EXAMINING THE POLESTAR OF READING COMPREHENSION: ONE TEACHER'S INSTRUCTION IN ONE L1 CLASSROOM AND STUDENTS' METACOGNITIVE KNOWLEDGE OF READING

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Abstract

This qualitative study examines reading comprehension instruction and students' metacognitive knowledge of reading in one L1 classroom at the lower secondary level. The data comprises four consecutive videotaped lessons from the same class in grades 8, 9 and 10 (*N* = 12), student group interviews, and an in-depth interview with the teacher. The study investigates a) the prominent features of the reading comprehension instruction in videotaped lessons, b) to what extent and how features of the observed instruction is reflected in students' perceptions of L1 lessons, and c) students' metacognitive knowledge of reading, i.e., what strategies they express that they would use to understand complex texts. A key finding is that the observed instruction was mainly dominated by reading comprehension strategies and language skills, which was also reflected in students' utterances of strategies they would use themselves and emphasized as important instructional elements by the teacher. However, while the students overall expressed metacognitive knowledge of how to approach complex texts independently, they also expressed a lack of variation in the provided instruction. The article discusses instructional practices, instructional variation, and the necessity of reading instruction balancing between fostering basic skills and higher-order thinking at the lower-secondary level.

Key words: Reading comprehension, Reading instruction, Metacognitive knowledge, Video observations, Case study

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1. INTRODUCTION

In today's textual landscape, adolescents need to juggle myriad demands of texts, tasks, and purposes in their everyday life, both within and out of school. As text comprehension is an absolute requisite for meeting these demands, a primary goal of classroom instruction is to guide students toward expertise and independence in text comprehension. As such, educational researchers have given a great deal of attention to finding the means to support textual understanding in classrooms (Pearson & Cervetti, 2017). Developing students' metacognitive knowledge of reading is one important objective in the endeavor of helping students navigate through increasingly complex texts as they progress through school.

A considerable part of existing reading research has been focused on how different instructional features have effects on reading outcomes (Hougen, 2014; Kamil et al., 2008; National Reading Panel [NRP], 2000) and how students think while reading (Bereiter & Bird, 1985; Kraal et al., 2018; Levine & Horton, 2015; Pressley & Afflerbach, 1995; Yang, 2006). However, there is a lack of empirical work that combines the examination of long-term comprehension instruction in natural classroom settings with insights into students' metacognitive knowledge of their own reading. Moreover, few studies have been conducted to investigate daily reading instructional practices at the lower-secondary level.

This study was thus designed to contribute to the knowledge base by looking at the way in which one teacher in one L1 classroom in Norway provides instruction in text comprehension in Grades 8, 9, and 10. Further, it was constructed to include an exploration of how the students in that classroom at the end of Grade 10 described and reflected on both the provided instruction as well as their own approach to reading complex texts. These perspectives were chosen to provide more in-depth knowledge about what kind of comprehension instruction is provided at the lower-secondary level and whether the students after three years of lower-secondary schooling attained a metacognitive knowledge of text comprehension that would enable them to become strategic in their own reading.

There is plenty of reason to look into the nurturance of reading comprehension in a secondary classroom. As texts become more complex in higher grades, instruction at the secondary level calls for a sustained focus on developing students' reading competence to meet these demands. If policymakers, teacher educators, and schools are to know how the curriculum and fostering of reading comprehension are implemented in secondary classrooms, investigating how teachers actually provide reading comprehension instruction is of great importance. Additionally, it can inform educators about possible ways to include comprehension instruction in daily teaching practices.

1.1 The Norwegian context

Norway is one of the countries with the highest expenditure per student on the OECD ranking (OECD, 2011). However, the results from PISA (Programme for International Student Assessment) in 2000 revealed that Norwegian 15-year-old students performed only at an average OECD level in reading. These results were among the main factors that contributed to the development of a new mandatory national curriculum in Norway in 2006, where reading was defined as a basic skill. Furthermore, compulsory national reading tests were introduced in 2004. This strong emphasis on reading may explain the fact that Norwegian PISA results have remained stable while the OECD average has decreased (Jensen et al., 2019), but there is a lack of empirical studies investigating how Norwegian teachers teach reading in their classrooms.

1.2 Perspectives on effective reading comprehension instruction

Reading instruction in classroom settings is a complex endeavor (e.g. Duffy, 2002), and the following section will give an overview of some of the instructional elements that are deemed to enhance students' reading comprehension development.

In accumulated findings from the literature it has been demonstrated that explicit teaching of comprehension is a practice that benefits reading comprehension (Hougen, 2014; Kamil et al., 2008; National Reading Panel [NRP], 2000; Palincsar & Brown, 1984). Although there is a recurring debate within the literature over how explicit instruction should be (McKeown et al., 2009), it has been shown that teachers' engagement in teacher-directed instruction and their support for student learning can make significant contributions to students' reading comprehension (Carlisle et al., 2011; Connor et al., 2004; Kamil et al., 2008). In particular, there are strong recommendations in the literature to provide explicit instruction of reading comprehension strategies (Block & Duffy, 2008; Duke et al., 2011; Kamil et al., 2008; National Reading Panel [NRP], 2000; Palincsar & Brown, 1984; Pearson & Cervetti, 2017), which are regarded as deliberate and goal-oriented processes that are used to construct meaning from text (Afflerbach et al., 2017). Many different types of strategies have been derived from existing research; for example, Mokhtari and Reichard (2002) distinguish between global reading strategies, such as having a purpose in mind when reading; problem-solving strategies, such as remediating misconceptions and trying to get back on track when concentration fails; and support reading strategies, such as writing summaries to reflect on key ideas in the text. Afflerbach and Cho (2010) defined three categories of strategies used by expert readers: identifying and learning text content, monitoring the act of reading, and evaluating different aspects of reading. In order to teach students strategies that skilled readers use, teachers should provide instruction that focuses on building students' *declarative*, *procedural* and *conditional* knowledge about strategies—that support students in making decisions about which strategy to use, in which situations to use it, and how to change strategies to suit different types of texts and different purposes (Paris

et al., 1983). Thus, classroom reading activities need to be concerned with what students should actively think while approaching different kinds of texts, in order to help them becoming strategic readers (Magnusson et al., 2019; Shanahan et al., 2010). Although the majority of studies on strategies instruction have been conducted with students at the primary level, teaching comprehension strategies has also proven to be positively related to secondary students' reading outcomes (Berkeley et al., 2011; Vaughn et al., 2011).

Many researchers have also pointed out the strong link between vocabulary and reading comprehension (e.g. Ash & Baumann, 2017), and several studies have shown that explicit instruction of vocabulary contributes to reading comprehension for both primary and secondary students (Kamil et al., 2008; Nation & Snowling, 2004; Ouellette, 2006; Ouellette & Beers, 2010). If students have limited vocabulary knowledge, their comprehension is likely to suffer (Oakhill et al., 2019); thus, engaging students in activities that may increase their depth of vocabulary may help their comprehension (cf. Cain & Oakhill, 2014). Michener et al. (2018) noted that instructional talk, such as the explicit instruction of vocabulary, acts as "linguistic exposure necessary for supporting students' linguistic comprehension for reading" (p. 747). Providing students with both definitional and contextual vocabulary information, as well as scaffolding students in selecting vocabulary for learning, have been emphasized as important components of vocabulary instruction (Blachowicz & Fisher, 2000; Graves, 2016; Stahl & Fairbanks, 1986).

Another element that plays an important role in comprehension instruction, is students' prior knowledge. When students activate information from their store of knowledge and integrate new information with already existing knowledge, it will benefit the comprehension process (Baker & Brown, 1984). Thus, teachers need to help students activate their prior knowledge when approaching texts.

