

# Strategic reading and text media in L2 English classrooms

*A video study of strategic reading and text media  
selection in lower secondary school L2 English  
classrooms*

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# Abstract

This master (MA) thesis is a follow-up study of Brevik (2019a) and has used video-recordings to analyse what characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies. The video data were collected by the Linking Instruction and Student Experiences (LISE) project at the University in Oslo, coordinated by Lisbeth M. Brevik. This study has analysed six lower secondary school classrooms across year 9 and 10 to identify what text media that were used in English lessons where either the teacher instructed or students used reading comprehension strategies. In addition, the MA thesis analysed whether the reading comprehension strategies were teacher or student initiated or used in collaboration between teacher and students.

My first finding shows that the printed text media is the most frequently used in English lessons across schools and school year. However, it appears that the classrooms often engage with multimodal reading activities where they combine printed and digital text media. The hypertext media (online text) appears underrepresented in comparison with the other text media. Second, I found that the lower secondary school classrooms used a variety of reading comprehension strategies with text media and that reading comprehension strategies were used flexibly according to text media and modality. Third, I found that the reading comprehension strategies were most frequently initiated or prompted by the teachers, while the students were the ones who chose and used the reading strategies to comprehend texts.

Based on this MA thesis's findings, I argue that the didactic implications are that English teachers should consider integrating various text media in their English lessons to help the students to develop proficiency with reading comprehension strategies across text media. In addition, teachers can help them by instructing or prompting the students to use strategies to solve comprehension issues associated with different types of text media.



# Sammendrag

Denne masteravhandlingen er en oppfølgingsstudie av Brevik (2019a) og baserer seg på video-opptak for å analysere hva som karakteriserer forholdet mellom forskjellige tekstmedier i engelsk som andrespråk klasserom på ungdomsskolen og instruksjoner og bruk av leseforståelsesstrategier. Video-opptakene stammer fra Linking Instruction and Student Experiences (LISE) prosjektet ved Universitetet i Oslo, koordinert av Lisbeth M. Brevik. Denne student har analysert seks ungdomsskole klasserom på 9. og 10. trinn for å identifisere hvilke tekstmedier som ble brukt i engelsktimer hvor enten læreren instruerte eller elevene brukte leseforståelsesstrategier. I tillegg har masteravhandlingen analysert hvorvidt det var elevene eller læreren som tok initiativet for å bruke leseforståelsesstrategiene, eller om de samarbeidet om å bruke strategiene.

Mitt første funn viser at trykte tekster brukes oftest av de andre tekstmediene i ungdomsskoleklasserom på tvers av skoler og skoleår. Likeså tyder resultatene på at klasserommene ofte benytter seg av multimodale tekster i undervisningen som kombinerer trykte og digitale medietekster. Hypertekst (tekster som leses på internett) er underrepresentert i klasserommene sammenlignet med de andre tekstmediene i studien. Mitt andre hovedfunn er at klasserommene hadde et stort utvalg av forskjellige tekst medier og multimodale tekster. I tillegg ble leseforståelsesstrategier brukt fleksibelt; det vil si at deltagerne endret bruksformen etter de forskjellige tekstmediene og tekstmodalitetene de leste. Mitt tredje funn viser at leseforståelsesstrategiene ble oftest initiert av læreren, mens det var elevene som valgte og brukte lesestrategier for å forstå teksten de jobbet med.

Basert på disse funnene argumenterer jeg at de didaktiske implikasjonene fra denne masteravhandlingen er at engelsklærere bør vurdere å inkludere et variert utvalg av tekster fra forskjellige medier i engelskundervisningen for å hjelpe elever med å utvikle sine ferdigheter med leseforståelsesstrategier. I tillegg bør lærere instruere eller påminne elevene å bruke lesestrategier som kan hjelpe dem med forståelsesproblemer når de leser tekster i forskjellige medier.





# Acknowledgements

With these words, I seal my MA thesis project and my five years at the University of Oslo. There have been many people who have helped and supported me through this time and who deserve to be thanked.

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# 1 Introduction

My interest in strategic reading ignited many years ago. Reading has been, for as long as I can remember, both a pleasure and a struggle. I have always felt an immense joy from experiencing a good story, but the process of reading has been laborious. When I began lower secondary school, it was discovered that I had dyslexia, and from then on, I was taught different reading strategies to help me with comprehension and to read more effectively. Years later, during my pedagogic practice period, the school at which I had my practice initiated a new project where the students' English textbook was digitalised. This presented teachers and students with a new set of possibilities and challenges, and it was necessary to employ a new mindset around how to think about reading and reading instruction when the students sometimes spent as much as five minutes finding the right page, pasted the whole text into Google translate or even looked at shoes online instead of reading. At the same time, the mechanisms in the digital text allowed for more effective word searches, looking up definitions of words and links to illustrations and videos. This experience brought a new element to my interest for strategic reading, and I began to wonder how the medium of the text might affect reading comprehension and what strategies might be introduced to help students read more effectively both on paper and screen.

Norwegian students' reading competence both in English and Norwegian has received much attention in the public debate since the beginning from the 2000's when Norway first began to participate in the international PISA literacy test in Norwegian (L1). The reading comprehension test results indicated that Norwegian students performed on average and they have continued to do so (the Norwegian Directorate for Education and Training [UDIR], n.a). The PISA literacy test measures students' L1 reading competence both regarding paper and screen-based reading, and the test scores suggest that there is large variation in comprehension among Norwegian students (Roe, 2014; Roe & Jensen, 2017). In addition, the number of students that struggle with reading comprehension increases from lower to secondary school (UNICEF, 2018). A doctoral study (Frønes, 2017) investigated how Norwegian 15-year old students navigated when reading hypertext in Norwegian in the online PISA text. The findings suggest that students were not sufficiently critical of what they read online and that the students who did not use reading strategies were often not able to answer the task. Based on this information and because the PISA test is conducted towards the end of lower secondary school (10<sup>th</sup> grade), I was curious to investigate how teachers and students

worked with reading strategies in English in lower secondary school and how they addressed reading on screen and paper in the classroom.

## **1.1 English in Norway**

As the world today is increasingly becoming more globalised, English has gained the position as the number-one lingua franca for communication (Crystal, 2012; Graddol, 2006), with approximately two billion learners of English across the world (Education first, 2015).

English is, furthermore, the main language on the internet (Education first, 2017; Røknes, 2019), providing people with opportunities to develop English proficiency as a first (L1) and second (L2) language. This easy access to English content online facilitates language learning in an informal context and is a source of developing English proficiency outside of school (Sundqvist & Sylvén, 2016; Sykes, 2018). In Norway, many students' access and exposure to English occurs mainly through the internet (Brevik, 2019b), and the importance of being a strategic reader in English today – across digital and paper-based texts – cannot be undermined (Brevik, in press, 2019).

The presence of English can be observed both in the private sphere and public life.

Researchers have discovered that in their leisure time Norwegian adolescence are great consumers of English and English texts on paper and screen through television, social media, comic books and lyrics, which contribute to familiarise them to the language and increase their English proficiency (Brevik, 2016, 2019b). In public life, students encounter English if they attend higher education in Norway or elsewhere, and students are expected to comprehend academic texts in English without additional aid (Busby, 2018). In addition, it is expected that Norwegian nationals possess a high level of English proficiency when they start working (Hellekjær, 2016).

The English language's position in the Norwegian society is further reflected in the national English curriculum (Norwegian Ministry of Education and Research [KD], 2013), which expresses that 'English is a universal language' (p. 2) that we will encounter in work, higher education, abroad and in everyday life. Because English proficiency has become a requirement in the Norwegian society at large, the next section describe how English is taught in the public education system.



## **1.2 English in Norwegian schools**

The Norwegian school system consists of a maximum of 13 years. The first 10 years are compulsory education with seven years (year 1-7) in primary school and three years (year 8-10) in lower secondary school. For the remaining three years, students may attend upper secondary school (year 11-13) and choose either general studies for three years or vocational studies for two years plus two years of apprenticeship (KD, 2013). English is a compulsory subject in years 1-11 and an elective course for the two last years of upper secondary school in general studies.

Both the current English subject curriculum (KD, 2013) and the new subject curriculum under reform (UDIR, 2019) emphasise that reading in English is important for language learning, intercultural competence and acquiring knowledge in general. Students develop reading proficiency in English when they learn to use reading strategies: ‘The development of reading proficiency in English implies using reading strategies that are suited to the objective by reading texts that are advancingly more complicated’ (KD, 2013, p. 5). Key here is that students develop as proficient readers by encountering more challenging texts and learning to adapt their reading strategy usage according to the text. The curricula operate, moreover, with a broad text definition that ensures that students are exposed to a diversity of texts in the English classroom. A text, according to the curricula, ‘involves oral and written representation in different combinations and range of oral and written text from digital media (KD, 2013, p. 2). This indicates that students need to learn to use reading strategies with all sorts of text, ranging from novels to songs and films to social media posts, and they gain reading proficiency by adapting their reading strategy use to the text. The new core curriculum (KD, 2017) further highlights that the purpose of education is for students to become independent learners: ‘School should contribute to enable students to reflect on their own learning processes and acquire knowledge in an independent manner’ (KD, 2017, p. 12, my translation). And they stress that strategic knowledge is an important aspect for students to develop as independent learners.

## **1.3 The basic skills**

UDIR has developed an interdisciplinary basic skill framework, describing five skills considered fundamental for learning in all subjects including English and a prerequisite for

students to show their competence and qualifications (UDIR, 2012). These five skills comprise reading, writing, oral, numeracy and digital skills. It is required in all subjects to help students develop them. The basic skill of reading is described as the ability to create meaning from texts in the widest sense: ‘texts include everything that can be read in different media, including illustrations, graphs, symbols or other modes of expression’ (p. 8). Thus, the basic skill framework defines reading competence to include reading of texts on screen and on paper (i.e. print-based, digital and online texts).

