
- The analysis of Fragment 2 shows an episode that takes place when the student is in the middle of writing up what she has been reading. The problem formulation is done over an extended series of turns, during which the student shifts her orientation between the

textbook and her own text, and eventually ends up with the student proposing a candidate understanding which the teacher confirms.

- The analysis of Fragment 3 shows an instance that takes place after the student has written half a page. In this episode, the student requests the teacher to read the text she has written, which becomes a way of checking its quality and receiving instructions on what further needs to be done.

As is clear from this summary, the ways in which the encounters are initiated by the students and responded to by the teachers differ significantly among the three episodes. The following analyses aim to explicate these differences, as well as how the students and the teachers orient to instructions, tasks, and texts.

Specifying instructions

The first episode (Fragment 1a-c) takes place at the beginning of an assignment, before the student who calls the teacher has begun to write anything. The student initiates the sequence by asking an open-ended question about the meaning of the written instructions. Rather than simply stating what the instructions mean or what the student should do, the teacher's "answer" takes the form of a series of IRE sequences. Such sequences – in which the teacher poses a question, the student replies, and the teacher evaluates or provides feedback to the student's reply in the third turn – have been extensively documented in the literature on whole-class interaction (e.g., Lee, 2007, 2008; Margutti & Drew, 2014; Mehan, 1979) and have been described as the "workhorse of direct instruction" (Macbeth, 2011, p. 37). In this situation, however, the teacher's questions are heard not only as questions, but also as specifications of the instructions that explicate the subsequent work on the task.

Earlier in the lesson, the teacher formulated the following topic to the class: “Agriculture in Sweden and the rest of the world. Will there be enough land? What should we eat?” According to the textual instructions, the students are supposed to write down information under this heading and argue for their positions on the issues in their texts. The question is framed in the context of “agriculture” and in the relationship between “Sweden and the rest of the world”, which, to some extent, specify what the students should do, but it is up to the students to find relevant information about the topic and to formulate a position based on this information. Fragment 1 begins just after the teacher (TeN) has arrived at the desk of the student (St1). While the students work individually on these assignments, another student (St2), who sits next to St1, eventually joins the discussion.

Fragment 1a

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101 St1: what do you mean with the question wh- (.) what should we e:at? (.)
         vad menar du med den punkten va- (.) vad ska vi ä:ta? (.)
102      like (0.3) here eh what (.) no=
         liksom (0.3) *här eh vad* (.) nej=
                      *points at the instructions*
103 TeN: =mm
104 St1: >what should we eat,<
         >vad ska vi äta,<
105 TeN: yes (0.4) what e::hm is best for the enviro:nment that we eat?
         ja (0.4) vad e::hm vad är det bästa för miljö:n att vi äter?
106      (0.5) [is it- ]
         (0.5) [är det-]
107 St1:       [is it  ] natu::ral products, or what one should say=
               [är det ] natu::rprodukter, eller vad man ska säga=
108 TeN: =yes uh one can think that there might be different eco (.)
         =ja eh man kan tänka sig att det kanske finns lite olika miljö (.)
109      labels on food?
         märkningar på mat?
110 St2: kravmärkt,
         kravmärkt,
111 TeN: maybe that and what does kravmärkt imply?
         kanske så och vad innebär kravmärkningen?
112 St1: aha^  [then I see-]
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         jaha^ [då förstår-]
113 TeN:       [is it good-] (.) if one relates this to the transportation
               [är det bra-] (.) om man kopplar ihop det här med transporterna
114      (.) is it good to eat an apple from- °or good° (.) eh fro- from
         (.) är det bra att käka ett äpple från- °elle bra° (.) eh frå- från
115      (.) South (.) America?
         (.) syd (.) amerika?
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The question “what should we eat?”, which the student locates in the written instructions by pointing at it (102) and by reading aloud (104), is open to innumerable interpretations. As is clear from the student’s question and the ensuing interaction, this does not mean that anything goes or that the teacher is unable or unwilling to further specify the question. After a brief acknowledgement, the teacher provides a first answer to the student’s question by reformulating “what should we eat?” as “what is best for the environment that we eat?” (105). When the teacher poses it this way, a certain ambiguity is introduced. On the one hand, the teacher’s reformulation specifies the instructions and, thus, talks about what the student should do and write to complete the assignment. Heard in this way, the question cannot really be answered then and there. Instead, it requires that the student engage with the relevant literature and formulate a text on her own. However, given the interrogative form, the raised intonation, and the short pause following it, the teacher’s utterance could also be relevantly heard as a question to be answered with an adjacently placed turn.

The answer to the teacher’s question is also formulated as a question (107). The interrogative syntax and the alternative “or what should say” marks the student’s reply, “*naturprodukter*”, as uncertain and projects confirmation or correction as the relevant next actions. By treating the teacher’s utterance as a question and projecting confirmation as a relevant next turn, the student’s contribution responds to the teacher’s utterance as a first part of an IRE-sequence, or as a “question with a known answer” (Mehan, 1979). In this case, the notion

of "*naturprodukter*", like its English equivalent "natural products", primarily refers to food, dietary supplements, and pharmacological products that do not contain artificial ingredients, that is, products that are more related to a healthy lifestyle than to a sustainable environment. Although the teacher does not explicitly correct the student – in fact, she provides minimal acknowledgement of the candidate answer – she steers the interaction in another direction: from "natural products" to "ecolabels" (108–109), which the second student answers by naming a Swedish ecolabel, "*kravmärkt*" (110).