Put together, classroom reading comprehension instruction should thus give weight to several elements and integrate these into meaningful practices for students. While we know a lot about single elements of instruction that can be beneficial for students' comprehension, we know less about the balance between these elements in the secondary classroom, and how they are being implemented in daily instructional practices. One purpose of this study, then, is to explore such instructional practices in a natural classroom setting.

1.3 Metacognition and metacognitively oriented comprehension instruction

It is well established that metacognition plays an important role in reading comprehension (e.g. McKeown & Beck, 2009). The metacognitive processes involved in the comprehension of texts include metacognitive *knowledge* of the readers' cognition about reading and metacognitive *monitoring and control* of text comprehension (Baker, 2002; Flavell, 1979; Mokhtari & Reichard, 2002). The knowledge component refers to relatively stable, usually statable knowledge about cognition (Griffith & Ruan, 2005) and includes knowledge about cognitive strategies and task variables

that influence cognition (Pintrich et al., 2000). The self-control component of metacognition is concerned with planning our actions, checking and evaluating outcomes and progress, remediating difficulties that arrive, and revising strategies (Baker, 2002; Baker & Brown, 1984).

Adolescence is an important developmental period for metacognitive growth (Baker, 2005) as active control of cognition is considered a late-developing phenomenon (Pintrich & Zusho, 2002). Older students become more capable of evaluating their own performance due to a greater degree of background knowledge (Baker, 2005). However, metacognition does not develop automatically with age and experience (Baker et al., 2015). Ample evidence exists to bolster the notion that teaching and supportive classroom practices can enhance metacognition (cf. Perry et al., 2019) and that metacognitively oriented reading instruction can impact reading comprehension development (e.g. Dignath & Büttner, 2008). Veenman, van Hout-Wolters and Afflerbach (2006, p. 9) refer to three principles for metacognitive reading instruction: *embedded instruction*, meaning that the metacognitive instruction should be integrated with a reading task; *informed instruction*, which means that students should be informed about the benefits of using metacognitive strategies; and prolonged training, which aims at a sustained application of metacognitive strategies and skills. The goal is that this metacognitive thinking becomes internalized by the students and that the monitoring process proceeds automatically when reading. Baker (2005, p. 74) explained that "[m]etacognitive skills come into play during troubleshooting, when a problem is encountered and the individual must attempt to resolve it".

It is important to note that metacognition is not a final objective in itself, but rather a means to an end (Baker, 2002; Mokhtari & Reichard, 2002; Paris & Winograd, 1990), serving as a requisite for students in acquiring the necessary abilities to become proficient, independent readers. Another purpose of this study, thereby, is to investigate the metacognitive knowledge about their own reading that students have attained after three years of lower-secondary schooling, which is potentially beneficial in further academic reading situations.

1.4 Teacher beliefs about reading instruction

Teachers' beliefs about *what* kinds of instructional features that are important to emphasize in classroom settings and *why*, are important epistemological questions. According to Fives and Buehl (2012), teacher beliefs may filter information and experience. For instance, beliefs about teaching practices may serve as a filter used in evaluating information or experience, influencing what teachers pay attention to and how that is incorporated into practice. Furthermore, beliefs may function as a guide for teachers' intentions and their actions in classroom settings. However, Fives and Buehl point out that different types of beliefs may serve different functions in different situations, thus contextual factors may influence how teachers enact their beliefs. For example, issues of classroom control or reactions from parents and

students may support or challenge the enactment of the teachers' beliefs in the classroom.

There is little certainty about the role of teacher beliefs on student reading outcome and motivation (Fives & Buehl, 2012). However, a study by Pecjak and Kosir (2008) offered support for this connection. Based on the reading practices teachers enacted in the classroom in Grade 7, they found differences in student reading motivation. One significant factor was the instruction of reading strategies, as for example using different reading strategies for different reading materials and systematically helping students in developing their vocabulary. In the current study, the teacher's perspectives on the provided instruction are included as aspects of the underlying beliefs that may affect the instructional practices.

1.5 Observations of reading comprehension instruction in natural classroom settings

Observational studies of classroom instruction have been important for understanding current instructional practices (Davis et al., 2015; Durkin, 1978; Ness, 2011; Pressley et al., 1998). Such studies show that, in an American context, there has been a slight increase in explicit comprehension instruction during the last decades, however less so in a Nordic context (Anmarkrud & Bråten, 2012; Magnusson et al., 2019; Tengberg, 2019).

The body of observational research has, to a large degree, focused on the frequency of overall comprehension instruction or frequency of specific instructional features. Although such mapping of the field has brought valuable insights, it might have camouflaged the nuances that classroom comprehension instruction entails. Moreover, most of these studies offer insights into classrooms during (shorter or longer) periods within one academic year, leaving unknown how the instruction proceeds as the students grow older and how the students perceive the instruction they are provided. More research is thus needed in which classrooms are observed over a longer time span and connected with insights into students' instructional experiences and their potential internalization of the components that are being taught. This study thereby adds to the knowledge base by offering observations of current classroom instruction in a natural setting at three different time points over a three-year period in which the students' and teacher's reflections on the provided instruction were subsequently elicited. The study was framed by the following research questions:

1) What are the prominent features of reading comprehension instruction (RCI) in Grades 8, 9 and 10?
2) How are features of the observed RCI reflected in students' and the teacher's perceptions of everyday L1 instruction?
3) What metacognitive knowledge do students have of their own reading at the end of Grade 10?

2. METHODS

2.1 Research design

In order to answer these research questions, we set up a case study, investigating one teacher's reading comprehension instruction of students (n = 19) in one Norwegian L1 classroom at the lower secondary level at three different timepoints (in Grade 8, 9 and 10). To get insight into both the instructional practices and students' and teacher's reflections, we conducted a triangulation in data collection using video observations of the classroom, student group interviews, and an in-depth teacher interview (see Table 1).

During the 2014-2015 school year, the participating class took part in a large-scale video study directed by the University of Oslo (*Linking Instruction and Student Achievement*, LISA) (Klette et al., 2017), of which four consecutive L1 lessons were videotaped in 47 eight grade classrooms. The classroom in this study was, along with five other classrooms, additionally videotaped for four consecutive L1 lessons in Grades 9 and 10, providing video data from this classroom at three different time points. The videotaped lessons were meant to capture naturally occurring instruction (Hassan et al., 2005), thus, teachers were asked to do what they would normally do during these lessons.

Out of the 47 classrooms that were included in the LISA study, the classroom chosen for this case study achieved the highest gains on the Norwegian national reading tests from Grades 8 to 9, with scores significantly above the national average. In addition, this classroom stood out as one of the few with explicit reading strategies instruction in a previous study based on all 47 eight grade classrooms in the LISA study (Magnusson et al., 2019). Thus, this classroom was selected as an interesting and unique case (Yin, 2014).

For the LISA study, as well as for the current study, participating teachers, students, and students' parents signed a written consent form. The study was approved by the Norwegian Centre for Research Data.

2.2 Setting and participants

We conducted the research in a school situated in a semi-urban area outside of a larger city in Norway, in a middle socio-economic district. In the participating class, there were nine girls and ten boys, aged 13-14 in Grade 8, 14-15 in Grade 9, and 15-16 in Grade 10. One student was bilingual. No students were diagnosed with dyslexia. In this class, student increase on the national reading test from Grade 8 to Grade 9 had an average score of 6.7 scale points (*SD* = 9.1) (the national average was 3 scale points). The students who scored below the national average of 50 scale points in eighth grade (*n* = 10) had an average increase of 9.15 scale points (*SD* = 7), whereas the students who scored above the average of 50 scale points (*n* = 9) had an average increase of 4 scale points (*SD* = 4.7). Due to restrictions by the Norwegian

Center for Research Data, no information is available about each student's socio-economic background. For the same reason, it is not possible to identify each student's personal test score.