The fact that the basic skill of reading involves reading of texts in digital media creates a connection to the digital skills. UDIR (2012) writes that a part of developing digital skills is to be able to ‘search and process’ information with the help of digital tools. This description is of importance, considering Cho and Afflerbach’s (2017) argument that reading in a digital environment presents additional challenges to reading comprehension. The reason is that the architecture of the internet page is challenging to navigate and may distract students to derail from task, or they may not locate the right information if they do not apply adequate reading comprehension strategies. The basic skills framework addresses these issues by requiring students to learn how to utilise digital tools to, ‘search for, navigate in, sort out, categorize and interpret digital information appropriately and critically’ (UDIR, 2012, p. 12). The idea is that developing such skills will help students read digitally for academic purposes, but also when they access information in English outside of school.

The framework indicates that students are to develop their reading and digital proficiency through using strategies: ‘Reading development requires using appropriate reading strategies and process information. Functional reading is therefore characterized by the use of reading strategies adapted to purpose and text type’ (UDIR, 2012, p. 8). Linking this requirement to the national English curriculum suggests that students should learn to deploy different types of reading strategies to develop their skills. Their strategy choices should be based on what sort of texts they are reading and the purpose of the reading activity (Duke et al., 2011). Research on the topic, both in Norway and internationally, emphasise the importance of teacher instruction for students’ independent strategy use (Brevik, 2019a; Grabe, 2009; McVee et al., 2018), implying that teacher instruction is a vital part of developing reading comprehension skills and strategies in students.

## 1.4 The LISE project

In order to examine classroom instructions, my MA study has used video-recorded data of English lessons that derived from the *Linking Instruction and Student Experience* (LISE) project at the Department of Teacher Education and School Research at the University of Oslo. In 2015, the project team coordinated by Associate Professor Lisbeth M. Brevik initiated video recording of lower secondary school classrooms instruction at seven schools over two school years: in 9<sup>th</sup> grade (2015-2016) and 10<sup>th</sup> grade (2016-2017) in English, French, Norwegian, mathematics, social studies and science (see Hjeltnes, Brevik & Klette, 2017). The LISE project represents the first time that systematic observation of video-recorded English lessons has been conducted across these subjects in lower secondary schools in Norway. The LISE project's objective has been to gather information about instructional quality in Norwegian lower secondary classrooms and student experiences of their instruction, collected by student questionnaires. In addition, LISE links the video-recordings with the student questionnaires.

In each classroom, four to six consecutive lessons in each subject have been recorded, which means the collected material consists of 290 recorded lessons, of which 60 lessons are filmed in English lessons. For my MA thesis, I have used the video-recorded English lessons as a starting point.

## 1.5 The thesis's research context

Prior to 2011, little was known about how English teachers in Norway instructed reading comprehension in the classroom (Brevik, 2015). What was known was that Norwegian students were among the best English readers in Europe (Ibsen, 2004), although their reading skills were not good enough to attend universities abroad (Hellekjær, 2005). Teachers, moreover, reported that they worked with reading skills across subjects (Aasen et al., 2012), but little was known whether this was the case for English and how teachers instructed reading in English (Brevik, 2015).

Since then, Brevik has conducted multiple studies to investigate how teachers and students in upper-secondary school work with reading skills (Brevik, 2014, 2017; Brevik & Hellekjær, 2018); however, to the best of my knowledge, little research has hitherto been conducted on how teachers work with L2 reading skills in lower secondary school, except one LISE study

(Brevik, 2019a). International test results show that the number of Norwegian students who struggle with L1 reading comprehension increases from primary to secondary school (UNICEF, 2018), and prior studies suggest that students in their last year of lower secondary school have poorer reading comprehension when reading on screen than on paper (Frønes, 2017). This indicates that there is a need for more research on how lower secondary school classrooms work with reading comprehension skills and various text media in English.

My MA thesis is a follow-up study of Brevik (2019a). In her research, she analysed the reading activities in 60 video-recorded lessons from seven lower secondary school English classrooms from the LISE project. The findings show that teachers engage in reading comprehension instruction more than half of the time and encourage students to use reading strategies on a daily basis. My MA thesis builds on Brevik's research by revisiting the lower secondary school classrooms with reading comprehension strategy instruction to analyse in further detail how reading comprehension strategies are used in combination with text media.

## 1.6 MA thesis research question

To fill this research gap, my MA thesis's main research question is *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?*

This research question ventures to examine both the teacher and the students, by observing which reading comprehension strategies the teachers instruct and students use in relation to different text media. To focus the observation, three sub-questions were created to investigate the different facets of reading comprehension strategy usage.

**RQ1:** What texts are used in the video-recorded English lessons across 9<sup>th</sup> and 10<sup>th</sup> grade?

**RQ2:** How are reading comprehension strategies instructed and used in relation to different text media?

**RQ3:** To what extent are the reading comprehension strategies explicitly instructed by the teacher or used independently by students?

The first research question centres around identifying what text media that are present in lessons with strategy instruction to examine what text media teachers and students read in

English in lower secondary school. The second research question identifies which specific reading strategies teachers instruct and students use and how these are used when reading different text media. The third research question investigates how the reading strategy use is initiated, in terms of whether the teachers are instructing or prompting the students to use reading strategies, or do students use reading strategies on their own initiative when they work with different text media to extract or construct meaning from text?

## **1.7 Central concepts**

As text media and reading comprehension strategies are the central concepts in my MA thesis, I present in this section brief definitions of the concepts of text medium, hypertext and reading comprehension strategies, which are used through out the MA thesis.

*Text medium* refers to the physical form through which information is recorded (Fiske, 1990). A medium can be handwritten, printed or digital. For the purpose of my MA study, I have chosen to examine reading comprehension strategies in combination with three text media: printed text, digital text and hypertext.

*Hypertext* is defined as blocks of words or images that are linked together through multiple paths or links, accessed through a web-browser on the internet (Landow, 2006). Key here is that the hypertext supports a non-linear reading path, which means that the reader's interactions with the text determine what and in what order information is read (Jonassen, 1996).

*Reading comprehension strategies* refer to controlled processes in the reader to become aware of reading comprehension gaps and the actions indicated to solve the comprehension problems (Afflerbach et al., 2017; Grabe, 2009; RAND, 2002). Reading skills differ from strategies in that way that skills are the automatic word recognition and decoding processes (Afflerbach et al., 2017).

## **1.8 Thesis outline**

The MA thesis consists of five chapters in addition to the present introduction chapter. Chapter 2 provides the theoretical framing and presents prior research that inform the MA study. Chapter 3 presents the methodology of the MA thesis with detailed information on how

I conducted my video observation and analysis in addition to research credibility and ethical considerations. In Chapter 4, the findings from the video observation are presented. In Chapter 5, the findings are discussed in light of the theoretical framing and prior research, and finally, Chapter 6 presents the concluding remarks of the thesis, in addition to suggestions for further research within this field.

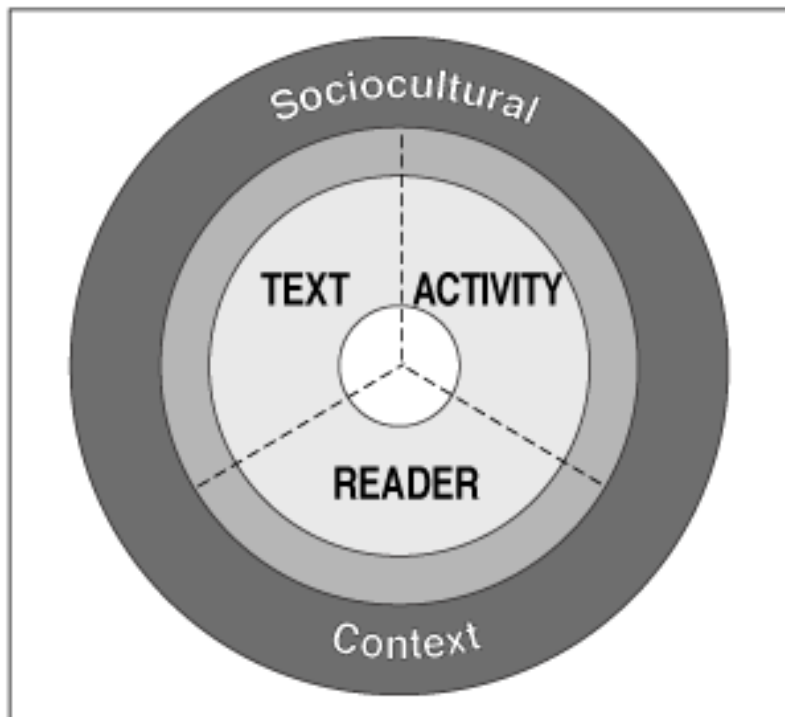
## 2 Theoretical framing and prior research

In this chapter, I present the theoretical framing that I used in the examination *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?* I have decided to present theory and prior research interchangeably because they draw on and highlight one another in explaining the MA thesis's theoretical framing. I first present a section on reading comprehension to illustrate how reading comprehension is conceptualised and what challenges might occur when students read (2.1). The next section concerns how reading texts of different media relates to reading comprehension (2.2). Section (2.3.) presents models for reading comprehension strategy use and reading strategy instruction. The last section is an overview of MA theses from the LISE project and I explain how my study builds on and contributes to the research output from the project (2.4).

### 2.1 Reading comprehension

Reading comprehension is inherently a complex phenomenon with various influencing factors, and a multitude of models and theories explain the concept (Pearson & Cervetti, 2017). My MA thesis bases its understanding of reading comprehension on the RAND reading panel's [RAND] (2002) model. The RAND model was designed to address L1 reading comprehension but has been frequently used in studies of L2 reading comprehension (Brevik, 2015; Bunch et al., 2014; Guerrero & Commander, 2013; Lesaux et al., 2010). Although Koda (2007) argues that L2 reading is more complex than reading in L1 because it involves at least two languages that operate in a dual-language system, the RAND model captures basic elements of reading comprehension both in L1 and L2 (Brevik, et al., in press, 2019).