In contrast to the previous contributions by the teacher, which were taken by the students as questions, the student's "aha then I see" (112) responds to the teacher's next contribution (111) as an instruction to how to proceed with the project work rather than as a follow-up question to be answered. More specifically, the aha-prefaced claim of understanding could potentially be taken as the first step to close the sequence, as an indication that she is now ready to go on (cf. Lindwall & Lymer, 2011, p. 472). This, however, is not a decision that is left to the student, and the teacher does not pick up on it. Instead, and overlapping with the student's response, the teacher introduces the topic of transportation as a starting point for a new series of questions (113–115).

Fragment 1b

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114 TeN: is it good to eat an apple from- °or good° (.) eh fro- from (.)
         är det bra att käka ett äpple från- °elle bra° (.) eh frå- från (.)
115      South (.) America?
         syd (.) amerika?
116 St1: no (.) [Swedish apples, ]
         nä (.) [svenska äpplen, ]
117 TeN:        [or should we bu-] (.) m:: why is that better? and what
                [elle ska vi köp-] (.) m:: och varför är det bättre? och vad
118      shall we eat so that it affects the environment as much- or
         ska vi äta för att de påverkar miljön så mycket som- elle
119      as little as possible?
         så lite som möjligt?
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120 St1: because one shouldn't trans- transport it that far
därför man ska inte trans- ta och transportera det så långt
121 TeN: precisely cause transportation leads to?
precis för transporter leder till?
122 St1: economy (.) and environm[ent-]
ekonomi (.) och mil[jön]
123 TeN: [env-] precisely (0.3) so (0.3) and what
[mi-] precis (0.3) så (0.3) och vad
124 should one eat- uh what's the best for the environment if one eats
ska man äta- eh va ä det bästa för miljön om man äter
125 much much really much meat or if one eats much vegetables?
mycket mycket jättemycket kött eller om man äter mycket grönsaker?
126 St1: much ve:::ge:::tab[les?]
mycke grö:::n:::sa[ker?]
127 TeN: [and] why is it like that?
[och] varför är det så?
128 (0.5)
129 St1: cause the animals must be able to produce,
därför att djuren måste ju kunna producera,
130 TeN: precisely (.) do you remember that time we made an energy pyramid
precis (.) kommer ni i håg den gången vi gjorde med en energipyramid
131 or a nutrition pyramid e:::h (.) in the seventh grade or something
eller en näringspyramid för e:::h (.) i sjuan eller någonting sånt
132 St2: *m:m*
nods
133 TeN: then it consumed energy in each step for each animal that ate
då gick det åt energi i varje steg för varje djur som åt
134 St2: m::=
135 TeN: =you began with green plants
=man började med gröna växter
136 St1: yeah=
ja=
137 TeN: =then it used energy cause these animals that ate in each
=sen gick det åt energi för att de här djuren som käkade i varje
138 step then energy depleted?
steg så försvann energi?
139 ((*St1 nods*))
140 TeN: so therefore then (.) in order to save the total energy of the world
så därför då (.) för att spara på jordens totala energi
141 (.) it's better that you eat more (.) vegetables
(.) så är det bättre att man äter (.) mer grönt

After the student's initial question (101–102 in Fragment 1a), the teacher maintains control of the structure and the substance of the interaction. Through her questions, the teacher introduces and changes topics: from issues such as transportation and its consequences (113–122) to the consumption of meat and vegetables (123–126). Several of the questions strongly suggest their answers and, thus, lead the student in a specific direction. When the teacher asks if it is a good idea to eat apples from "South America" in terms of transportation (114–115), the selection of a continent far from Sweden provides resources for finding an answer. And similarly, when the teacher asks if it is better to eat meat or vegetables, considering the environment, a preferred answer can be discerned in the actual formulation of the question: the choice is not simply between eating meat or vegetables, but whether it is good for the environment to eat "much much really much meat". Macbeth (1994, pp. 317– 318) investigates what he calls sequences of intimations. In such sequences, "each question or offer posed by the teacher projects asymmetrical response options; of the several, imaginable responses, one is preferred". Characteristic of these sequences is how "the structure of intimation presumes the affairs intimated as already known or knowable with nothing more than the inspectable evidence at hand" (Macbeth, 1994, p. 317). Throughout the sequence investigated here, the openness of the question "what should we eat?" is similarly reduced through a series of instructional moves that concretize the task and simultaneously demonstrate what an answer might look like (see also Koole, 2010, on "knowledge producing questions" and Edwards & Mercer, 1987, on "cued elicitation").

When the student expands her answer to the teacher's polar (yes/no) question "is it good to eat apples from South America?" (114–115) from a simple "no" to one that includes an alternative "Swedish apples", the teacher interrupts the question she is about to produce next and

asks a new one (117–118) in direct response to the answer proposed by the student. In relation to this, it is also worth noting how the teacher ties her questions to the student's utterances and how she thereby makes explicit that – and to various extents how – the sense of her questions relies on previous contributions. The teacher's "why is that better?" (117) and later her "why is it like that?" (127) ask the student to account for the "that" that she just mentioned. When the student's "one uh shouldn't transport it that far" (120) is responded to with the follow up question "cause transportation leads to?" (121), the response similarly asks the student to account for her previous answer. One can further note how the use of conjunctions frames the questions in certain ways: the "cause" (121), "so" (123), and "and" (127) convey the relationship between the previous utterance and what is to come in terms of a consequence, an upshot, or an addition to what was just said.