Table 1. Overview of collected data

	Test data	Video data	Interview data	Texts (see Table 3 in the appendix)
Grade 8	Achievement scores on national reading test at the beginning of eighth grade	Four consecutive lessons		
Grade 9	Achievement scores on national reading test at the beginning of ninth grade	Four consecutive lessons		
Grade 10		Four consecutive lessons	Student group interviews Teacher interview	

2.3 Data sources

2.3.1 Video data

The video data comprised 12 videotaped lessons from the selected case classroom, of which four consecutive lessons were filmed in Grades 8, 9, and 10. All 12 videotaped lessons included reading comprehension instruction (RCI) in; however, some portions of a few lessons were targeted toward other L1 activities. To provide a more precise account of the RCI, we divided each lesson into 15-minutes segments and identified RCI in 36 out of 41 such segments (see Table 2). The texts read and/or used in the observed lessons reflected a variety of types, genres, media, and content topics (see Table 3 in the appendix).

Table 2. Overview of lessons and segments containing reading comprehension instruction (RCI)

Grade	Number of lessons containing RCI	Number of segments (15 minutes each) containing RCI
8	4	12/12
9	4	10/13
10	4	14/16

Note. In Grades 8 and 9 each lesson had a duration of 45 minutes, whereas in Grade 10 the lessons lasted for 60 minutes.

2.3.2 Interviews

At the end of Grade 10, we interviewed all students in the participating class and their teacher in an attempt to elicit their reflections on the provided instruction and

explore the students' metacognitive knowledge of their own reading. Students were interviewed in groups of three or four, a total of six groups. Although we conducted the interviews at the end of Grade 10, the participants were asked to account for their overall experiences throughout the lower-secondary level, thus their answers could reflect practices across all three grade levels. The interviews included open-ended questions about various aspects of reading (cf. Paris & Flukes, 2005) and about the provided reading instruction. We asked students questions like, "When an unknown text is introduced in a lesson, how does the teacher usually organize the reading activities?" Depending on their answers, we asked follow-up questions regarding what they usually do before, during and after reading. Further, we asked students questions about their own reading processes, such as, "What things do you do before you start to read a text?", and, "When you come across a part of the text that is confusing, what do you do?" These types of questions are recommended to get a sense of the students' views of the reading process and their knowledge and use of strategies (Garner, 1992). We conducted a pilot testing of the interview questions in advance with three tenth grade students in another school from a similar school district.

In order to attain more insight into the instructional rationale related to the observations, we asked the teacher questions like "How do you work on enhancing students' reading comprehension in the L1 instruction at the lower-secondary level?", "Why do you place emphasis on these particular elements?", and, "How do you assess whether students have internalized strategies for text comprehension?"

2.4 Data analysis

We conducted an inductive coding of the video data using NVivo software (version 12) and performed the coding in accordance with systematic guidelines (cf. Braun & Clarke, 2006), to ensure credibility and trustworthiness. The author conducted the coding process. Any uncertainties or concerns were discussed with other reading experts throughout the analytic process. A description of the coding process, including examples of the coding, is presented below.

2.4.1 Data analysis of video observations

As an initial coding, we closely examined the data related to textual activities and comprehension instruction and compared these for similarities and differences (Corbin & Strauss, 2008). This included both a *descriptive coding*, which "summarize[s] in a word or short phrase the basic topic of a passage of qualitative data" (Saldaña, 2013, p. 70), *in vivo coding* (Corbin & Strauss, 2008; Saldaña, 2013), of which the teacher and/or student utterances related to reading and talk about texts were adopted as separate codes, and a *conceptual coding* (Saldaña, 2013). For example, we coded the teacher question "She has been a driving force for the Sami culture, what do you think driving force means in this sentence?" as the conceptual

phrase “eliciting contextual information about the meaning of a word” (cf. Blachowicz & Fisher, 2000).

In a second coding cycle, we assembled together the similarly coded segments for more detailed coding and analysis, grouped these into emergent constructs (Miles & Huberman, 1994) if appropriate, and subsequently sorted into overarching themes. For example, we grouped both asking questions about and providing either definitional or contextual information about words (in a text) into the construct of text-based vocabulary, which was placed within the theme of language skills and language learning strategies. Table 4 provides examples of themes, subcategories, and descriptions of the codes, including exemplar quotes (for a complete overview, see Appendix B).

Table 4. Examples of coding scheme video observations

Themes	Subcategories	Description	Exemplar Quotes
Language skills and language learning strategies	Text-based vocabulary	Asking questions about or providing definitional or contextual information about words in a text	“What does the word ‘methods’ mean in this context?”
Comprehension strategies	Purpose of reading	Asking students to reflect on what the purpose of reading a particular text is and why this is a useful strategy	“Why is it important to find out what the purpose of reading is?”

2.4.2 Data analysis of interviews

We coded the interviews applying a content-based or conceptual phrase that represented a topic of inquiry to a segment of the data (Saldaña, 2013). For example, we coded student utterances such as, “[S]he wants us to write like a summary, from the text. So that we only focus on the most important. . .” as content-based, as the code “summarize”, whereas we coded the following student utterance, connected to pre-reading classroom activities, as the conceptual phrase of “making predictions”: “We often talk about [the text] and then like—sometimes it is what the text probably will be about. Like based on the headline.”

After coding each utterance related to textual activities and comprehension, we grouped the similarly coded utterances into emergent constructs (Miles & Huberman, 1994), and—similar to the video data analysis—subsequently sorted these into overarching themes, as part of a data reduction process. For example, we grouped student utterances that were coded as “difficult words”, “important words”, and “words I don’t understand” into the construct of vocabulary talk, which was applied to the theme of language skills instruction. See Tables 5, 6 and 7 for examples of the coding of student and teacher interviews (for a complete overview, see Appendix C, D, and E).

Table 5. Examples of coding scheme student interviews: perceived reading instruction

Theme	Subcategories	Description	Exemplar Quotes
Comprehension strategies instruction	Purpose of reading	Talking about why to read in a pre-reading phase	"We kind of follow a plan that we have on the whiteboard, about why we should read, as if we were asking questions before reading, like why we should read."
Reflections on the instructional features	Lack of variation	Reflections on the fact that they often do the same every lesson	"We know what`s coming."

Table 6. Examples of coding scheme student interviews: students' strategies for text comprehension

Theme	Subcategories	Description	Exemplar Quotes
Focusing on words, language, and structure	Figure out difficult words	Building a good vocabulary and figuring out the meaning of difficult words to aid text comprehension	"If there are any difficult words, try to explain them, or, yes, try to understand the text."
Getting help and support	Talking to others	Asking/talking to someone that might know more about the topic, like parents, teachers, or peers.	"So, in a way [parents] can be helpful, in a way it's about listening to others. To get their view."

Table 7. Examples of coding scheme teacher interviews

Theme	Subcategories	Description	Exemplar Quotes
Important reading instructional elements	Focusing on important words	A sustained focus on explaining words and concepts to aid text comprehension	"The more words you can explain, or the more words you know that you are quite sure of what they mean, the better chance you have of understanding the text. And this applies to both fiction texts and non-fiction."
Instructional practices not enacted	Teaching formats	Reflecting on reasons for applying whole class teacher-directed instruction and not other teaching formats	"Once it`s not very controlled and very clear what to do, the students do other things instead."