The RAND model (2002) explains that reading comprehension frames the reader's ability to create meaning through text, conceptualised as 'the process of simultaneously extracting and constructing meaning through interaction and involvement with written language' (p. 11). This process is based on the reader extracting and constructing meaning from text, which occurs through the reading activity and affected by the sociocultural context. Reading comprehension, thus, comprises four factors: the reader, text, activity and sociocultural context. Their interrelationship is illustrated in Figure 1.



**Figure 1.** The RAND model (2002)

The RAND model consists of three core elements: (1) the *reader*, the one who is doing the comprehending and has experiences and background knowledge that are drawn on when reading. (2) The *text*, the object which is being comprehended and might be either in print or in a digital medium. (3) The *activity*, which is the manner through which comprehension occurs, involves the purpose, the process and the consequences of reading. These three elements act, as Figure 1 illustrates, within the fourth element: (4) a larger sociocultural context. The sociocultural context influences factors such as the identity and capability of the reader, which texts are being read and how the reader reads and engages with the text (RAND, 2002). Because the RAND model regards both the reader's inner mental processes and the social interactions as factors that affect reading comprehension, it considers reading comprehension a cognitive and social process (Brevik, 2016; Duke et al., 2011). These two processes are especially relevant for studying reading comprehension in a classroom environment in which students' reading comprehension is both affected by comprehending the text on their own (cognitive word processing) but also through social interactions with a teacher and peers. The RAND model's division into reading comprehension elements makes



it, moreover, suitable for studying different sides of reading comprehension in the English classroom.

### **2.1.1 The reader**

The reader is the one who comprehends the text. This happens as the reader draws on a wide range of abilities such as cognitive capacities, motivation, self-efficacy, and prior and strategic knowledge when engaging with a text (RAND, 2002). Fluency is, in addition, considered a prerequisite to and a consequence of comprehension. The reader needs efficient word recognition and some syntactic knowledge in order to create meaning from the text. When reading in L2, the reader draws on L1 reading skills, but the condition for the transference to occur is that the reader has sufficient linguistic knowledge of the L2 to achieve flow in reading (Koda, 2007).

However, a reader's capacities and abilities are not rigid. When the reader reads, 'knowledge and capabilities of the reader change. For example, a reader might increase domain knowledge during reading. Similarly, vocabulary, linguistic, or discourse knowledge might increase' (RAND, 2002, p. 13). The RAND reading group (2002) argues that appropriate instruction is an important factor that can help foster reading comprehension. In instruction, the teacher should provide specific goals to help the reader to become an active, self-regulated reader. Therefore, the teacher needs to tailor his or her instruction to the student group (the readers), so that the students learn adequate reading comprehension strategies, helping them to complete both short and long term comprehension goals (RAND, 2002).

### **2.1.2 Text**

The text is what the reader is supposed to comprehend and has the largest effect on their reading comprehension (RAND, 2002). In the process of reading, 'the reader constructs different representation of text that are important for comprehension' (RAND, 2002, p. 14). These representations derive from the text's surface code (the wording), the text base (the ideas) and models or illustrations in the text. This text definition applies to both printed text, digital text and multimedia documents.

Whether a text is difficult to comprehend is determined by factors embedded in the text itself (e.g. structure and illustrations); the reader's prior knowledge and linguistic repertoire; and the activity in which the reader is engaged (RAND, 2002). In the activity of reading, the

reader's capacity to interact with the text is imperative. Classroom instruction can, hence, facilitate the reader's comprehension of a text by teaching different text structures and increasing the reader's prior knowledge before the reading activity (Catterson & Pearson, 2017). Moreover, learning about text structure in various media can enable the reader to plan and adjust the reading with strategies according to the text's demands (Duke et al., 2011).

### **2.1.3 Activity**

The activity of reading refers to the purpose and consequence of reading. The reading activities take place in 'microperiods': the before-reading, during reading and after-reading phases (RAND, 2002). In the before-reading phase, the reader is ideally presented with the purpose for reading, which can either be an internal purpose (e.g., entertainment or seeking information) or an externally imposed purpose (e.g., completing an assignment). In the during-reading phase, the reader chooses an approach to process the text connected with the purpose; for example, skimming for information or close reading in order to remember information. The consequence of reading occurs in the after-reading phase, which may consist of the reader expanding his or her linguistic repertoire or gaining new knowledge. These changes in cognitive capabilities may increase the reader's precondition for comprehension in future reading situations (RAND, 2002). In short, the more the reader reads and learns, the more it will support the reader's reading comprehension.

The teacher's instruction is a key aspect of reading activities. RAND (2002) emphasises the importance of knowing how instruction influences the purpose and the adjoining consequences of reading. How the teacher frames the reading activity, manages to help the students activate prior knowledge and/ or instructs them to use different approaches and strategies while reading may affect the outcome of the reading activity. In a classroom setting, the purpose is often externally imposed, and the student may accept it or not. In the latter case, RAND (2002) argues that students who do not see the relevance in the task are prone not to read purposefully, 'thus compromising their comprehension of the text' (p. 15). In other words, if students do not accept the reading activity, they may choose not to apply reading strategies because they are not motivated to or capable of correcting potential comprehension gaps.

### **2.1.4 Sociocultural context**

Reading is, however, not an activity only confined within the walls of the classroom but is a part of a larger sociocultural context. Students bring to the classroom different capacities for reading, determined by their experiences both inside and outside the classroom (RAND, 2002). The classrooms and schools reflect the economic and societal differences in what kind of instruction is offered and what types of text, technology and instructional resources that are available for the students.

A sociocultural learning perspective regards learning and acquisition of literacy as processes that occur through social interactions between the student and more expert others, such as peers and teachers. Through the support of a peer or teacher, the student will be able ‘to perform tasks that are slightly beyond their own independent knowledge and capability’ (RAND, 2002, p. 16). That is to say, classroom instruction is an invaluable aspect for students to develop their reading comprehension. Today, students frequently face different text media both in education and the larger society, and these media require a more complex reading competence than with printed text only (RAND, 2002). It is, therefore, necessary that students through classroom interactions acquire adequate reading strategies to support their developing reading comprehension. In that perspective, this MA thesis can be considered within the field of sociocultural research because it examines the interactions between teacher and students in Norwegian classrooms and identifies how reading and reading strategies are taught and used through these interactions.

## **2.2 Various text media**

Elaborating on the RAND (2002) comprehension model, this section presents literature on how text media affects reading comprehension, regarding multimodality, paper vs. screen reading and hypertext reading.

### **2.2.1 Multimodal texts**

Whereas text medium refers to the form through which the information is presented (Fiske, 1900), text mode or modality refer to the elements or building blocks in the text that expresses information. A multimodal text is defined by the New London Group (1996) as a text composed of different modes of expression, for example, visual, audial or moving quantities of information (Walsh, 2005). Multimodal elements can appear in both printed and digital text

media, but because some modes (e.g. audio and movement) require technology, they are only possible in digitalised texts. The terms multimodal and multimedia texts can, therefore, overlap in the cases where the text requires two or more text media to convey all the modes of expression (Mayer & Moreno, 2003).

Relating to reading comprehension, Paivio (1986) argue with his 'dual-coding theory of information processing' that visual and verbal information are processed in separate channels when reading L1 multimedia texts. Because visual and verbal information are processed separately, it increases the likelihood of the reader retaining what is being read for a longer period (RAND, 2002). Kroll and Stewart (1994) adapted the processing theory into an L2 reading context and argue that the reader processes verbal information through both languages, given the reader has good L2 proficiency that meets the text's demands (Xu, 2010).

Jewitt and Kress (2010) discuss how multimodal texts have changed the practices in the English classroom. They argue that combining written language with illustrations provide students with new avenues to comprehend a text. In line with Paivio (1986), written language and illustrations are processed separately and, therefore, have the potential to show different aspect of the text and facilitate different interpretations and understandings. Jewitt and Kress (2010) also argue that drawing texts from the internet facilitates connecting the English classroom to the outer world, which allows for more diversity texts being included in the classroom.

### **2.2.2 Reading on paper and screen**

Studies on L1 reading comprehension on screen vs. paper since early 2000 have identified that students generally have poorer reading comprehension when they read on screen than on paper (Mangen et al., 2013). A study conducted on Norwegian study was Mangen et al. (2013), which examined how reading the same text on screen and paper affected the reading comprehension to 72 tenth graders (15-16 years). The participants were divided into two randomised groups were the first group two texts in print (1400-2000 words in length), while the other group read the same texts in a pdf format. The results from the study aligned with previous research and presented possible explanation for why reading on screen negatively affects reading comprehension. For example, (1) screen-based reading has more demanding text navigation than paper-based texts. (2) It is harder for the reader to create a text

representation when the text has not a physical form, which affects the reader's ability to recall the text's content. (3) Reading on screen often involves multitasking when the reader accesses information on multiple windows of the computer screen, which results in the reading activity becoming more cognitively demanding (Mangen et al., 2013). On the other hand, researchers argue that L1 readers can achieve the same level of reading comprehension screen, but the reader needs to spend more time on task (Ackerman & Goldsmith, 2011; Kerr & Symons, 2006; Mangen et al., 2013).

In an L2 English context, Jeon and Day (2016) conducted a meta-analysis in which they investigated the impact of extended reading (ER) on learners' reading proficiency in ER programmes in both English as L2 and English as a foreign language (EFL) settings. Of the 49 programmes they found in the literature, from 1980 to 2014, only ten used online materials. Their meta-analysis revealed that there was a significant mediating effect of text type. ER students that used web texts had a bigger effect size ( $d=.89$ ) compared to studies that used printed materials ( $d=.47$ ). It seems that learners' reading proficiency gains were greater when they read online texts compared to printed materials. Even though text types were significant mediator, Jeon and Day stated that the results needed to be interpreted with caution because of the imbalance in the number of studies in each group.

These prior studies are interesting for this MA thesis because they show that students' comprehension on screen and paper can be affected by which language they read. The common thread in the L1 and L2 research is that the extent of the reading activity affects reading comprehension.