To simply categorize a large part of the (105–127) interaction as a series of IRE sequences – "why is it like that" (127) as a teacher question, "cause the animals must be able to produce" (129) as a student answer, "precisely" (130) as a teacher evaluation, and so on – or to focus on the meaning of single turns would miss the tight, reciprocal interplay between the contributions of the teacher and the student. As noted by Lee (2007), in sequences like these, "the teacher displays her ongoing analysis of the local contingencies occasioned by the students' second turn, from which she estimates what the students know, and determines what to do next" (p. 189; cf. Margutti & Drew, 2014). This can be seen in how the teacher's questions aim to modify and qualify the issues brought up in the student's answer. It can also be seen in how the series of questions is temporally suspended and replaced with a recapitulation of a past event, something the student previously worked on and could already be familiar with (130–141). Although the student's account of why it is better to eat vegetables than meat is assessed with a

"precisely", the recapitulated account differs substantially from that of the student. This recapitulation becomes something like a mini-lecture, during which the student's contribution is limited to acknowledgements and tokens of recipiency. Then, the teacher continues by again asking a series of questions with preferred answers (Fragment 1c).

Fragment 1c

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142 TeN: and then one can also think about (.) in the wi::nter? should we eat a
         och sen kan man fundera också kring (.) på vi::ntern? ska vi käka
143      lot of tomatoes then? (.) so that we affect the environment [as lit-]
         mycket tomater då? (.) för att vi ska påverka miljön        [så lit-]
144 St1:                                                             [no:(h) ]
                                                                     [ne:(h)j]
145      cause they come from down there (.) from the warm countries
         för de kommer ju där nerifrån (.) från de varma länderna
146 TeN: what vegetables are best to eat in the wi:nte::r?
         vilka grönsaker är dom bästa att käka på vi:nte:rn?
147      (2.4)
148 TeN: yes (0.5) t-thi:nk about that (0.4) what is it that's easy to
         ja (0.5) f-fu:ndera på det (0.4) vad är det för nånting som är lätt å
149      store that we grow he:re that's easy to sto:re?
         lagra som vi odlar hä:r som är lätt å la:gra?
150 St1: pot(h)tatoes but it [is  ] no(h)t a vegetable  [really- ]
         pot(h)atis fast de  [är  ] ju ing(h)en grönsak [egentli-]
151 TeN:                    [yeah]                     [-h-how  ] about
                            [ja  ]                     [-hu-hur ] är det med
152      e::h other root- it's a root vegetable=
         e::h andra rot- det är ju en rotfrukt=
153 St2: =is it like carrots and stuff like that?
         =ä de typ inte så här morötter och sånt?
154 TeN: yes^(.) good^ (.) now your'e on course=
         ja^ (.) bra^ (.) nu är ni på eh banan=
155 St1: =ri:ght tra::ck=
         =rä:tt spå::r=
156 TeN: =great^ (.) good (.) then you have received some ideas
         =jättebra^ (.) bra (.) *då har ni fått lite tankar*
                                *takes a step backwards then leaves*
157      (2.0)
158 St1: you know, whe- we when she stands here and tells us then you get it
         du att nä- vi när hon står här och berättar så fattar man
159      but then when she leaves (.) then like (.) what will you write?
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men sen när hon går (.) då ba (.) vad ska man skriva?

As an answer to the written question “What should we eat?”, it would not be sufficient to write, “We should mainly eat locally produced vegetables, and root vegetables rather than tomatoes during the winter”. According to the instructions, the students should provide arguments and discuss their answers. Consequently, the teacher does not ask the student only to choose between apples from different continents or between meat and vegetables, but also to give an account of why. However, it does not seem to be a problem for the teacher that the responses to the requested explications are relatively condensed. The students are not only asked to provide answers to the teacher’s questions there and then, but they are supposed to develop these issues after the teacher has left. This is reflected in how the teacher shifts from her “minilecture” (130–141) to a new set of questions in terms of “then one can also think about” (142), which, in turn, retrospectively frames the previous “lecture” as not only that, but as “things to think about”, too.

Again, the teacher’s question leaves open the issue of whether it is just introducing something that the student could use or whether it is also to be answered there and then. And again, one can see how the students’ answers are used in the formulation of new questions. When the teacher asks if they should eat many tomatoes during the winter, thus introducing season as something more to “think about”, the student connects back to the issue of distance and that it is negative because “they come from down there (.) from the warm countries” (145). In relation to this, the teacher’s follow-up question, “what vegetables are best to eat in the wi:nte::r?” (146), more clearly isolates seasons as a new aspect. Not immediately receiving an answer, the teacher tells the student to “think about that”. Still failing to receive an acknowledgement, she

reformulates the previous question in ways that include additional clues as to the answer: vegetables that we grow here and that are easy to store (148–149).

Instead of picking up on the classification of vegetables (root vegetables are called "root fruits" in Swedish), the teacher begins to close the whole episode through a series of assessments and by gradually removing herself from where the students sit (156). In addition to assessments such as "good" and "great", the teacher ends the episode by telling them that they are now "on course" (154). This speaks to the sequence as being embedded in the students' overall work on the task. The end of the sequence does not mark the completion of the task – in fact, the work with the assignment has just begun – but the students have now, as the teacher points out, "received some ideas" (156) for how to move on. Turning these "ideas" into a text, is, of course, not a straightforward matter. As St1 points out to St2 a couple of seconds after the teacher has left, "when she stands here and tells us, then you get it, but then when she leaves, then like, what will you write?" (158-159). This complaint is understandable, and the distinction that the student makes is significant. If "getting it" means "knowing how to go on" (Wittgenstein, 1953, p. 154; cf. Lindwall & Lymer, 2011), it is a distinctly different thing when the students interact with the teacher compared to when they then continue with the task on their own. In the actual sequence, there is no immediate difficulty in knowing how to go on, since the teacher is carefully leading the student the entire way. After the sequence, however, the teacher is no longer there to affirm, adjust, qualify, or correct the student's next moves.