3. FINDINGS

3.1 Reading comprehension instructional practices

Through the case study approach, the analysis conducted in this study showed that the reading comprehension instruction observed in this one classroom—across lessons in Grades 8, 9, and 10—was mainly teacher-led and provided in a whole-class teaching format interspersed with frequent, short peer conversations. The teacher engaged the students in whole-class dialogues about reading and texts, but this interaction was highly dominated by teacher-facilitated questioning, echoing the results of Davis et al. (2015). The two most salient instructional features across all lessons and grade levels were explicit reading comprehension strategies instruction and explicit language skills instruction. These practices were highlighted by the teacher and the students during the interviews.

3.1.1 Explicit strategies instruction

The observed comprehension strategies instruction across three time points (in Grades 8, 9, and 10) was predominantly explicit and was primarily targeted toward pre-reading strategies, such as finding the purpose of reading the text, getting an overview of the text in terms of skimming, making predictions, and activating prior knowledge. Further, the instruction focused on support strategies (cf. Mokhtari & Reichard, 2002), such as different ways of summarizing and organizing text content through, for example, mind maps, two-column notes, and Venn diagrams. Different ways of reading were also frequently mentioned during instruction, such as search reading, close reading, and reading actively.

From a previous study on reading strategies in eighth-grade classrooms (Magnusson et al., 2019), observations of the instruction in the participating classroom showed that the teacher engaged in the explicit teaching of strategies in several of the observed lessons in Grade 8. The findings also showed that the strategies instruction was mostly decontextualized, that is, not connected to specific texts. In the current study, therefore, the findings related to reading strategy instruction in Grade 8 will serve both as an illustration and an elaboration of these prior findings. A further emphasis, then, is placed on practices observed in Grades 9 and 10 and how these relate to the observations from the eighth-grade lessons.

In the following situation from Grade 8, the teacher provided decontextualized explicit instruction concerning different strategies in a pre-reading phase as preparation for reading a textbook chapter:

> Before we start this chapter, we are going to talk about pre-reading comprehension because before we start reading, there are things we usually do to be oriented about what is coming. If you get a text that you have never seen before, what is the first thing you usually do? (…) Think carefully—what do you do when you are faced with an unknown text? Talk to your neighbor.

> [Teacher and students dialogue about the purpose of reading a text, getting an overview of what the text is about by skimming, and activating prior knowledge.]
>
> Ok, so many of you make a mind map, some use a KWL scheme, and some write a reflection note—and it's a bit like—what's the best way for you. Up until now you have often experienced a teacher saying, "Let's make a mind map" about a topic before reading, or the teacher has said, "Let's make a KWL scheme: What do I already know about this, and what do I want to know?" And reflection—well, it means to think about, right? And then the question is, "What do you prefer?"

In this example, the teacher provided instruction on declarative knowledge of strategies by explicitly stating that they were going to talk about pre-reading comprehension and mentioned skimming, activating prior knowledge, and using different graphic organizers—thereby allowing the students and teacher to have common labels for their discussion (Nokes & Dole, 2004). She also focused on using graphic organizers as a way of activating prior knowledge, which are concerned with the teaching of procedural knowledge (Paris et al., 1983). Moreover, the teacher introduced the importance of having a clear purpose in mind when reading a text, emphasizing the use of a global strategy (Mokhtari & Reichard, 2002). Besides providing the students with declarative and procedural knowledge, the main purpose of this classroom dialogue seemed to be to elicit students' thoughts about their own preferred use of strategies. As the teacher stated, "up until now you have often experienced a teacher saying…," referring to the use of different pre-reading activities initiated by a teacher. However, in this situation, the teacher placed emphasis on how these familiar reading activities can be used strategically and independently by the students (cf. Shanahan et al., 2010). By asking them, "What do you prefer?," she focused on how the students can make an active choice of which strategy to use and as such plan their actions—an important part of developing the self-control component of metacognition (Baker & Brown, 1984).

In the following example from the ninth grade, the teacher reminded the students of what to do in the pre-reading phase, and she emphasized the familiarity that students ought to have with this kind of preparation for reading. Here, the teacher focused on how to approach a textbook as a multimodal text:

> So, every single day that you open up a textbook, you see a multimodal text. You are used to that. But how do you read a multimodal text? What is the first thing you do when you open the first page of the book? You are in ninth grade, and you have done it a million times. Don't you try to get an overview of what it's all about? You read the headlines or look at the pictures and stuff? And then you consider how long it will take to read. How long is the text, right? You often do that, so you are used to it.

In this example, the teacher focused on procedural knowledge regarding how to approach a multimodal text (cf. Paris et al., 1983); she repeated strategies that were taught in the eighth grade, such as getting an overview of the text, and explained how that entails reading headlines and looking at pictures. She also highlighted the consideration of the length of the text, which is an element to take into account when planning a reading (cf. Baker, 2002). The teacher pointed to the strategic actions she expected students to engage in when opening a textbook by highlighting

their age and experience with these kinds of texts, suggesting that they ought to be familiar with not only the text type but also with how they approach these texts. As such, the teacher highlighted the significance of strategy training for the students' independent use of strategies and also for their metacognitive knowledge of these strategic actions.

Pre-reading strategies were also repeated and explicitly taught in the tenth grade. However, the instruction at this grade level appeared more contextualized. In the following example, the class had been learning about the Sami language and culture as a cross-disciplinary topic and were about to read a short story called "Schoolboy" by the Sami writer Laila Stien:

> Teacher: Ok—before we move on, why are we going to read this text?
>
> Student: We are learning about the Sami people.
>
> Teacher: Yes, we are learning about the Sami people because we need to learn more through fictional texts about what Sami cultures can be like. If we try to get an overview of the text (…); in order to get this overview, you often skim the text, you read the headline, and here it says "Schoolboy," and it is quite significant for the text, don't you think? Look at the picture. Underneath, it says, "Norwegian lessons at a boarding school for Sami children in 1950." This also gives an indication of what the text is about. And you also see some children playing, and can you see the deer in the back? That was the overview.

Here, the teacher pointed to several of the strategies that were observed in Grades 8 and 9. She focused on the global strategy of considering the purpose of the text by asking the students why they were going to read the text; however, she did not put emphasis on why that consideration is important. Further, she talked about getting an overview of the text, which she explicitly mentioned in both Grades 8 and 9, and also repeated reading the headline and looking at pictures, which was observed in Grade 9. Further, she elaborated on how to use the information from the short text related to the picture to get an idea of the textual content. This shows that the teacher continued to provide explicit instruction related to the same strategies as taught in Grade 8 and 9, albeit leaving out the overall aim of applying this strategic approach and as such paying less attention to the conditional knowledge of strategies (cf. Paris et al., 1983).

The observed instruction in this study reveals that the teacher continued to focus on the explicit teaching of strategies in Grades 9 and 10, exhibiting both a decontextualized and contextualized practice, and both repeated and referred to previous instruction as well as providing elaborated instruction. At the minimum, this shows that the teacher reviewed and repeated strategies throughout the lower-secondary grades.

This practice of explicit strategy instruction is reflected in the students' utterances. When the students were asked to describe what they usually do in class whenever a text is at the center of instruction, they emphasized that they talked a lot about planning the reading by getting an overview of texts before reading, talking about the purpose of reading the texts, and making predictions. They also pointed

out that they were frequently encouraged to "read with a pencil in [their] hands." Many students also emphasized the focus on making summaries of texts in terms of writing short summaries or summarizing main content in the form of two-column notes, Venn diagrams, or key words. The focus on pre-reading strategies and support reading strategies thus seems to be a dominant instructional practice in this classroom.