### **2.2.3 Hypertext**

Although online texts share many of the embedded text elements with other multimodal texts (Afflerbach & Cho, 2010), the hypertext medium has some unique features that change how the reader approaches the reading activity (Zhang & Duke, 2008). Internet pages tend not to display all the information on a topic; instead they have various hyperlinks embedded in the text that lead the reader to other webpages with more information. The reader must decide the usefulness of the hyperlinks and select those he/she believes will be in accordance with the reading goal. The different processes the reader conducts to navigate a hypertext is called 'creating a reading path' (Cho, 2014). Because the reader elicits information from different places on the internet, the reader has to be able to comprehend information from one page

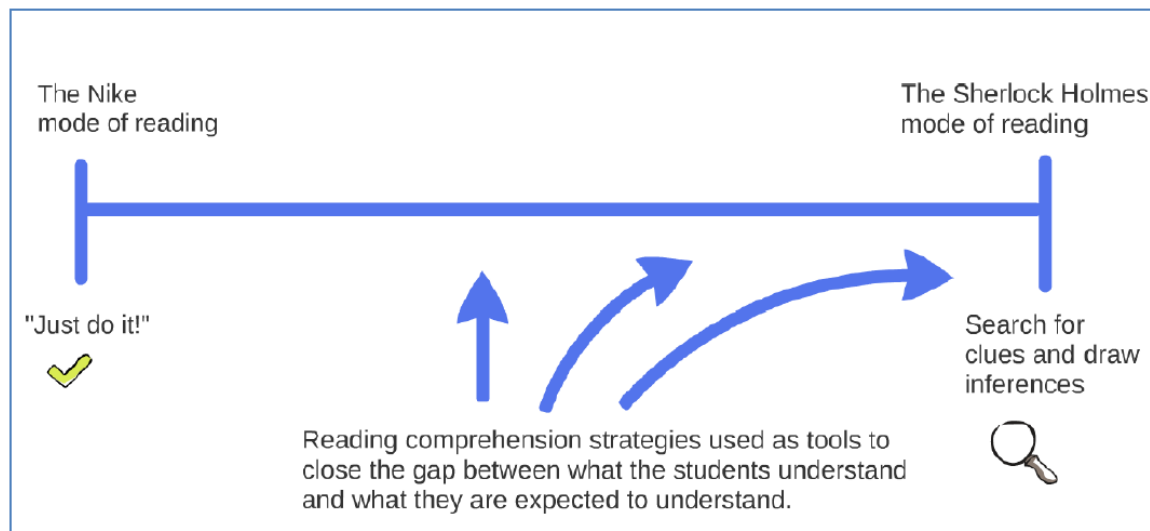
(single source) and synthesise the information with what he/she reads on other pages (multiple sources) to create a text representation (Afflerbach & Cho, 2010). In addition, webpages tend to present non-linear text structures, where information is presented in text and image blocks, with commercials and other distracting elements. This presentation has the effect that, 'when reading, students can get easily distracted, confused, and "off track" in the online environment with multi-layered textual structures, without a clearly defined scope and sequence' (Cho & Afflerbach, 2017, p. 113). Additionally, hypertexts often require the reader to engage with a search engine and/or choose between various links that lead to different texts on the internet, requiring a base level of digital skills (e.g. UDIR, 2012). Moreover, most internet texts have unknown authorship, which means that the reader must additionally perform digital judgement by questioning the information's credibility (Cho & Afflerbach, 2017). As a manner supporting the reader's comprehension when engaging with different text types, Afflerbach and Cho (2010) argue that students should learn and develop a repertoire of reading comprehension strategies which can help them when they read texts on paper and screen.

## **2.3 Reading comprehension use**

In the previous sections, I have presented how reading comprehension is an interplay between the reader, text, activity and socio-cultural context (RAND, 2002), and comprehension issues may occur when there is a mismatch in one of the elements. Researches have, over the last two decades, conducted numerous studies that suggest that readers who use reading strategies have increased their comprehension both in L1 and L2 (e.g., Block & Duffy, 2008; Brevik, 2019a; Duke et al. 2011; Fisher & Frey, 2008; Grabe, 2009; Pearson & Cervetti, 2017). Reading comprehension strategies differ from reading skills in the way that skills are automatic process of word recognition, while strategies are conscious, controlled processes initiated by the reader (Afflerbach et al., 2017; Grabe, 2009). The key is that reading comprehension strategy use is a deliberate act; the reader surveys the text, sets reading related goals and chooses strategies according to the purpose of the reading activity (Block & Duffy, 2008).

Another key factor to reading comprehension strategies is that they are at their most effective when used purposefully. Researchers commonly refers to two types of readers: good and poor (Duke et al., 2011). Good and poor readers tend to use the same reading strategies, but the

good readers apply them more effectively (Bunch et al., 2014; Grabe, 2009). Brevik (2014) explains that good readers, in addition, are skilled at monitoring their reading and able to expose and rectify misconceptions as they read, while poor readers tend to be unaware of their lack of comprehension. This dichotomy between reading with and without a purpose is also illustrated in the L2 ‘Mode of Reading Continuum’ (Brevik, 2014), see Figure 2.



**Figure 2.** Mode of Reading Continuum (Brevik, 2014).

The two extremes of the Figure 2 exemplify the different approaches a reader may use when engaging in a reading activity. On the left side is the *Nike mode of reading*. In this mode, the reading activity is done according to Nike’s catch phrase ‘Just do it!’, and students begin the reading activity ‘without analysing the task or considering how to read’ (Brevik, 2014, p. 55). It implies that the reader does not read purposefully or regard the metacognitive aspect of reading, which together may cause incomplete comprehension of the text (see also Block & Duffy, 2008; RAND, 2002). At the other end of the spectrum is the *Sherlock Holmes mode*; a mode in which the students have a ‘broader vision of analysing the task, choosing and applying potentially effective strategies, searching for clues, drawing inferences based on textual evidence, monitoring comprehension progress, and modifying the choice of strategies when necessary’ (Brevik, 2014, p. 55). This understanding of different modes of reading aligns with Roe’s (2014) emphasis on metacognitive awareness. Brevik (2014) argues that when students monitor their reading process and recognise the gap in their comprehension, it is possible for them to apply reading comprehension strategies that bridge the comprehension gap (see also Brevik et al., in press, 2019). In Table 1, I present an overview with

explanations of the most common reading comprehension strategies found in literature for L1 and L2 reading.

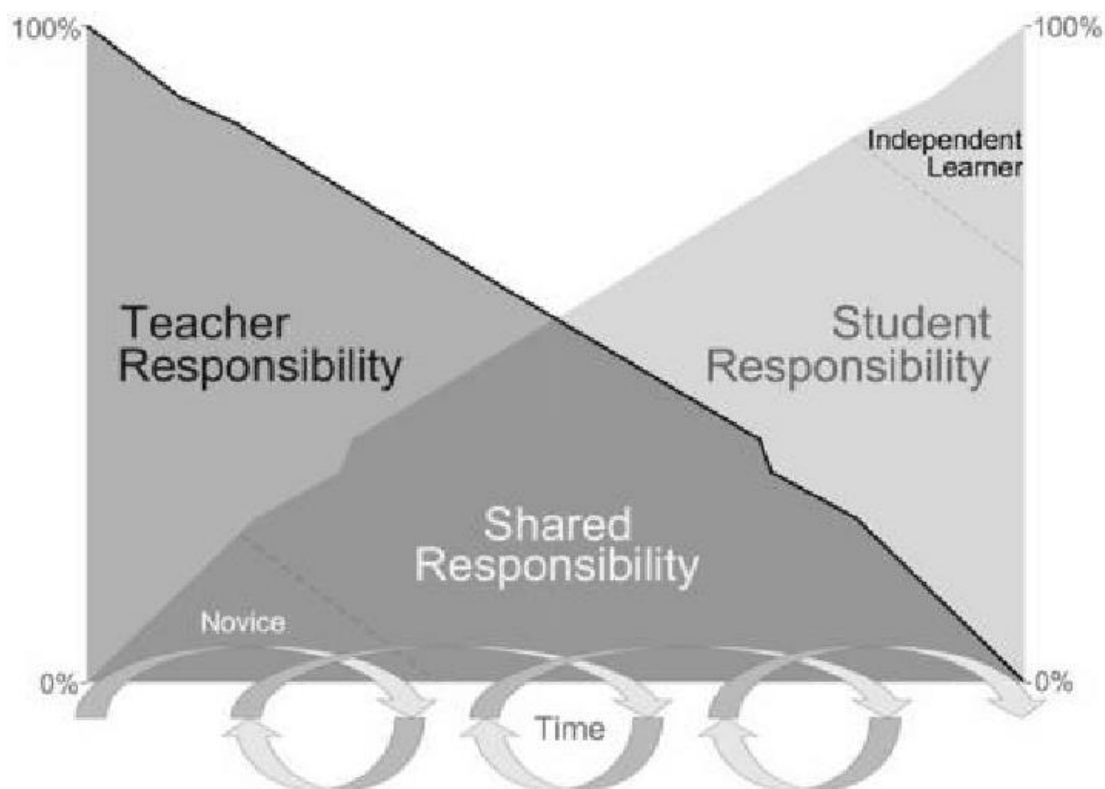
**Table 1:** Overview of L1 and L2 reading comprehension strategies (Brevik, 2014; Cho, 2014; Block & Duffy, 2008).