Localizing a problem

In Fragment 2, the student first introduces the topic that she is working on, then provides a longer background description, and, finally, poses a polar question that formulates a candidate understanding. The interaction in this episode is centered on the formulation and localization of a

specific problem. Since the assignments are not as well defined as are, for instance, the math tasks in the study by Koole (2012), the students in the investigated setting cannot just point to the texts, say "I do not understand this", and immediately get an explanation. Instead, the student in the sequence provides a longer background description of what she has read in textbooks and written herself. For the teacher, a central task is finding or discerning the problem that the student formulates. Furthermore, as demonstrated by the episode, the student can display whether the teacher's instructions are relevant to the problem that is raised or are beside the point.

Before the episode, the student has been reading a school geography book that has a section on the processes of turning ore into iron and has begun to write a paragraph based on this section. While the student attempts to use information from the textbook to write a text of her own, something comes up that makes calling on the teacher relevant. As is shown in the analysis, what this something is, where it is found, and what type of instruction is needed all take some time to come to terms with.

Fragment 2a

```
201 TeN: yes
202 St3: eh: this thing here I'm writing about uh:m (.) the steel sector
         uh: *detta jag skriver om* eh:m (.) stålsektorn
             *Points in her notebook*
203      the:n. and [u:h]
         då:. och   [e:h]
204 TeN:            [m: ]
205 St3: in former days (0.9) or how one- how one (.) produce iron and such
         *förr så* (0.9)      *elle hur man- hur man* (.) framställer järn å så
         *Points in her text* *Points at another paragraph in her text*
206 TeN: yes=
         ja=
207 St3: =the oxygen like this ox- uh (.) yeah (.) the oxygen in the ore
         =syret så här syr- eh (.) ja (.) syret i malmen
208      disappears (.) and then they disappear a:nd form dioxiförsvinner
         försvinner då (.) och så försvinner de å: bildar koldioxi-
```

209 carbon monoxide and carbon dioxide
koloxid *och koldioxid*
Looks up at TeN
210 (0.6)
211 St3: o [r °it sa]ys°
el[le °det st]år°
Picks up her geography book
212 TeN: [precisely] (.) it's tha- (.) when you think about (.) it's the
[precis] (.) de ä de- (.) när du tänker på (.) de ä
puts her finger in the notebook
213 oxygen ato:m
syreato:men
214 St3: yeah=
ja=
215 TeN: =so in the ore there's oxy:gen ato:ms
=så i malmen så finns de sy:reato:mer
216 St3: m:
217 TeN: and they change bu:ddi:es y'know they change (0.4) u:h ato:m neighbours
å dom byter ko:mpi:sar alltså byter (0.4) e:h ato:mgrannar
218 (0.2) becoming another compound and then they become (0.5)
(0.2) blir en annan förening å då blir de (0.5)
219 carbon monoxide, and oxide is y'know oxygen and carbon dioxide=
koloxid, å oxid de ä ju syre och koldioxid=
220 St3: =m: (0.4) but what I was wondering about because it says uhm will see if
=m: (0.4) *men de ja undra va för de står så ehm ska se om ja*
Looks in the geography book

The student begins the sequence by directing the teacher toward her handwritten text, pointing to a "thing here", and saying that she is writing "about the u:hm (.) the steel sector" (202). The initial formulations provide a topical frame for the upcoming interaction. It tells the teacher what the issue or question will be about broadly and, more specifically, what task the student has been working on. In addition, this "preface" projects what is to come as a background description that potentially will take some time to tell (cf. Schegloff, 1980). In other, similar, sequences, students begin by saying, "we have a question about gas" or "I have a question about planned economy". In those cases, as in the case here, what immediately follows

are not questions but longer accounts that eventually lead up to a question or a more specific issue. Taken in this way, the teacher is to remain in a listening position until some issue or problem related to the steel sector has been formulated.

In the following turns – and while the teacher stands beside the student, looks at her text, and provides receipts of recipiency – the student displays some trouble localizing and formulating the issue she is after. While she points to a section in the text on the history of iron-making, she reads a sentence that begins with "in former days" (205). Then, she quickly makes a repair by cutting off the sentence she had begun to read, moving her index finger to another section that describes the chemical process involved in iron-making, and glossing the topic as how to "produce iron and such". After having made several new starts, with increased confidence that she is localizing the relevant section (207), she finds and partly reads a sentence in her text that describes how the oxygen in the ore disappears, forming carbon monoxide and carbon dioxide (207–209). The teacher and the student maintain eye contact for a short while, before the student returns her gaze to the table and begins to pull out the geography book from under her notebook.