In the interview, the teacher mentioned that she had learned a lot about reading through a professional development course called "Reading to Learn" and that she had the responsibility for the domain of reading at her school, thereof having started a reading course that she taught for all—more or less—struggling readers across grade levels. She also made frequent references to the course during lessons while explicitly teaching strategies or language skills, emphasizing that this is what they concentrate on during the course lessons when trying to make sense of difficult texts. This cross-disciplinary course was offered in particular to those students that scored below a given threshold on a reading test, but all students were welcome to join if they felt they needed extra help. The teacher pointed out that all the students in her class had participated at one time or another during the three years of lower-secondary schooling because they had all experienced challenges with reading texts in some school subject at some point. Several students also referred to the reading course either by mentioning that they had participated in those lessons by saying, "We also do this in the reading course" or by saying that the teacher explains how they focus on the same features (strategies and skills) in the reading course.

The teacher expressed that she had earned credibility in "dissecting" the texts together with the students in this course as the texts often were part of subject areas outside her professional expertise. She explained, "I then have to figure things out the same way that students need to, and it makes my strategies visible for the students when I think aloud about what I do not understand in the texts and how I can achieve an adequate understanding," which underscored her belief in modeling as an important part of reading instruction. As such, this conception may reflect her beliefs connected to both the information from the professional development course ("Reading to Learn") and the experience connected to contextual factors in the immediate environment (cf. Fives & Buehl, 2012). The positive feedback she experiences from the students when modeling seems to have influenced her view on what reading instruction should entail, which in turn seems to have increased her self-efficacy when it comes to this instructional practice.

3.1.2 Language skills instruction

In addition to a focus on the explicit teaching of comprehension strategies, the findings in this study provide evidence of consistent language skills instruction in the participating classroom, in both eight, ninth and tenth grade. The observed instruction was quite varied and comprised several features that have been shown to be important for language development. The instruction was, to a large extent, targeted

toward scaffolding students to select important vocabulary for learning (Blachowitz & Fisher, 2000). The teacher provided instruction on words that might be important or difficult in a text or asked students which words they wanted to focus on and subsequently provided feedback on these reflections.

In Grade 8, the observed instruction focused in particular on the multidimensionality of word learning by paying attention to *semantic relationships* (Nagy & Scott, 2000), such as antonyms and synonyms, as well as *morphological analysis* (Graves, 2016; Nagy, 2007), providing instruction about words that are composed of several different words and teaching strategies for finding the most important word-element for comprehension. To explain, the teacher used the same example of compound words several times: "Which word is the most important, the first or the second? Now I have to do the famous 'car fire' [*bilbrann*] and 'fire car' [*brannbil*, meaning fire engine] again. The last word is the most important!" The teacher also provided instruction on *prefixation*, as in the following example, when the class tried to find the antonym of being active: "Often we can place 'un' in front of [a word] to get the opposite, but unfortunately, that is not the case here . . . Instead of 'un,' you can use 'in,' and then you get 'inactive.'" Teaching this kind of generative word knowledge has been deemed particularly appropriate for students in upper elementary grades and beyond (Nagy et al., 1993).

In both Grade 8, 9 and 10, the instruction focused on word information. This included *definitional information* (Stahl & Fairbanks, 1986) by engaging the students in the explanations of specific words with prompts such as "What does 'methods' mean?" It also included *contextual information* (Graves, 2016), which involves constructing meaning of words within the textual context. This can be illustrated by the following example, where the word "earmark" was connected to a specific sentence in a text about the Sami culture (in Grade 10): "If the rein has an earmark, what is that? Because [the text] says, 'From his dad, he has just learned the earmarks on the reins,' so obviously the earmarks have different names." Furthermore, the teacher seemed to acknowledge that word learning is incremental through queries such as "Do you remember that you have said that you often think you know what the word means, but you still feel that it is difficult to explain?" This aligns with Dale's (Dale, 1965) third (out of four) phase of word learning, where one "recognizes the word in context as having something to do with" without being able to fully explain the word as such. In sum, the teacher provided the students with multiple exposures to to-be-learned words (Stahl & Fairbanks, 1986). The teacher also encouraged extended peer discourse when presenting or reviewing important words and concepts related to the L1 content in focus for that particular learning period.

In the interviews, students highlighted making notes of difficult and/or important words. The instructional focus on vocabulary was mentioned by all the student groups, and many also pointed to literary devices as a recurring theme when reading texts during lessons:

> Student 1: We always read like pieces of texts, we read one part, and then [the teacher] asks if there were any difficult words there.

> Student 2: Difficult words.
>
> Student 3: Yes.
>
> Student 1: Or like similes and metaphors. I don't know everything about—
>
> Student 2: Literary devices.
>
> Student 1: Thank you! That fancy name. And then we list up all that we found, and then [the teacher] always finds some more—or no, actually, we have become pretty good! And then we find most of them and move on in the text.
>
> Student 1: Yes, that's always how it is.

These students emphasized the repeating patterns of the instruction by stating that, "We always read . . ." and "That's always how it is," and one student also reflected on the fact that they had "become pretty good" at finding literary devices in texts, suggesting that this was a familiar way of approaching texts.

In the interview, the teacher emphasized that she focuses a great deal of attention on the explicit teaching of vocabulary: "We work a lot on concepts, difficult words—the more chance you have of understanding the text," and that she believes in the importance of repetition: "I have learned through a long life of teaching that nothing gets automatized unless it is repeated a million times." This underscores the way the teacher's beliefs are filtered through experience (cf. Fives & Buehl, 2012).

3.2 Students' and teacher's reflections on the focus on strategies and language skills

When asked what they think about the provided instruction, some students mentioned that they had learned a lot from it; however, students generally emphasized the monotony of the instruction:

> Student 1: We learn a lot from it, but it could perhaps have been more varied because it is usually the same every lesson.
>
> Student 2: It's like—it's what we do, we get a text, we read it and analyze it, talk about difficult words, and then we are given tasks to discuss with our neighbor.
>
> Student 3: That's what we do, yes.

Similarly, another student emphasized the lack of instructional variation: "I guess it's ok, but we have been doing it for quite many years now, so it wouldn't really hurt to have a small change."

Even though the teacher emphasized that she believed in the explicit teaching of strategies and skills, she did stress that she had tried out other, more student-centered instructional activities, such as literary conversations and group work where students needed to take more responsibility, but that, unfortunately, it had not really worked out with the students in the class, and she expressed the need to take control of the instruction in order to keep the students concentrated on learning activities. She added, though, that she would have liked to have had more time to read novels during lessons but that she had made the choice to focus mainly on reading proficiency because, "That is what the students need the most in their

further education." This exhibits the teacher's belief in a more balanced teaching of reading (cf. Pressley, 2006); however, the enacted practices seem to be constrained by classroom management issues and contingent on what she believes to be student needs (Beed et al., 1991). It might also reflect the teacher's belief in how an effective classroom works, where there might not be room for a process in which the students, with guidance from the teacher, would gradually learn how to take on responsibility for the learning activities.

3.3 Students' possible attainment of metacognitive knowledge of their own reading

When the students were asked how they would approach the reading of complex texts they might find difficult, they mentioned several of the features observed in the instruction, such as the emphasis on difficult and important words, applying different reading techniques (skimming, close reading), activating prior knowledge ("thinking about what one knows about the topic"), and talking to peers. Trying to understand difficult words was mentioned by a majority of the students. One student explained what he would do if he was faced with a very difficult text, for instance, on the exit exam: "I would go through [the text] and be certain that I know what the words mean and not think like, that word isn't so important." This also exhibited a focus on monitoring and self-regulation of one's own reading processes, in this case of word comprehension. Many students mentioned this kind of reading monitoring, revealing a metacognitive thinking about their own text comprehension. Some students also made a connection between the instruction they had been given and the strategies and skills they had developed, as in this student's utterance: "We have had really good help in understanding like what do I do now if I don't understand this, it's not like, then I just keep on reading, it's like just automatically, 'What does this word mean?'" The student pointed to how the instruction helped to overcome reading challenges and reflected on the strategy of focusing on difficult words as having become more of an automated skill. This also suggested that students perceived the strategies they had been taught as helpful; thus, the provided instruction may have enhanced their self-efficacy in reading.