<b>Description of reading strategies</b>	
<b>Name</b>	<b>Description</b>
Text location	Students search purposefully and select webpages and links that direct them towards reading goal related information among multiple information spaces on the internet (Cho, 2014). This can be considered on its own a category of navigation strategies and a navigation strategy on its own.
Activating prior knowledge	Students activate their prior knowledge by reflecting on the text's topic, text features and strategies. (Block & Duffy, 2008; Brevik, 2014; Corio & Dobler, 2007; Duke et al., 2011; Fisher & Frey, 2008; Grabe, 2009).
Predictions	Students preview the text before they read by looking at titles, text features, illustrations, key words etc. (Block & Duffy, 2008; Brevik, 2014; Grabe, 2009; Kendeou & van den Broek (2007).
Skimming and scanning	Students read quickly (i.e. skim) the text to identify the main idea in the text. Scanning is to look for specific details in the text (Brevik, 2014; Bråten & Anmarkrud, 2012; Grabe, 2009;).
Monitoring	Students activate different comprehension strategies to derive meaning from text (Block & Duffy, 2008).
Key words	Students collect important words from the text (Brevik, 2014; Grabe, 2009).
Close reading	Students read selected part of the text with great attention to understand, see details and nuances in the text (Brevik, 2014; Duke et al., 2011).
Making inferences	Students connect the ideas in the text by using their prior knowledge, discursive awareness and personal experience (Block & Duffy, 2008; Brevik, 2014; Corio & Dobler, 2007; Day & Park, 2005; Grabe, 2009).
Underlining/ highlighting	Students highlight important information and identify the main ideas in the text (Brevik, 2014; Bråten & Anmarkrud, 2012).
Summarisation	Students summarise what they have read from the text by identifying the main ideas and deleting redundant material. (Block & Duffy, 2008; Brevik, 2014; Duke et al., 2011; Fisher & Frey, 2008; Grabe, 2009).
Graphic organiser	Students create a visual representation of the main idea or the order of ideas in a text. These can be diagrams or visual imagery, often in combination with key words (Duke et al., 2011; Fisher & Frey, 2008; Grabe, 2009).



### 2.3.1 Strategy instruction

The overarching goal for strategy instruction is, therefore, that students learn to monitor their reading comprehension and apply strategies to bridge their potential comprehension problems. Researchers argue that reading comprehension strategies should be introduced gradually, first explicitly instructed and modelled by the teacher, then applied communally, before the students increasingly gain the responsibility to use them individually on their own (Brevik et al., in press, 2019; Duke et al., 2011). A model for teacher instruction, called the *Gradual release of responsibility*, developed by Pearson & Gallagher (1983) is still developed today (e.g. McVee et al., 2018). The model (see Figure 3) illustrates how responsibility for the reading strategies in the classroom transfers from the teacher to the students in three phases, from the teacher's responsibility, through shared responsibility to student responsibility and independent strategy use.



**Figure 3.** Gradual release of responsibility over time (McVee, et al., 2018)

In phase 1, the teacher has the responsibility for the reading strategies and provide the students with explicit instruction and modelling on how, why and when reading strategies are to be used. With the instruction, the students need to read sufficiently challenging texts that give them the opportunity to try out reading strategies as needed (Duke et al., 2011). In phase 2, the teacher and the students share the responsibility for using reading strategies. The

students are provided with opportunities to apply reading strategies to texts and activities, while they receive guidance from the teacher or other students in the class when needed. At this stage, the teacher may prompt specific reading strategies targeted at specific comprehension issues or remind them to use reading strategies in general (Brevik et al., in press, 2019). In phase 3, the students have the responsibility of using reading strategies consciously. The students have become independent learners who are able to monitor their reading comprehension and apply reading strategies to repair comprehension gaps. It is important that students have included comprehension strategies to their repertoire, which they can use as single strategies or in combination to address comprehension challenges they experience in different texts (Brevik et al., in press, 2019; McVee et al., 2018).

McVee et al. (2015) argue, however, that the gradual release of responsibility is not a linear process. 'The arrows at the bottom of the picture [Figure 3] represent the recursive nature of learning; the gradual release is not a straight slide down an even line, but a process that will include multiple iterations of support and responsibility for instructors and learners' (p. 66). This argument is echoed in Duke et al. (2011) who explain that when students encounter a text with a more complex subject matter or language, they rely on teacher scaffolding of the strategy before the students can apply it independently. In addition, students may forget what they have learnt between lessons and might use strategies independently one day but not the next. Still, once the students develop sufficient facility with a reading strategy and it becomes a part of their repertoire, they do not need to receive instruction to use it on a daily basis (Duke et al., 2011).

Review of research connected to reading comprehension strategy instruction for L2 students has shown that explicit reading strategy instruction can be problematic because L2 students did not show the same improvements as L1 strategy instruction did (August et al., 2009). Brown (2017), therefore, argue that explicit instruction is not necessarily effective for L2 readers because they are developing their L2 competence. Instead, he promotes collective reading strategy use as a more suitable approach to improve L2 readers' reading competence.

### **2.3.2 Reading comprehension strategies across text media**

The objective of reading strategy instruction is for students to build a repertoire of strategies that they can use to solve most comprehension issues. Because comprehension issues occur between the text and the reader (RAND, 2002), students' reading strategy repertoire should

include reading strategies that addresses comprehension issues based in various text media. However, Afflerbach and Cho (2010) argue that the same reading strategies can to a great extent be used when reading printed and digital media texts, but how they are applied may vary. This argument aligns with Duke et al. (2011) who argue that students develop proficiency with reading strategies when they have opportunities to use them in different contexts. Cho (2014) emphasises the necessity of learning reading strategies that one can use to draw connections between different sources of information. As hypertexts are characterised by information being presented at different pages and different modes of expression, the reader needs comprehension strategies to understand connections and create text representations.

Still, reading hypertexts has some characteristics that set the reading activity apart from other text media (see 2.2.3). Afflerbach & Cho (2010) argue for the need for reading comprehension strategies targeting common comprehension issues that can occur when reading hypertexts. They created four new categories of reading comprehension strategies that emphasise helping the reader (1) navigate their reading in the internet environment, (2) create meaning from single and multiple information sources, (3) monitor their reading comprehension and (4) evaluate the information sources. Furthermore, Cho and Afflerbach (2017) argue that many reading comprehension strategies designed for offline reading also can be applied to comprehend hypertexts with modified application according to the comprehension issues present.

For an L2 perspective on hypertext reading, Song & Cho (2018) conducted a study where they examined how 12-14 years old middle school students used reading comprehension strategies when reading L2 hypertexts. The findings show that 33% of the reading strategies used are translingual strategies, which are reading comprehension strategies that use more than one language to make meaning. These findings are interesting for the MA thesis because they highlight how hypertext facilitates the use of multilingual reading and show how students can combined their linguistic and strategic repertoire to comprehend L2 hypertext.

## **2.4 MA theses from the LISE project**

In this section, I present prior research from the LISE project and frames my MA thesis within the research field of video-observation studies from lower secondary school.

My MA thesis, being a part of the LISE project, builds on and contributes to the collective research output from the project. Although prior MA theses using the LISE data material have all contributed with insights into English instruction in Norwegian lower secondary school, only two have studied reading instruction. Of these only one has touched upon strategies (Hjeltnes, 2016; Solberg, 2017). My thesis is, thus, the first one to systematically analyse reading comprehension strategies. Furthermore, only one prior MA study compares instruction across 9<sup>th</sup> and 10<sup>th</sup> grade (Aashamar, 2017), and then only in one classroom, while I study six classrooms across both years.

#### *LISE studies related to reading*

Hjeltnes (2016) investigated one 9<sup>th</sup> grade classroom to identify how quality instruction could be identified when students worked with text by using the LISE video observations combined with student surveys and national reading test results in English. Her findings show that there was higher quality text-based instruction in longer reading periods than in the shorter. Solberg (2017) investigated three 9<sup>th</sup> grade English classroom approaches to differentiation, connected to reading instruction by employing video observation and analysis of student surveys. Her findings showed that in the classroom with ability groups focused on process and environment differentiation, and the two classrooms with random groups focused on product and content related to a student oral presentation. Common across the classrooms was that all differentiation was related to text-based instruction.

#### *LISE study across 9<sup>th</sup> and 10<sup>th</sup> grade*

Aashamar (2017) used video observation to examine the opportunities one class had across 9<sup>th</sup> and 10<sup>th</sup> grade for discussing democracy in social studies compared to English lessons. The findings suggest that the teacher's questions had an influence on establishing and directing the form of classroom debates.

#### *LISE studies in 9<sup>th</sup> grade*

Four additional MA theses use data from the LISE material. They have investigated how culture was taught (Listuen, 2017), teachers' feedback practices (Ivancevic, 2018) and teachers' approaches to teaching pronunciation (Iannuzzi, 2017) and grammar (Bentsen, 2017) in English lessons in 9<sup>th</sup> grade. These four MA studies do not directly inform my MA thesis but show an overview of the research output from the LISE project. So, as

demonstrated, my MA thesis examines and fills a knowledge gap regarding how lower secondary school classrooms use reading strategies over time and what text media are read in English lessons.

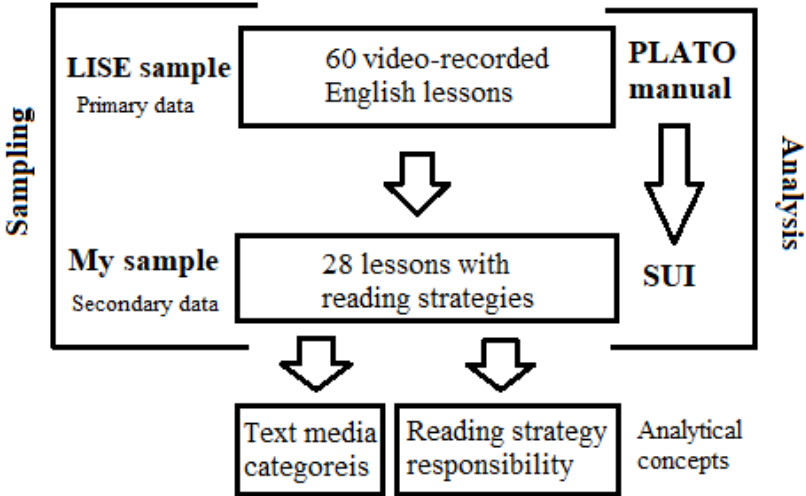
# 3 Methodology

In this chapter, I present the method I have employed to examine my research question: *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?* I present in the following sections the MA thesis’s research design (3.1), the LISE project (3.2), secondary data usage (3.3), data analysis procedures (3.4) and research credibility and ethical considerations (3.5).