The student has not yet formulated a direct question or problematic issue, but the exchange of glances and ensuing silence could be understood as a proposal of a candidate understanding designed to solicit confirmation from the teacher. Not receiving an immediate response, the student picks up her book while saying "or it says" (211), thereby projecting another and different take on the localization of the problematic issue. Instead of waiting for the student's new attempt to localize the problem, however, the teacher provides a confirmation (212) of what the student previously said in overlap with the student's utterance. In the student's previous account, the oxygen "disappears" (207–208). What the teacher says after her

"precisely" can thus be heard as an embedded correction: it talks about "changing buddies", "changing atom neighbours", and "becomes another compound" (217–218). The teacher does not set out to explain the entire reduction process involved in producing iron from ore. Instead, and after several restarts (219), she reformulates and clarifies what the student just said. As marked by the teacher's pointing out that oxide means oxygen, the student is not expected to be very knowledgeable about the chemistry involved. From the teacher's point of view, to confirm and further explicate the reduction process could, at least potentially, address what the student is after. Although the student initially provides continuers, however, she does not pick up on this: what the student is "wondering about" is something else (220).

Fragment 2b

```
220 St3: =m: (0.4) but what I was wondering about because it says uhm will see if
         =m: (0.4) men de ja undra va *för de står så ehm ska se om ja*
                                       *Looks in the geography book*
221      I find it here somewhere (.) em em e::m it says it becomes what's
         *hittar de nånstans här* (.) em em e::m *de står att de blir va*
         *Flips through the pages*               *Points in the book*
222      it called u:hm (1.2) it only says tha- (.) it doesn't say where it
         hette de e:hm (1.2) de stå att de ba- (.) de står ju inte var de
223      goes (.) here (.) they show you how (.) yeah how it's done
         tar vägen (.) *här* (.) så visar dom ju hur (.) ja hur de bildas
                       *Points at a picture of a blast furnace*
224 TeN: m:=
225 St3: =then it only says that yeah it- it disappears out blah [blah]
         =så står de bara   att  ja   de- de försvinner ut  bla  [bla ]
226 TeN:                                                       [yeah]=
                                                               [ja  ]=
227 St3: =and does [ it-] but I wonder if it's that-
         =å  blir  [ de-] men jag undrar om de ä de-
228 TeN:           [yeah]
                   [ ja ]
229      and ca:rbon[diox]-
         å     ko:l [diox]-
230 St3:            [that] becomes (.) yeah but I wonder if it's it (.)
                    [som ] blir (.) ja men jag undrar om de ä de (.)
231      that which becomes the emissions? [that they release]
```

```
         som    blir     utsläppen?        [att de släpper ut]
232 TeN:                                   [ ma:- pre:cis    ]
                                           [ ma:- exa:ctly   ]
233 St3: that it disappears out in the air o[r if where does   ] it go?
         att de  försvinner ut  i  luften el[ler om vart tar   ] de vägen?
234 TeN:                                    [sure, it does that]
                                            [visst blir de så  ]
235      absolutely [(.)   an]d carbon dioxide is the tricky one [right ],
         absolut    [(.)   oc]h koldioxiden ä  ju  den  som ä lur[ig va,]
236 St3:            [so they-]                                  >[yeah I] know<
                    [så de-  ]                                  >[ja jag] vet<
237      it was that I was wonde[ring about]
         det  va de  jag     und[rade      ]
238 TeN:                        [      abso]lu:tely perfect really good=
                                [      abso]lu:t *perfekt ^jättebra=*
                                          *Takes a step backward*
```

Since the student has called on the teacher to address a particular issue, she has, at least to some degree, a right to assess the relevancy of the teacher's guidance. In this case, her "but what I was wondering about" makes clear that what the teacher just said did not address her problem. The student flips through the pages of the geography book. The localization of the relevant paragraph in the text still poses a problem, and she explicitly comments on her own search: "will see if I find it here somewhere". It gradually becomes clear that what the student is searching for is something that she finds to be missing in the text. While pointing at a particular paragraph in the geography book, she begins to formulate "what it says", reformulates this to "it only says", and then begins again, "it doesn't say where it goes" (221–223). She then starts over, this time pointing at an image of a blast furnace used in the book to illustrate the reduction of oxygen in the ore. Again, there is a movement, from what they "show you" to "it only says that it disappears out blah blah". In different ways, the student uses what is found in the text as a background for what she is searching for, what she wants to know but the geography book does not say.

For the first time in this sequence, the student begins to formulate a question (227). After having aborted a first attempt, “and does it”, she reuses the format found at the beginning of Fragment 2b, “but I wonder if it’s that”. Before the student completes the question, the teacher breaks in and specifies “it” is “carbon dioxide” (229). Again, the student’s “yeah but I wonder” conveys that the issue she has encountered is something other than the topic introduced by the teacher’s clarification: what she is wondering is, “if it is that which becomes the emissions?” (230–231). While the teacher answers this question by confirming it, the student continues to formulate several alternatives – that “they let it out” and that “it disappears out in the air” – before asking where the emissions go (231–233). Indicating that she now potentially has found what the student is having a problem with, the teacher returns to the subject of carbon dioxide, “carbon dioxide is the tricky one right?” (235). The Swedish word *lurig*, which here is translated as “tricky”, remains somewhat vague in this context. It usually means “hard”, as in “hard to understand”, but it can also mean “bad”, as in “bad for the environment”. In contrast to her previous “but what I was wondering about”, the student does not directly misalign with the teacher’s mention of carbon dioxide. However, with her “I know” (236), she shows that what she is wondering about is not that but, rather, what the teacher previously confirmed (232) about the emissions.

Here, the sequence could potentially have come to an end. The teacher’s high-grade assessments (238), which are spoken while she begins to remove herself from the student’s desk, orient toward the “solution” to the problem and, thus, the closure of the sequence (cf. Antaki, 2002; Broth & Mondada, 2013). Instead of continuing her work with the task, however, the student asks a follow-up question (239), thus “moving out of closing” (cf. Button, 1987). While students are generally not in a privileged position to claim that they have understood the subject

matter – since the teachers have the right to decide that students still need further instruction (cf. Fragment 1a, 113–115) – claims and displays of being unsure, unable to follow, or not getting it have a different status. The teacher cannot leave the students with unanswered questions without being accountable for having done just that.