Many students mentioned asking others for help and support as a strategy they would use when encountering difficult texts. When asked what they would do if they could not talk to others but needed to figure things out for themselves, one group of students gave the following explanation of approaches:

> Student 1: If you don't understand anything, you could start from the beginning—realize that it is a difficult text and read it once more.
>
> Student 2: Or read with proper understanding.
>
> Student 1: Yes, you try to use all you have learned to understand the sentences, like work really hard.

> Student 2: Because there's a difference between skimming—then you read quickly through the text and don't get everything, then you can read normally, which is more slowly, and then you have to read thoroughly if you don't understand everything—
>
> Student 1: So, if you don't know what the words mean, you go through it again, and think about what it might mean. Like really thoroughly. It takes a hundred years! But then, hopefully, you understand the text.
>
> Student 3: We are supposed to use a pencil and make notes if we find literary devices and difficult words and stuff. So that we don't just read something that we don't understand at all.

These students acknowledged the importance of monitoring their reading; realizing that a text is difficult is the result of monitoring their own textual understanding, as is making notes of difficult words, and the awareness of comprehension as something more than pure decoding ("so that we don't just read something that we don't understand"). What reading with "proper understanding" entails seemed to be more challenging for the students to unravel, but reading "thoroughly" was described as a way of scrutinizing a text and was thus a close-reading practice (cf. Catterson & Pearson, 2017). It was made clear that it requires cognitive effort and time ("work really hard," "it takes a hundred years") and that the students deemed rereading and different reading strategies as ways of overcoming the challenges as well as acknowledging that reading pace plays a part. Thus, the students in this study seem to have knowledge about repair strategies they can use when textual understanding fails.

4. DISCUSSION

The analysis in this study shows that the dominating reading comprehension instruction observed in the participating classroom in both Grade 8, 9 and 10 is centered around strategies for understanding texts and general language skills, which is underscored by the students' account of the instruction, and emphasized by the teacher as important instructional elements for this group of students. The students exhibited metacognitive knowledge of how to approach complex texts independently, but they also expressed a lack of variation in the provided instruction.

4.1 Instructional practices and students' metacognitive knowledge

In line with theory of the role of language skills in reading comprehension (Ash & Baumann, 2017; Hoover & Gough, 1990), the findings in this study provide evidence of consistent language skills instruction in the eighth, ninth, and tenth grades. The instruction focuses on building language skills as a superordinate skill encompassing different types of linguistic and vocabulary instruction. Such instruction has been proven to build the ability to reflect upon and manipulate language (Nagy, 2005) in terms of enhancing word consciousness (Ash & Baumann, 2017) and metalinguistic awareness (Nagy, 2005; Nagy, 2007), and is likely to contribute to promoting deep

processing of words and meanings (Stahl & Fairbanks, 1986; Graves, 2016). Moreover, the instruction is in line with research claiming that vocabulary instruction needs to be long-termed and comprehensive (Nagy, 2007).

Additionally, the teacher was clearly focusing on teaching strategies to enable students to become independent readers, in line with recommendations within the field (e.g. Kamil et al., 2008). This instruction was enacted both in relation to specific texts as well as through a more decontextualized practice and focused on knowledge building and training of those strategies through explicit instruction and consistent short peer-talk activities.

To some degree, the instruction aligned with the metacognitive oriented instruction recommended by Veenman, van Hout-Wolters, and Afflerbach (2006). The instruction was mostly *embedded*, meaning that it was related to specific texts; however, decontextualized strategies instruction was also observed. The instruction was *informed* in the way that students were told why the provided instruction was important. Furthermore, the explicit teaching practices related to both declarative, procedural and conditional aspects of reading, provided the students with opportunities to develop a metacognitive perspective of the reading process. The teacher provided *prolonged* instruction, as there was a sustained focus on how students should think before, during, and after reading throughout the lower-secondary grades. The results indicate that this embedded, informed, and prolonged instruction focusing explicitly on strategies and linguistic features made the students aware of these elements as important when approaching texts, as the students do seem to have attained a metacognitive knowledge of their own reading by the end of Grade 10. Although the students in this study did not always say that they used the strategies they had been taught, they showed an awareness of these and reflections on why they did not use them and/or why they preferred other strategies, which indicated independent considerations of strategy use and suggested that the students acknowledged strategy use as more than solely a procedural task. As such, the findings in this study support the idea that the integration of such instructional elements is fruitful.

Although students exhibited metacognitive knowledge of how to approach unknown texts that are quite varied and appropriate, the students, at the end of Grade 10, expressed that they would have preferred the instruction to be more varied. As skilled readers have been shown to vary their reading activities more than less skilled readers (Janssen et al., 2012), a greater instructional variation might be of importance in order for students to proceed with their development in becoming expert readers. Moreover, the findings suggest that the lack of variation might impede student motivation. Even though prior studies have shown a connection between reading strategies instruction and student motivation (Pecjak & Kosir, 2008), laying considerable weight on just a few instructional elements may impinge on the motivational factor.

4.2 A balance between fostering basic skills and higher-order thinking

Considering that the student gains on the national reading tests from Grades 8 to 9 showed that the lower-performing students were those having the highest gains, it might indicate that the provided instruction—a basic focus on comprehension strategies and language skills—would be very helpful for those who need more support to attain an adequate level of comprehension but potentially not foster further development in terms of higher-order thinking about texts, such as, for example, reading critically. As the teacher expressed, she would have liked to have had more time to read novels and focus on literary discussions, which might have been important in fostering more higher-order thinking when preparing students for the upper secondary level.

So, what should the balance be between fostering basic skills and higher-order thinking? Does it have to be one but not the other? In answering these questions there are certainly case-specific attributes that need to be considered. Depending on the students, it might be more critical to engage the students in developing basic comprehension skills in some classrooms than in others. However, if teachers continually focus on basic skills, it may hamper the students' engagement in higher-level thinking and make it difficult for teachers to determine students' thinking abilities. Conversely, if higher-order tasks are dominant in classrooms—especially in whole class teaching, where students are not necessarily obliged to participate—it may be conceivable that (some) students struggle with basic reading comprehension. It is therefore reasonable to strive for a certain balance of instructional features, taking into account the diversity and abilities of the students in a given classroom. This is also in line with what Pressley (2006) calls a balanced teaching in reading, in which he emphasizes that teachers should include elements for both reading proficiency training as well as a more holistic approach to texts. Students need to develop vocabulary and reading skills to meet the ever-increasing demands on reading competence and, especially for students in higher grades, it is also crucial to read texts through a more holistic approach.

4.3 Limitations and future research

There are several limitations to this study concerning the conclusions that can be drawn. No causal link can be made between students' metacognitive knowledge and students' performance. Case studies "do not offer information about causality regarding teaching and learning but they do provide information on the dimensions and dynamics of classroom living and learning" (Barone, 2011, p.7). This study provides insights into the mechanisms by which reading comprehension instruction in one classroom potentially can make contributions to students' metacognitive knowledge, in aligning the observed instruction with well-established research and theories within the field, and exploring students' approaches to complex texts.