## 3.1 Research design

This MA thesis is a follow-up study of Brevik (2019a). Her study analysed the reading activities in all the English lessons in the LISE material and studied how the classrooms read. My MA study follows up her results and I have based my sample on English lessons that showed evidence of reading strategy instruction and conducts an in-depth analysis of teacher instruction and student usage of reading strategies. To study these classrooms, I have followed a qualitative research approach to the data analysis because interactions between people are in the heart of my MA thesis (Larsen, 2017).

Figure 4 provides an illustration of the MA thesis research design and shows the different steps I have conducted to identifying the sample from the secondary data from the LISE project and the analytical concepts I have used to analyse the video recordings.



**Figure 4.** Research design. *Note.* SUI = Strategy Use and Instruction.

The box on the top of the research design model illustrates the starting point of my MA research. I had access to the 60 English video-recorded lessons collected by the LISE project. The LISE researches had, furthermore, analysed all the 60 lessons with the PLATO observation manual. The box in the middle shows that the sample used in my MA thesis is 28 English lessons with reading comprehension strategies which were identified by using the PLATO element Strategy Use and Instruction (SUI). I watched 28 English lessons and confirmed that reading strategy instruction or use occurred in all of them. The boxes on the bottom illustrate the analytical concepts I used to analyse the English lessons. I analysed first what text media with which the reading strategies were used and who had the responsibility for the reading comprehension strategies being used. In the following sections, the different components are explained in further detail.

## **3.2 The LISE project**

The present MA thesis bases its data on secondary video recordings that are collected through the LISE project. Before beginning this MA research project, I had the opportunity to work with LISE video data through an MA course in English didactic course: *EDID4001*, spring 2018. I signed an agreement of confidentiality and non-disclosure and received access to the data at the video laboratory. During that semester, I transcribed one English lesson and was introduced to the methodology concerning video observation.

### **3.2.1 Video observation**

The method I used to analyse the secondary video data material was video observation with a qualitative approach. Larsen (2017) explain that a qualitative research method is suited for studies that aim at investigating interactions in great detail within a small sample for a limited period of time. The approach suited this MA study because it aims at studying the nuances in teacher instruction and student use of reading strategies, which entails studying small segments of interactions in great detail (Patton, 2014). The study has, furthermore, no intention of generalising its results to a larger population because the sample was selected through purposeful sampling (Bryman, 2015). Thus, results from the classroom interactions are limited to the classrooms that participated in the study (Cohen et al., 2011; Maxwell; 2013), but the results can still inform and contribute to the larger field of English didactics by providing data on English instruction in lower secondary school.

Video observation as method in qualitative research allows for systematic investigation of the different facets of classroom interactions without the risk of losing key events due to divided focus. Blikstad-Balas (2017) writes that one of the clearest benefits of video observation in qualitative research is the opportunity to re-watch certain events, which enables the researcher to study the same recordings with different analytical foci. Moreover, ethnographical studies based in *in situ* observation have received much criticism for their lack of transparency (Blikstad-Balas, 2017; Heath et al., 2010), which is a problem that is addressed by using video recordings. ‘In stark contrast to a researcher relying solely on field notes, a researcher who has video data can systematically look for patterns that would be impossible to observe directly *in situ*’ (Blikstad-Balas, 2017, p. 511). Furthermore, a researcher working with video data can write transcriptions of classroom interactions that can contribute to the transparency of the observation and enable the researcher to analyse interactions at word level. In my experience, working with video data has been beneficial for my investigation of reading strategies and text media. First, I could watch the same interactions multiple times, one time focusing on reading comprehension strategies, other times on the text media and other times on the interaction between the teacher and the students. Second, because LISE researchers had coded all the English lessons, I knew prior to the observation which segments that would be relevant for my research questions; hence, I saved much time locating the relevant classrooms interactions.

Video observation, similarly, comes with some disadvantages that it is necessary to address. First, because the video recording is the main source of information from the classroom, technical issues with the equipment can hamper the observation process. The sound quality, for example, could vary from classroom to classroom and lesson to lesson, and it could be challenging to hear what students said during group work activities. In such cases, it was beneficial to re-watch segments to understand what the students said. Second, Larsen (2017) writes that another disadvantage is that the research can only access to what is observable. Brevik & Davies (2016) address this limitation in the context of observational studies concerning reading comprehension because reading comprehension is something inherently unobservable. They write that when one observes a student sitting in front of a text, one cannot determine whether he/she is reading or just looking at the page. This limitation naturally extends to observing reading comprehension strategies that are solely based on mental processes. Therefore, the researcher has to elicit evidence of reading comprehension strategy use when teacher or students report it, for example, by explicit instruction or



prompting. Moreover, evidence can be elicited when video recordings show teachers or students instructing or using a strategy in a visual manner (e.g. graphic organisers, highlighting or writing summaries). In addition to rely on the video observation for these reading strategies, researchers from LISE have photographed PowerPoint slides, whiteboards and student notebooks in some lessons, which provides further evidence of reading strategy use.

Another challenge with video observation in social research, addressed by Blikstad-Balas (2017) is the hazard of reactivity, also known as the *camera effect*. It is argued that by placing a camera into a natural social setting, for example the classroom, has the potential of ‘destroying’ the naturalness in the interactions. Some participants may be inclined to alter their behaviour because they are aware of the camera for instance by being quieter than they would normally be. However, Blikstad-Balas (2017) argues that the *camera effect* dwindles over time. ‘The camera itself received little attention after only a short time. When asked about it, participants often claimed to forget that they were being recorded – not at all times, but for periods of time’ (p. 514). I have myself noticed during observation that in the minutes of recording in a LISE classroom, teachers and students could occasionally glance in the direction of the camera and a couple minutes later appeared not to give it any attention.

### **3.2.2 The LISE sample**

The sampling from the LISE project was based on a prior video study, the Linking instruction and student achievement video [LISA] project. In 2014-2015, the LISA researchers video-recorded lessons in year 8 at 49 at Norwegian lower secondary schools (Klette, Blikstad-Balas, Roe, 2017). The next school year, the LISE project began its data collection and from 2015-16 and 2016-17 (years 9 and 10), researchers collected video data from seven L2 English classrooms: five of the classrooms were from the LISA project (school 2, 7, 9, 13 and 17) and two schools were added (school 50 and 51). In total, the LISE researchers collected 60 English lessons from lower secondary school classrooms (Brevik, 2019a).

When the LISE researchers are recording lessons, they follow the same standard procedure at each school. In each classroom, they install two cameras: one in the back of the classroom facing the teacher, and one in the front of the classroom facing the students. Thereby, the researcher is provided with a more detailed portrayal of the classroom setting; and, in the analysis, it is possible to change between the two cameras depending on whether it is the teacher or the students who are of interest. There are also two microphones in the room: the

teacher wears one, recording all he or she says, and one in the centre of the ceiling recording the student voices. If the teacher approaches a student, the student’s voice becomes clearer.

**3.2.3 The PLATO manual**

The methodology the LISE researchers use when they analyse video recorded lessons is The Protocol of Language Arts and Teaching Observation (PLATO 5.0), which was developed by Grossmann (2015). PLATO is an observation manual that consists of 13 elements that measure effective teacher instruction in English Language Arts (ELA) in lower secondary school. One needs to obtain a PLATO certificate in order to code with the manual. When researchers code a recorded lesson, they divide the lesson into 15-minute segments, and each segment receives a score with the PLATO elements from 1-4, with 4 indicating the strongest evidence of the element. A segment that receives a score 1 indicates no evidence of the element. A score 2 indicates limited evidence, while score of 3-4 indicate weak or consistently strong evidence of the element.

When I joined the LISE project, all the 60 recorded English lessons had been coded with the 13 PLATO elements. Thus, the LISE researchers had mapped out what sort of instruction had occurred in each 15-minute segment in the data material. With my thesis’s aim being to study the relationship between reading comprehension strategies and text media, I received an overview of the score results to the PLATO element *Strategy Use and Instruction* (SUI). See Table 2.

**Table 2.** Overview of categories describing Strategy Use and Instruction (SUI) (PLATO 5.0).

	1 Provides almost no evidence	2 Provides limited evidence	3 Provides evidence with some weakness	4 Provides consistent strong evidence
SUI	Teacher does not refer or provide instruction about strategies. This includes referring to strategies without discussion or why or when to use them.	Teacher introduces or refers to at least one strategy including why to use it; however, the teacher does not provide explicit instruction on how to use the strategy.  Or the teacher prompts student to use strategies and there is evidence that the students use them.	Teacher provides explicit, but limited, instruction about a strategy, including how to use it.	Teacher provides explicit and detailed instruction about one or more strategies including how (and often why or when) to use them.

The PLATO element SUI captures all ELA strategies including writing, speaking, listening, reading and engaging with literature (PLATO 5.0). However, only the strategies related to reading and literature are included in my MA thesis. A score 1 with the SUI element indicates that there was no evidence of SUI in the video segment. A score 2 indicates that the teacher refers to or prompts a strategy. Prompting is defined as when a teacher suggesting the use of a strategy without providing explanations of use. The scores 3-4 indicate that the teacher explains how to use a strategy and provides modelling or guiding, and the scores are distinguished by the thoroughness of the explanation. It is worth mentioning that a PLATO score does not equal high- or low-quality teaching. The observation manual is only used to categorise the presence of different teaching activities in classrooms, and the same video segment can receive a score 1 with one code and 4 with another.

### **3.3 Secondary data**

When I joined the LISE project the spring 2018, the research team had finalised the recording processes at the schools that participated. The data material in my MA thesis is, therefore, based on secondary video data. Dalland (2011) writes that it is not uncommon that qualitative research data are analysed by multiple researchers. For the current MA thesis, having access to secondary data had clear advantage for the study. First, it was time efficient because I could access the data from day one without needing to find informants and recording several classrooms over a period. Second, participating in the project allowed me to access a larger sample than what I would be able to acquire on my own. Third, I was invited into a researcher community, which gave me access to prior research with the data material and it was possible to discuss my analysis and findings with other researchers that were connected to the LISE project. In addition, the findings from this MA study can inform and contribute to new perspective on the previously analysed data material and can inform future research connected to the LISE project (Dalland, 2011).