Fragment 2c

```
239 St3: =so there's no- they don't take care of it in any way?
         *=så de finns inge-* dom tar inte hand om de på nåt sätt?
         *Looks up at TeN*
240 TeN: °no°
         °nej°
241      (0.9)
242 St3: °okay° (.) it wa- I fo- found I don´t find where it said that but it
         °okej° (.) *de va- ja hi- hitta ja inte va de va de stå nånstans men de*
                    *Flips the pages in the geography book*
243 TeN: m: (.) it said a little about thi:s i:n the chemistry b:oo::k as well
         m: (.) de va ju lite om de:tta även i:     kemibo:ke::n
244      I think=
         tror ja=
245 St3: =a::=
246 TeN: =have you read that as well?
         =har du kollat i den också?
247 St3: °wait here it says°    (.) here it says yeah (.) >the oxygen in the ore
         °vänta här står det°* (.) här står det ja (.) *>syret i malmen
                              *Stops flipping the pages* *reads out loud*
248      and coal creates bla bla<
         och kolet skapar bla bla<*
249 TeN: a [exactly ]
         a [precis ]
250 St3:   [that's led] out of the top of the furnace [it only says (.) but it ]
           [som leds ] bort  ut ur  ugnens  överdel   [står de bara (.) men det]
251 TeN:                                              [yeah: exa:ct (.)   exact]
                                                      [ja: preci:s (.)  precis ]
252 St3: doesn´t say where  it goes   ne[xt] what book did you say it was in?
         står ju inte var de tar vägen s[en] vilken bok sa du att de sto i?
253 TeN:                               [no]
                                       [nä]
254      the chemistry book as well
         kemiboken också
255      *(3.2)*
```

The teacher fetches the chemistry book

256 TeN: but it's correct as you say (.) look in this as well (so that you

men det är rätt så som du säger (.) kolla i denna också (så har du

Returns and hands over the chemistry book to the St3

257 include that) (.) good great

med den med) (.) *bra jättebra*

takes a step back and then leaves

258 St3: yeah

ja

From what has been said thus far, it is clear that the process of reduction results in carbon dioxide, but it is not clear whether it is then just released into the air. Thus, the question remains whether "they don't take care of it in any way?" (239). After the teacher's confirmation, the student continues to search in the geography book for the relevant section. Even when the teacher points out that this is something that potentially could be found in the chemistry book (243) and asks whether she has looked there as well, the student continues her search in the geography book. Finally, she finds the section she has been looking for, and what she then reads aloud confirms some of the issues that she and the teacher have discussed. In the relevant section, it "only says" how a process that involves coal and the oxygen in the ore creates carbon dioxide that is let out the top of the furnace, but not how it is taken care of. Again confirming what the student proposes, the teacher takes this as a repetition of what has been said. At this point, the student stops searching in the geography book and asks about the book previously mentioned by the teacher (252). The teacher fetches the chemistry book, reaffirms that what the student has found is correct, hands the book to the student, and asks her to look in it (255–257). Before the teacher provides several high-grade assessments and walks away, she has thus presented the student with instructions that take the form of a very concrete course of action, "look in this as well so that you include that", which the student immediately begins to pursue.

When the student began to formulate her problem, the source was first located in her own notebook and then in the geography book. Eventually, however, it became clear that the problem was more about what the geography book did not say than what it did say. According to the assignment instructions, the students should write a report on the steel sector, including its history, how steel is produced, and its environmental consequences. Although the geography book deals with the two former aspects, what the student is unable to find, and therefore considers missing, could be seen in the light of the third. Even though it is possible to make this observation in hindsight, the student's difficulty in formulating and localizing "what she is wondering about" corresponds with the teacher's difficulty finding it. In the first sequence (Fragment 1a), the localization of the issue poses no immediate problem. The question is tied to the premise of the instruction, and the teacher owns the answer, not only because she knows it, but also because she has written the instructions in the first place. However, in this second sequence, the problematic issue is situated in the particularities of the student's work. Therefore, the guidance needs to be grounded in this work, and the student becomes active in formulating the problem and in assessing whether the teacher has managed to address it.

Checking the text

The final episode takes place after the student has formulated a text that is part of an argumentative essay on "climate and energy sources". After the student has called on the teacher, the sequence is initiated with a request "can you read this?" What the student is asking is not only that the teacher read her report. Implicit in the student's request is that the teacher should assess what she has done, either by "okaying" it (cf. Greiffenhagen, 2008) or by pointing out mistakes or what more or else she should write. For the teacher, the student's text provides grounds for assessment and instruction. By reading the text, the teacher can assess it in terms of

the ways in which it satisfies the requirements and can treat it as an indication of whether the student has misinterpreted the instructions or missed something. After the teacher has taken the student's notebook and read the text, the teacher responds by positively assessing what the student has done so far and then mentions some additional things that the student should address to complete the task.

At the beginning of the lesson, the teacher introduced the written instruction and summarized the following on the white board: "You should argue for your opinion and try to convince us that you are right. Please write out references in your text. Highlight opinions that go against your own. Finish off with a strong argument, in which you repeat some of the initial arguments. Between ½ and 1 A4." Before the student calls for the teacher's attention, she has worked on the assignment for 15 minutes and has written about half a page on logging and rainforests.