Another limitation concerns the constraints of using interviews as a methodology. Interviews elicit a sort of delayed recall in which students account for what they normally do or think they would do in a given situation, which could be different from what they actually do. In the case of metacognitive knowledge about strategies, it is important to note that "*knowledge* is not *use*" (Garner, 1992, p. 238). Thus, the participating students may have attained knowledge of strategies, but might not have the willingness to engage in strategy use in required situations, or their procedural and/or conditional knowledge may not be sufficiently sophisticated. In order to obtain a more exact insight into students' metacognitive thinking, on-line measurements are needed (Veenman et al., 2006).

Additionally, future research should seek to make closer connections between instruction, students' metacognitive thinking, and students' performance. Also, in this era of personalized learning (Alexander & Fox, 2019), researchers need to put more effort into investigating the individual student's reading development and internalization of instructional features, in order to identify instruction that is beneficial for particular students, rather than solely focusing on classrooms as entities.

5. CONCLUSION

This study displays a considerable emphasis on comprehension strategies and language skills as part of L1 instruction at the lower-secondary level. These features are underscored by the students' accounts of the L1 instruction they had been provided over a period of three years of lower-secondary schooling, which were also mentioned by both the teacher and the students as recurring features in a cross-disciplinary reading course provided by the L1 teacher. The findings in this study thus shows that, even though strategy instruction has been deemed as "hard to curricularize" (Pearson & Cervetti, 2017, p. 35), this instructional feature can be embedded in reading instruction over time at the secondary level.

Furthermore, comprehension strategies and attention to vocabulary were dominant in students' reflections on how to approach complex texts on their own. Thus, as the students conveyed such metacognitive knowledge about strategies for text comprehension, this indicates that sustained practices over time may influence students' way of thinking about reading comprehension. However, the rather restricted focus on strategies and language skills may come at a cost: As students experienced the instruction as monotonous, there is a risk of a decrease in motivation. Also, the instruction left little room for focusing on other teaching methods and text practices which may have been equally important for preparing the students for upper secondary schooling. In line with prior research (e.g. Pressley, 2006), these findings thus emphasize the need for a multifaceted and balanced approach to reading instruction that will provide students with opportunities to attain both basic and higher-order thinking skills, and help them to successfully manage, navigate, experience, and critically question the myriad texts that surround adolescents on a daily basis.

The findings in this study may provide valuable insights for teachers and educators of how explicit strategy and language instruction can be integrated in daily instructional practices over time, yet bearing in mind the risk of the instruction being too monotonous. More specifically, this study informs L1 reading instruction about the ways in which strategies and vocabulary can be given continuous attention, while also emphasizing that reading instruction needs to be supplemented by other elements as well—maintaining care of reading motivation as a central aspect of L1 instructional practices.

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APPENDIX A

Table 3. Overview of topics, text types, genres, and texts

Grade	Topic	Text type	Genre/text
8	Reading strategies and general learning strategies	Expository	Textbook chapter on reading/learning strategies
		Expository	A text about philosophical questions (unknown source)
		Expository	A text about water resources (unknown source)
		Narrative	A text about a 14-year-old boy that has been caught stealing from a shop (unknown source)
		Narrative	Extracts from the novel *Barsakh* (2009) by the Norwegian author Simon Stranger
9	Multimodal texts	Argumentative	YouTube: advertisement videos
		Argumentative	Advertisements in newspapers/magazines
		Expository	Online language arts textbook (smartbook)
		Expository/narrative	Food blogs
		Expository	Website: vg.no (newspaper)
10	Sami language, culture, and texts	Aesthetic	A Sami song/poem: "Gula Gula" (text/music video) by the Norwegian Sami artist Mari Boine
		Aesthetic	A personal yoik: "Ole´s yoik" ["Oles joik"]
		Narrative	A short story: "Schoolboy" [Skolegutt] (1979) by the Sami writer Laila Stien

APPENDIX B

Table 4. Coding scheme video observations

Themes	Subcategories	Description	Exemplar Quotes
Language skills and language learning strategies	Text-based vocabulary	Asking questions about or providing definitional or contextual information about words in a text	"What does the word 'methods' mean in this context?"
	Morphological analysis	Explaining and asking questions concerning prefixation or compound words	"When you use 'un' it means the opposite."
	Semantic relationships	Explaining and asking questions concerning antonyms or synonyms	"What is the opposite of 'public'?"
	Word-learning strategies	Explaining and modeling the thinking process of figuring out word meanings	"I don't know what graphical means; I have to figure it out and what do I do, well I Google the word 'graphical,' I get a hundred million hits, then I have to figure out which link to choose and assess the pages."
		Talking to peers to elicit background knowledge and help each other explaining the meaning of words	"Yes, that's typical, difficult words are difficult to explain. Talk to your neighbor about [the word]."
Comprehension strategies	Purpose of reading	Asking students to reflect on what the purpose of reading a particular text is and why this is a useful strategy	"Why is it important to find out what the purpose of reading is?"
	Keywords	Identifying and justifying keywords in a text	You are now going to compare your keywords, and if you have different keywords, you have to argue for why you chose the ones that you did."
	Underlining and making notes	Identifying and underlining words and phrases that are difficult to understand	"Now you need a pencil, and that pencil should be used to underline the words that are difficult."
	Summarizing	Writing short summaries, retelling to peers the main content of a text	"In order for you to get an ownership to the content here, listen through what the texts says and summarize in your own way."
	Using graphic organizers	Making mind maps, two-column-notes, Venn-diagrams, KWL tables	"Can making a mind map before you begin—can that be a strategy?"
	Making predictions	Making predictions in a pre-reading phase based on headlines and/or pictures, or filling in a predictogram	"And now I want you to start to think about what's going to happen with Samuel in the book."

	Getting an overview of texts	*BISON*[1] Skimming through the text, focusing on length, headlines, and pictures	"It's smart to get an overview—for example by using *BISON*."
	Asking questions to the text	How and why to generate questions to a text and modeling how and when to take thinking pauses	"And now I will try to make you understand why it is important to ask yourself questions when reading."
	Rereading	Focusing on rereading as a way to improve comprehension	"You should read the text once more, to get better understanding."
	Activate prior knowledge	Prompting students to think about what they know about a topic in a pre-reading phase	"Ask yourselves, 'What do I know about this?'"
	Making a chapter overview	Finding subheadings and topic sentences in a text to get an overview of what the text is about	". . . many of the headings had sub-headings which in turn had some sub-headings, and then we got an overview of the different parts of the chapter."
	Reading actively	How to engage with the text, including "making the textual content your own"	"If you are an active reader—what do you do—how do you engage with the text?"
	Monitoring own reading	Focusing on monitoring own reading comprehension	"Have you understood that it's important to monitor your own reading comprehension while you're reading?"
	Building declarative knowledge of strategies	Explaining what a pre-reading phase is and what the term "pre-understanding" entails, processing the text after reading, explaining what the term *reading strategies* entails	"There are different pre-reading activities—many use mind maps, and some use KWL form."
Classroom interactions	Peer-talk	Asking students to talk about subject matters to the person they are sitting next to	"Talk to your neighbor: What do you think the word 'process' means?"

[1] *BISON is a Norwegian acronym that stands for Bilder (images), Innledning (introduction), Siste avsnitt (last paragraph) or Sammendrag (summary), Overskrifter (headlines), and NB-ord (Nota Bene words—words that stand out as important). This acronym is often used to prompt skimming of texts to get an overview in the pre-reading phase.*

Teacher questions to texts	Literal understanding	Asking questions that require students to understand what is explicitly stated in the text	"What do [the main characters] normally do every Friday?"
	Making interpretations	Asking questions that require students to interpret textual content	"It says they get to go home. Who are 'they'?"
	Finding literary devices in texts	Asking questions that require students to find and/or reflect on repetitions, contrasts, and metaphors	"Do you find any repetitions in this text?"
Building knowledge	Building general and disciplinary knowledge	Building knowledge about a topic before reading a particular text relevant to that topic, including cultural, linguistic, and biographical knowledge	"The Sami people have the right to be heard in matters pertaining to them, and rules, announcements, and forms must be available in the Sami languages."
References to reading in other situations	References to a reading course	References to activities and strategies used in a separate cross-disciplinary reading course	"And now I want to ask you guys who attended my reading class yesterday: What did we do with the science chapter yesterday?"
	References to reading in other subjects	References to reading about particular topics in the subjects KRLE[2], science, and social science	"If this had been a homework assignment in science, could this way of reading be a smart way to learn the material?"