There are, nonetheless, some ethnographical limitations that can occur when using secondary qualitative data. The information gathered through the cameras cannot fully recreate the classroom context, and misinterpretations may occur. Blikstad-Balas (2017) calls this concept magnification, which is that researchers, ‘amplify events that are not representative of the participants and not a part of the larger pattern of events’ (p. 516). Some steps have, however, been taken to reduce the hazard of magnification, for example, the observations have been

discussed with other researchers and I have accessed additional other data from, such as copies from the teachers' PowerPoints and images of the whiteboard and students' notebooks.

### 3.3.1 My sample

I selected my sample by following a purposeful sampling approach (Bryman, 2015; Vedeler, 2000). This approach allowed me to narrow down the amount of video recordings to the ones that related to answering my research question. As the MA thesis follows up on the findings from Brevik (2019a), I did not take any further steps to expand the amount of video lessons or do additional data collection.

From the total number of 60 English lessons available, the overview of the SUI code showed that there were six schools and 28 English lessons that had received a score of 2-4, and these became the thesis's sample, containing lessons in year 9 and 10. I deemed that the main criteria for a classroom to be relevant for the study was there was evidence of reading comprehension strategy instruction or use in one of the lessons. Of the seven schools, one (School 9 [S09]) was not included in the sample because all the lessons received a score 1 with the SUI element. Table 3 illustrates the distribution of lessons across schools and school years.

**Table 3.** Overview of the recorded lessons from the schools 9<sup>th</sup> and 10<sup>th</sup> grade (N = 28).

	School	S02*	S07	S13	S17	S50	S51
<b>Nr. of</b>	<i>Year 9</i>	6	3	3	2	5	2
<b>lessons</b>	<i>Year 10</i>	0	1	1	4	0	3

\* School 2 withdrew from participation in year 10.

Table 4 provides background information of the teachers in the video recordings. The information is given by the teachers themselves as a standard procedure of the LISE team's data collection. The teachers in the sample are of different sexes, age groups and have different academic backgrounds in English. S17 and S51 changed English teacher from year 9 to 10, which is not uncommon in Norwegian lower secondary school. Steps were taken by the LISE project during the data collection process to ensure that the schools represented different geographical locations and socio-economic backgrounds in Norway (Brevik, 2019a).

**Table 4.** Background information of the teachers.

School	Grade	Gender	Age	Education in English	Teaching experience
S02	9	Female	40-49 years	Master (300 ECTS)	14 years
S07	9-10	Male	20-29 years	61-90 ECTS.	6 years
S13	9-10	Female	40-39 years	No education in English	16 years
S17	9	Male	20-29 years	100 ECTS.	1,5 years
	10	Female	40-49 years	61-90 ECTS.	20 years
S50	9-10	Male	40-49 years	31-60 ECTS	18 years
S51	9	Male	20-29 years	Master (300 ECTS)	3 years
	10	Female	50-59 years	31-60 ECTS	6 years

*Note:* ECTS = European Credit and Accumulation System

### 3.4 Data analysis

In this section, I present the various analytical steps I have done to analyse the secondary data from the LISE project. My overarching analytical approach to the data material was structured observation and I followed a deductive research method in line with direct content analysis (Fauskanger & Mosvold, 2014; Hisu-Fang & Shannon, 2008). A direct content analysis involves using prior research to develop the analytical concepts that are applied to structure the data analysis. The analytical categories, thus, determine what interactions and objects that were registered as evidence to answer the research question (Kleven, 2014). In the following steps, I present the process of developing the analytical categories and explanations to how I applied them

#### 3.4.1 Step 1: Analysing reading comprehension strategies

To analyse the reading strategies that were used with the text media categories I relied on the pre-coded data material with SUI code. Although I knew what score the segment had, I had to identify which reading comprehension strategies the score described. For that, I used the description of the SUI code in the PLATO rubric (see. 3.1.1) to determine what was a reading strategy and identified the type based on literature (e.g. Brevik, 2014; Duke et al., 2011; Grabe, 2009; Afflerbach & Cho, 2010). During the observation, I transcribed the reading strategy instruction and usage.

### 3.4.2 Step 2: Analysing text media

After identifying lessons with evidence of reading comprehension strategies, I began developing analytical categories to analyse the text media selections in the classroom. At the same time as I received the overview of the SUI element scores, I received a list that showed all the texts that were present in the LISE classrooms. From this list, I had an idea of which texts teacher and students used in the classrooms. I based the general text definition on the national curriculum's text definition, which says, 'the concept of text is used in the broadest sense of the word. It involves oral and written representations in different combinations and a range of oral and written texts from digital media' (KD, 2013, p. 2). This definition was compared with RAND's (2002) definition, which states that a text is a surface code, text base or an imbedded model the reader uses to construct different representations. What to draw from these definitions is that texts can both be oral and written and printed and digital. The reader's text representation, in addition, can be constructed from reading one text, or by reading multiple texts in combination.

Next, I based the text media categories on Afflerbach & Cho's (2010) categories: *printed text*, *single digital text* and *multiple digital sources*. However, I found these categories difficult to operationalise due to the blurred line between single and multiple digital sources. In addition, I thought, based on their text descriptions, that online reading had some challenges which were not prominent in reading offline digital text. Therefore, I decided to merge the single and multiple digital sources categories and divide them according to whether the text medium used internet navigation or not. This division resulted in two new categories: digital text (e.g. electronic but not in an internet environment) and hypertext, which contained all texts that required internet navigation. The process is illustrated in Table 5. Under the table follows further descriptions of the text categories.

**Table 5.** Development of text media categories

Original categories	Merging	New categories
Printed text	Printed text	Printed text
Single digital source	Single digital source and	Digital text
Multiple digital sources	Multiple digital sources	Hypertext

### *Printed text*

The printed text medium refers to texts with physical form where the surface code is printed, written or painted on a non-electronic object. The surface code can be single modal or multimodal, including written text and illustrations (Walsh, 2005). Examples of printed texts in the classroom include books, magazines, brochures, maps and handouts (Roe, 2014). With the printed text medium, the reader has access to all the text's content, and the number of pages, content and position of the text do not change (Afflerbach & Cho, 2010).

### *Digital text*

The digital text medium is firstly defined by the need of an electronic device to access the text. A digital text can contain written, visual, audial information giving elements. Examples of digital texts include pdf documents, digital presentations (e.g. PowerPoint, Prezi), films, animations and electronically recorded music (Cho & Afflerbach, 2017). Digital text can, moreover, have either a sequential or a non-sequential reading path depending on the form of the text's form (e.g. film vs. Prezi) (Roe, 2014). An important note for clarification: YouTube videos, Netflix, Spotify and the like count as digital text when the only engagement the teacher or the students have on the webpage is to start the digital medium. For example, the teacher finds a YouTube video off camera and plays it in front of the class. This is because such interactions on the webpage do not illustrate the characteristics of online reading (e.g. Cho & Afflerbach, 2017; Zhang & Duke, 2008).

### *Hypertext*

The hypertext medium can be single or multiple digital sources that is accessed on an electronic device that is connected to the internet. Hypertext can be accessed through links or web-browsers. Internet pages with hypertext tend not to display all the information about a topic on the same page. The reader must, therefore, interact with the text through links embedded in the text that opens a new text. Cho and Afflerbach, 2017 argue that reading on the internet is characterised by the reader's interaction in the text, by navigating the reading through different links and synthesise information across different hypertexts. A text is categorised as the hypertext medium when there is evidence of a webpage being read and engaged with in the classroom.

### 3.4.3 Step 3: Analysing reading strategy responsibility

The pre-coded data material with the SUI code was similarly employed to determine who had responsibility for the reading strategies in the LISE classrooms. A high score such as 3-4 indicated that the segment showed explicit strategy instruction from the teacher, which would mean high teacher involvement. A lower score, 2, would indicate less teacher involvement and rather point towards shared responsibility or the students using the reading strategies independently.

In addition to the SUI code, I based the reading strategy responsibility on the *Gradual release of responsibility* model in McVee et al. (2018) (see. 2.3.1). Their model divides the responsibility of reading comprehension strategies into three: *Teacher responsibility*, *Shared responsibility* and *Student responsibility*. In Table 6 below, I present my operationalisation of the categories from McVee et al. (2018) with authentic examples from the observation findings presented in Chapter 4.

**Table 6.** Categories for responsibility for reading comprehension strategies

<b>Responsibility</b>	<b>Operationalisation</b>	<b>Authentic examples</b>
<i>Teacher responsibility</i>	The reading strategy is instructed by the teacher. The teacher either provides explicit instruction of the reading strategy or model usage for the students. There is limited student interaction, by which students either only pay attention to the teacher or copy the teacher modelling.	- Teacher: This is what I the poster to include: it needs to include the literature we have covered [...] and words you associated with the topics [...] so we need to think of words that are like, 'I'll remember that!'.  (Key word example)
<i>Shared responsibility</i>	The reading strategy is used in collaboration between the teacher and the student(s) or the teacher prompts/ reminds the students to use reading strategies.	- Teacher: So, what do you expect from a text with this title 'The Lottery'? - Student: I think it is about a person that either wins something or loses something.  (Prediction example)
<i>Student responsibility</i>	The students use reading strategies independent without teacher support.	The student opens an internet browser and accesses the search bar on the top of the page and types in a couple words. The internet page changes to a result screen on google, and the student scrolls the result page gradually up and down. The student accesses Wikipedia. The student scrolls down to the centre of the page and accesses a hyperlink, which



		brings the student to another Wikipedia page.  (Text location example)
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### 3.4.4 Step 4: Organising and reviewing

The forth step of my analysis was to organise the data and identify patterns in data material. First, I read through the notes I had written from the observation and registered the observation as numbers in an excel document. I used the numbers to create different diagrams and graphs that displayed the findings of text media, reading strategies and reading comprehension responsibility. Next, I read through the transcriptions of the reading strategies and returned to the video laboratory and observed some segments again to verify the accuracy of the transcriptions and the overall analysis.