Fragment 3

```
301 St4: TeS, can you come?
         TeS, kan du komma?
302 TeS: yeah
         ja
303 St4: can you read this?
         *kan du läsa det här?*
         *hands over her notebook to TeS*
304      *(27)*
         *TeS reads*
305 TeS: m: (.) m:m^ that was good (0.3) have you found any-=
         m: (.) m:m ^ *det var ju bra* (0.3) har du hittat några-=
                      *Gives the notebook back to St4*
306 St4: =no I'm not really sure what you mean with that=
         =nej jag vet inte riktigt vad du menar med de=
307 TeS: =yeah like what would the others those who think it's good (.) what can
         =ja alltså va skulle dom andra dom som tycker att de är bra (.) vad kan
308      they use  (the  land for)  the-  they  might [need  ]
         dom använda (marken till) do- dom behöver ju [kanske]
309 St4:                                              [uhu^  ]
                                                      [jaha^ ]
```

310 TeS: pasturage and cultivation too,
betesmarker och odlingsmarker å,
311 St4: uhu so I should write that some think that it's good that we ravage
jaha så jag ska skriva att vissa tycker att det är bra att vi skövlar
312 the rainforest to [get more-]
regnskogen för att [få mer-]
313 TeS: [yeah they] think tha- hold that it's necessary so that
[ja dom] ser att- de anser att det är nödvändigt så att
314 St4: while I t(h)hink .h(h)
medan jag t(h)ycker .h(h)
315 St5: that we don't need potato chips
att vi inte behöver chips
316 St4: m:(h)m but does it have to be longer than this then,
m:(h)m men *behöver det vara längre än så här liksom,*
Puts her hand over the text
317 TeS: no only that you get it- so that you put it down so that it becomes
nä bara du får med- så du får ner det så att det blir
318 half a page (.) when it's printed out later on (.) it's y'know
en halv A4 (.) när du väl skriver rent det sen (.) det är väl
319 perhaps therefore you'll need some counterarguments as well
därför kanske du behöver ha lite motargument med också
320 St1: yeah (.) yeah
ja (.) ja
321 TeS: and then that you finish it off with something strong
och sen att du avslutar med nånting starkt
322 *((The teacher leaves))*

At the beginning of the sequence, the student hands the text to the teacher and asks her to read it. The student does not say why the teacher should read it or whether there is something special that she "wonders" about. From the teacher's response, it is clear that the student does not have to. The teacher does not hesitate or ask the student to specify her request. Instead, she immediately begins to read the text. After the teacher has spent half a minute reading, she provides an initial approving assessment. However, as the teacher's expanded reply makes clear, this does not mean that she considers the text finished. The teacher begins to ask a question (305), but before she has finished it, the student breaks in with an answer (306). If one looks only

at the sequence, the teacher's question "have you found any-" and the student's latching answer "no, I'm not really sure what you mean with that" are difficult to follow. The student projects what the teacher is about to ask, but why she is able to do this is not found in the interaction itself. For the student, the teacher's question is understood against the background of the instructions and her report. The instructions state that the text should include opinions that "go against your own". The student has not done that and, as confirmed by her quick reply, she realizes that this is something that the teacher has noticed, even before the teacher has actually said so.

The student's comment "I'm not really sure what you mean with that" (306) has some parallels with the question "what do you mean with the question (.) what should we eat?" (101) as it was used in the first sequence (Fragment 1a). In both cases, it becomes relevant for the teacher to further explicate what she "means" by the instructions. In this particular case, the teacher responds by asking questions "what would the others, those who think it's good (.) what can they use the land for?" (307–308) that she answers herself: "they might need pasturage and cultivation" (308–310). The questioning format and the provisional character of the answer also have parallels with the first sequence (Fragments 1a–c). The teacher does not formulate exactly what the student should write but points in a specific direction. The written instructions stated that the student should "highlight opinions that go against yours". Although these opinions are contextualized in terms of land, pasturage, and cultivation, the question and the answer do not completely specify what the student should write. And, as shown by the student's follow-up question, it is not completely straightforward how such an opinion is reasonably formulated.

In Fragment 1, the students check their understanding with candidate answers. Some of the interaction develops as a series of IRE sequences. Here, this option is not available since the

teacher answers her own question. Instead, the student formulates an upshot of the teacher's instructions in terms of what she should write: "so I should write that some think that it's good that we ravage the rainforest" (311–312). In saying this, the student sounds somewhat sceptical, as if it is impossible for anyone to hold the position that it is good to ravage the rainforest. While the teacher confirms this upshot, she follows it with an embedded correction. The position that they think it is "good" to "ravage the rainforest" is replaced with they "hold it necessary" (313). By continuing with "while I think", the teacher contrasts the "they" with the "I", which the student could use to further work with the task.

After the student makes several joking comments to a peer, which refer to something the students have talked about previously, the student asks whether the text has to be longer than it is. The teacher answers that it is okay if she just adds what they have been talking about so that she has written half a page. She points out that including counterarguments might result in a text of sufficient length and, finally, adds that the student should end with something strong. To some extent, these are recapitulations of the initial instructions. Like the teacher's previous comments, however, these are recapitulations that have been made relevant by the reading of the text, as well as by the ensuing interaction and, therefore, are particularly adapted to what the student should do next.