[2] KRLE is a subject in the primary and lower-secondary grades in Norway. It is an acronym that stands for Kristendom (Christianity), Religion (Religion), Livssyn (Humanist life values), and Etikk (Ethics)

APPENDIX C

Table 5. Coding scheme student interviews: perceived reading instruction

Theme	Subcategories	Description	Exemplar Quotes
Comprehension strategies instruction	Activating prior knowledge	Includes teacher questions about authors, a topic, or a genre	"[The teacher] often asks if anyone knows anything about the author or has read anything else by the author or something like that."
	Previewing the text	Getting an overview of the text before reading, often by using *BIO*: looking at the pictures, introduction, and headlines. Scanning and skimming	"We often look through the text and take a *bio look* before we read."
	Making predictions	Predicting text content in a pre-reading phase based on headlines and pictures, or during reading based on content in the passages that are read	"Sometimes it`s what the text is going to be about. Like based on the headline. Which creates more—Which makes us think about our prior knowledge."
	Purpose of reading	Talking about why to read in a pre-reading phase	"We kind of follow a plan that we have on the whiteboard, about why we should read, as if we were asking questions before reading, like why we should read."
	Summarizing	Making summaries of text content in different ways: making two-column notes, Venn-diagrams, writing keywords	"A lot of the work is about summarizing in different ways, make two-column notes or Venn-diagrams or things like that."
	Making notes	Making notes of words, paragraphs, phrases during reading	"We make notes—what kind of thoughts we get as we read. Like . . . can I write in the margins. How the author writes . . ."
Writing tasks		Completing writing tasks about textual form and content	"Sometimes we get writing tasks, like, 'How do you think the protagonist feels when she says that,' and questions like that."
Language skills instruction	Finding linguistic/literary devices	Finding literary devices, such as repetitions and similes	"We go through all repetitions and things like that, that we have found. What [the teacher] found and what we found."
	Vocabulary talk	Classroom talk about difficult words in a text they are going to read (selected by the teacher) or that they have read	"If there are any difficult words in the text, we talk about them in advance."
Making interpretations		Finding themes and message	"We talk about the theme of the text."

Talking to peers		Talking to peers about difficult words and text content	"Often it is—talking to your neighbor who is sitting next to you and then we talk about the text and, well, what you think and what you found out."
Reflections on the instructional practices	Lack of variation	Reflections on the fact that they often do the same every lesson	"We know what`s coming."
	Learning reading comprehension during L1 lessons	Students' reflections on what they have learned about reading during L1 lessons at the lower-secondary level	"[The teacher] goes very thoroughly through the texts or ways to read and all that stuff, so we have—or at least I've learned a lot more about it."

APPENDIX D

Table 6. Coding scheme student interviews: students' strategies for text comprehension

Theme	Subcategories	Description	Exemplar Quotes
Focusing on words, language, and structure	Figure out difficult words	Building a good vocabulary and figuring out the meaning of difficult words to aid text comprehension	"If there are any difficult words, try to explain them, or, yes, try to understand the text."
	Making notes of text structure and linguistic/literary devices	Paying attention to how a text is structured and the use of linguistic/literary devices	"Finally, I would map out how the text is structured and whether there are any repetitions, similes, well, if there is anything like that in the text. And usually there is."
Monitor own reading		Thinking about how well they understand a text	"Maybe I will read paragraph by paragraph to see if I understand it—or like look at the first, or if I read the first paragraph then also see what this section is about—think about that paragraph and move on to the next, and also look at the connection between them and somehow take bit by bit, and spend some time actually understanding the text."
Getting help and support	Searching the Internet	Make Internet searches in order to find information or literary analyses to aid text comprehension	"If I read [a text] several times and I don't understand anything, I Google what it's about."
	Using support material	Use information about different text types, provided by the teacher	"We also got a paper that says how to go through such a text."
	Talking to others	Asking/talking to someone that might know more about the topic, like parents, teachers, or peers.	"So, in a way [parents] can be helpful, in a way it's about listening to others. To get their view."
Rereading		Read the text multiple times to aid text comprehension	"When it's a quite difficult text, it certainly helps me to read it several times."
Close reading	Reading thoroughly	Paying attention to each sentence, looking more closely into difficult parts, and reading slowly	"I think I maybe would have focused a little extra on each sentence"
	Making interpretations	Interpreting each sentence	"I'd possibly interpret each sentence. It depends on how long the text is."

APPENDIX E

Table 7. Coding scheme teacher interview

Theme	Subcategories	Description	Exemplar Quotes
Important reading instructional elements	Focusing on important words	A sustained focus on explaining words and concepts to aid text comprehension	"The more words you can explain, or the more words you know that you are quite sure of what they mean, the better chance you have of understanding the text. And this applies to both fiction texts and non-fiction."
	Activating prior knowledge	Focuses on activating prior knowledge, based on what research says about being ready to perceive content	". . . talking about what we know about [the texts], and like we can, well, figure out something before we start. I have done this quite systematically."
	Previewing	Get an overview of texts	"We get an overview first, of what the texts can be about."
	Asking questions of texts	Focuses on asking different types of questions of texts, and not only those in textbooks	"When I ask questions about texts, I kind of try to have different types of questions of the text."
	Modeling strategies	Modeling strategies to make the thinking available to students and that they ultimately can apply this themselves	"Mostly, I model [pre-reading strategies]."
	Repetitions	Focusing on repetitions to make strategies automatized	"I have learned through a long life of teaching that nothing is automatized if it is not repeated a million times"
Comprehension strategies instruction	Declarative knowledge	Reflections on whether strategies should be named	"Well, the word 'strategy' is difficult for them . . . But when I say two-column note or Venn-diagram or, yes, keywords, yes, then I want it to have a meaning for them, so that when I have said it enough times, they somehow get an understanding of what it means."
	Evaluations of students' use of strategies	Evaluating students' strategy use through their actions during lessons and filling out a scheme to keep track of their strategy use.	"For example, if I hand out a text like we . . . which is unknown, then I say: 'Now I saw that two of you began to scroll to see how long the text was, and to get an overview—shouldn't all of you be doing that?'"

Instructional practices not enacted	Teaching formats	Reflecting on reasons for applying whole class teacher-directed instruction and not other teaching formats	"Once it's not very controlled and very clear what to do, the students do other things instead."
	Spending time reading	Wishing to spend more classroom time reading, novels in particular	"Although we encourage them to read, we do not devote enough time to it."
Reading course	A cross-disciplinary reading course	Describing and reflecting on how a cross-disciplinary reading course focusing on vocabulary and strategies benefits students' reading skills	"The students who are struggling with reading, which has been revealed in the national test or in other ways, that they need extra help, they are offered a reading course."
Teacher professional development (PD)	Extra teacher training	Mentioning of attending a PD course called "Reading to learn"	"I've always been interested in updating my knowledge and learning new methods."
	Use of a reading program	Mentioning of a reading program called "Leselos" [Reading guide], which has been implemented in the whole district	"When we read texts, I always use the principles from 'Leselos', to get an overview first, of what the texts can be about."