Conclusion

The analyses of the three episodes show how the organization of the encounters is tied to the overall structure of the classroom activities. In the investigated setting, the students sit at their desks and work on their assignments while the teacher moves among the desks and responds to the students' requests for help. This produces an expectable and manifest orientation to tasks and problems. All 37 encounters between students and teachers concern the tasks that the

students are working on, and in most cases, they involve both "problem-establishing and problem-remedying work" (Vehviläinen, 2009; cf. Ekström & Lindwall, 2014). In addition, the overall structure of the classroom activities means that the teachers, at the initial point when the students ask for their assistance, have limited access to what the students are working on and the issues that occasioned the students to request the teachers' attention. This can be contrasted with academic supervision and whole-class teaching, in which student questions and requests are positioned next to a local and sequential history that is shared by the parties to the interaction (e.g., Park, 2012a; St John & Cromdal, in press; Vehviläinen, 2009). Given that the investigated encounters lack this kind of sequential history, the localization of issues and problems needs to rely on other resources.

As is shown in the analyses, the students initiate the encounters by situating their questions, problem formulations, and requests in various texts. Throughout the 30 hours of video-recorded interaction, the use of texts is constitutive of the students' work on the tasks: there are written instructions to be interpreted; textbooks, journals, and Internet pages are read and used for the purpose of writing; and the students are instructed to formulate their own reports, essays, and posters. The three episodes demonstrate how variations in terms of authorship, access, and accountability are consequential to the ways in which these texts are used in the encounters. The instructions for the assignments are written by the teachers, and the teachers are held accountable for what they "mean" by them. Although the teachers are asked to correct or clarify problems that emerge in the work with textbooks and journals, the students do not treat the teachers as having access to the details in these texts. In addition, it is mainly what the students take from printed books and journals – how they understand or use them – that is presented as in need of confirmation, clarification, or correction. The texts written by the

students have a different status. These texts are the outcome of the students' work on the assignments, and as such, they are objects to be accepted, extended, or revised. However, it is important to note that what is most central to the organization of the encounters is not the authorship of the texts in itself, but how the texts are tied to the work on the assignment and the issues that emerge at various stages of this work.

As mentioned in the introduction, social actions, in general, have a "retrospective and prospective orientation" (Goodwin, 2006). In the analyzed sequences, there are also retrospective orientations to what the students have done before the encounters and prospective orientations to what they should do next, which, in different ways, shape the ways the that the sequences progress. Fragment 1 shows a student who has just begun her work with a task. The open-ended question does not specify a particular problem beyond how the instruction is to be interpreted, and the instructions orient to how the students should proceed with the task rather than to what the particular student has done. This differs from Fragment 2, in which the student situates the issue in the midst of writing up what she has been reading. After the preliminary formulation of the topic, the student continues with a longer background description in which she attempts to formulate and localize what she wants the teacher to address before she formulates what she is "wondering about" as a candidate for the teacher to confirm. In Fragment 3, the student asks the teacher to read a text that the student has written. In this case, it is the outcome of the work on the task that is at issue. While the student's request in itself does not specify any problem, she later points out that she was aware of a potential problem with the text and her understanding of the instructions.

Central to the interplay between talk, text, and tasks is the notion of instruction. The term instruction has a variety of meanings (cf. Lindwall, Lymer, & Greiffenhagen, 2015). In the

context of education, it can be used synonymously with “teaching” or for specific forms of teaching. The term might also be used for directives and orders or for manuals, handbooks, and so on. Educational tasks, such as the ones investigated here, involve instructions in all the senses mentioned: students are handed printed instructions, they are told what to do, and they receive further guidance or clarifications when they request them or when the teacher deems it relevant. As has been repeatedly pointed out in the literature, there is an inherent openness in all instructions (e.g., Garfinkel, 1967; Amerine & Bilmes, 1988). For instance, Sharrock and Button (2003) state that instructions never “prescribe a determinate in advance matching of situation and action” (p. 262). It is always necessary to “refer to the relevant details of the occasion to be able to follow them and their very formulation in the first place depends upon this ability to refer to the situation and the occasion to follow them” (ibid.). In the investigated settings, there is an additional openness that connects to the educational agenda. Unlike recipes, crocheting patterns, or manuals on how to assemble IKEA furniture, the written instructions for these tasks are not written to be followed step-by-step. Relevant aspects, which potentially would aid the completion of the task, are purposefully left unspecified so as to shape the ways in which students approach the task.

It is difficult or impossible to pinpoint exactly how the educational character of the tasks is consequential to the formulation of the assignment or to the unfolding of the instructional interaction. Instead, what is relevant here is the difference between being able to follow what the teacher is saying by providing a relevant next and being able to use these instructions in the subsequent work on the task. In Fragment 1, the teacher carefully leads the students through a series of questions and answers that are much like IRE sequences and that are commonly classified as direct instruction. In terms of the work on the task, however, the guidance provided

by the teacher retains much of the openness that characterizes the written instructions: the teacher does not tell the students exactly what to write but provides guidance by introducing topics, posing specified questions, and modifying the students' answers. The two other fragments are somewhat different in this respect: the students propose some sort of candidate understanding, in the form of a polar question and a written paragraph, that the teacher then confirms. Following previous studies of student-initiated instructional interaction (e.g., Vehviläinen, 2009), a distinction can be made between episodes in which students more generally display that they are unsure of how to proceed and episodes in which they present some kind of candidate understanding. It should be noted, however, that the ways in which students initiate the sequences in no way are decisive for the instructional interaction that follows. Regardless of the format, and as demonstrated by these fragments, student contributions always have the potential to make further instructions relevant.

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