## 3.5 Credibility

In this section, I discuss the reliability and the validity connected to my MA thesis, in addition to the ethical concerns and the steps taken to ensure the participants' privacy in the study.

### 3.5.1 Reliability

Reliability is defined by Johnson and Christensen (2013) as present in a study when 'the same results would be obtained if the study were conducted again (p. 279). However, Brevik (2015) argues that research that involves people cannot be fully reconstructed, for example, the interactions and the atmosphere of a classroom. Therefore, even if one uses video data, some details cannot fully be reproduced.

Intra reliability measures to what extent repetitions of the study by different researchers would arrive at the same results using the same analytical framework (Bryman, 2015). Video observation comes with the possibility to rewind classroom situations and look at them several times by multiple researchers (Blikstad-Balas, 2017). Thereby, the researcher must provide ample descriptions of the analytical tools to ensure that they can be applied by other researchers. With the PLATO manual, one needs to be a certified coder in order to use it. In the case of the present study, each segment with the PLATO code has been coded by at least two researchers. Regarding the text media, I have provided information on my understanding of the term and provided description on how it was operationalised for the video observation.

### 3.5.2 Validity

Validity in qualitative research relates to whether the findings in the study are ‘plausible, credible, trustworthy, and therefore defensible’ (Johnson & Christensen, 2013, p. 299), and over the years it has developed a consensus in qualitative research that the researcher ought to defend the study’s validity (Creswell & Miller, 2000).

The first threat to validity in the study is *researcher bias*. Johnson & Christensen (2013) describe this phenomenon as when the researcher allows ‘one’s personal views and perspectives to affect how the data are interpreted and how the research is conducted’ (p. 299). This issue occurs because researchers will subconsciously look for findings and patterns in the data material that support their thesis. Nevertheless, if the researcher engages in self-reflection and addresses his or her biases and predispositions that may have influenced the data analysis and conclusions, the loss of validity might be weakened (Creswell & Miller, 2000; Johnson, 2013). Due to my previous experience as English teacher and having read a great deal of theory and prior research, I had some predispositions of what reading comprehension instructions would look like, but I also was curious to see what different practices there were in other English classrooms. Being aware of my own biases, using the PLATO manual was an invaluable tool during my observation. Because other researchers had worked with the video recording before, it was possible for me to compare my findings with previous findings and discuss them with other researchers, engaging in a *peer debriefing* (Creswell & Miller, 2000).

An additional strategy to strengthen validity is to use *rich data* or *thick, rich description* (Creswell & Miller, 2000). This process involves that the researcher provides detailed descriptions of the setting, the participants and the context of the study. The video recordings and the transcriptions of these would serve as thick, rich description because they show everything that happens in the classroom, which prevents me as a researcher from solely collecting data that supports my conclusion for the present study.

Finally, it is necessary to state that it is not my intention with this study to generalise my research results to a greater population. Due to the smallness of my sample and of purposeful sampling approach, generalisability is neither possible nor the aim of the thesis (Bryman, 2015).

### 3.5.3 Ethical considerations

As my role in the LISE project is that of an independent researcher using secondary data (Dalland, 2011; Vedeler, 2000) I have had no former contact with the schools, teachers or students in the data material. Moreover, the video data was collected before I was connected to the project; therefore, in this section, I will present how the LISE team ensured that the ethical guidelines were duly followed, and how I upheld them as a when working with secondary data.

All pedagogical research in Norway must be done in accordance with the research ethical guidelines issued by the Norwegian National Research Ethics Committee's department for Social Sciences, Humanities, Law and Theology (NESH, 2016). Befring (2015) elaborates on NESH's guidelines and lists four steps that a researcher must address during the research that includes personal data:

- 1) Consent and obligation to notify
- 2) Anonymity and safekeeping of data
- 3) Protection of vulnerable groups and children
- 4) Potential harm to the participants

The first principle concerns the participants' right to freely consent to participation and being notified of the purpose of the study. '*Freely given* consent means that the consent has been obtained without external pressure or constraints on individual freedom' (NESH, 2016 p. 15, original emphasis). Before installing the cameras in the classrooms, the LISE team informed the teacher and the students of the purpose of the study and collected consent forms from them. Because the students were between 14 and 15 years at the time of recording, consent was collected from parents or legal guardians (Befring, 2015). They were also informed they could withdraw from the study at any time. The students who wished not to participate were placed outside of the cameras' angle during recording.

The second principle about the participants' anonymity is addressed by NESH (2016). 'Research must be conducted in accordance with basic consideration for data protection, such as personal integrity, privacy and responsible use and storage of personal data' (p. 13). The video data is stored in the video lab at the University in Oslo. Only people connected to a video project have access to the lab, and one needs to use a username and password to access the data. Before entering the project, I signed a form agreeing not to share any confidential information in the recordings, and when writing this MA thesis, I anonymised all the

participants. However, as the participants are recorded, it is impossible to guarantee fully their anonymity. Extra steps have, nonetheless, been taken to ensure it. All variables such as names and workplace are unidentifiable for all who participate in the project. The only information a researcher is provided with is gender, age and education; and if school name or participants' name should be revealed during observation, these are to be omitted and anonymised.

The third principle deals with the protection of vulnerable groups and children. Befring (2015) writes that a researcher needs to show special consideration when children participate in research. NESH (2016) justify this heightened protection due to 'Children are often more willing to obey authority than adults, and they often feel that they cannot object. Nor are they able to see the consequences of participating in research' (p. 21). With this in mind, there is an overt power imbalance between the researcher and the participants because only the researcher creates the classroom narrative. I have, therefore, in my classroom portrayal been aware of not abusing my position as the researcher and not presented the participants in a way that could cause potential harm.

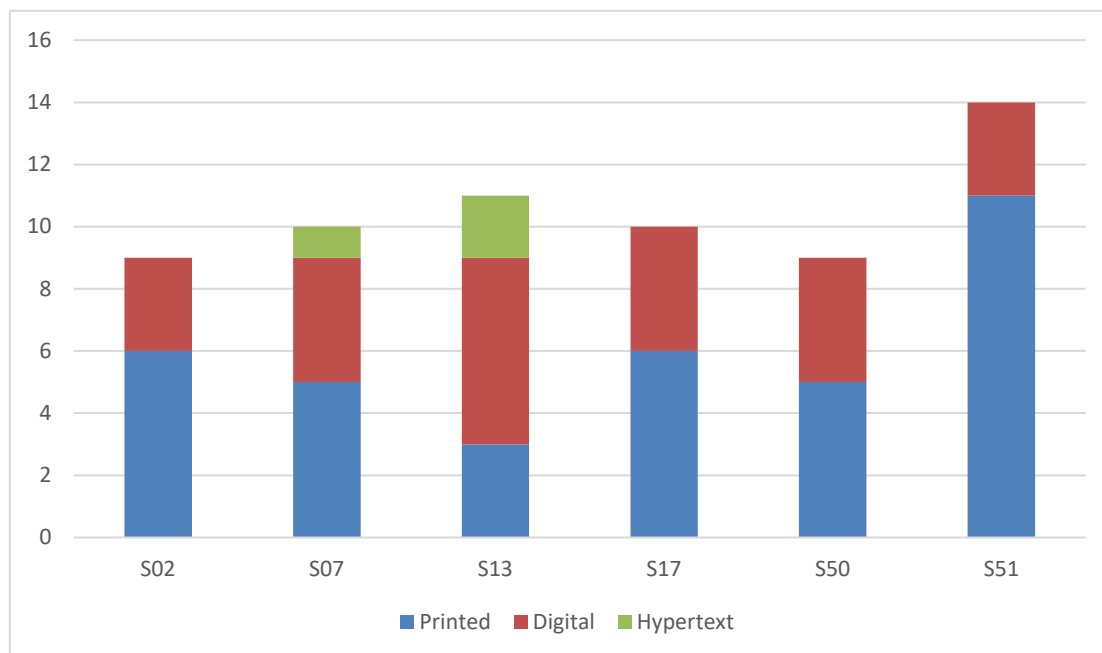
The fourth principle is related with the third: 'ensuring that participants are not exposed to serious physical harm or other unreasonable strain as result of the research' (NESH, 2016, p. 19). In case of this, the LISE team had informed the participant that they could withdraw from the study at any point.

## 4 Findings

In this section, I present the findings from the video observation and examine how the video data inform my main research question: *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?* The chapter is divided into three sections, each presenting findings concerning my sub research questions. The first main finding is the identification of multiple text media in lessons that contain reading comprehension strategy instruction (RCSI) and use; however, the strategy instruction was often targeted at only one text medium at a time (4.1). In addition, the use of hypertexts was underrepresented in comparison with printed and digital text media. The second main finding is that although all three text media were the object of RCSI, the teachers instructed reading comprehension strategies mainly targeted at understanding printed text media (4.2). The third main finding concerned the characterisation of RCSI in the classroom, which mainly comprised guided use, where the responsibility for reading comprehension strategy use was commonly shared between the teacher and the students, with little evidence of explicit RCSI and also little evidence of independent strategy use in the classroom (4.3).

### 4.1 Text media selection in the classrooms

Initial analysis of the text media selection in the six classrooms showed that multiple text media were present in the same English lessons. The most notable finding was that hypertext media were only used in two classrooms (e.g. S07 and S13), and the printed text media were most frequently used across all the schools. The findings concerning text media are displayed in Figure 5.



**Figure 5.** Overview of text media distribution across 9<sup>th</sup> and 10<sup>th</sup> grade.

Figure 5 illustrates the distribution of the printed, digital and hypertext media across classrooms in lessons with RSCI. We see that printed text was the most frequently used media across schools and school year. The exception is S13, where digital text media were used more frequently than printed text. Interestingly, S07 and S13 were the only schools that used all three text media categories. Further analyses showed that it was common for the classrooms to combine two different text media, not only in the same lesson, but also in the same reading activity. As shown in Table 7, students rarely engaged with only one text medium (seen in 6 of 28 lessons), while none of the classrooms used all three text media in the same lesson.

**TABLE 7.** Lessons with multimedia reading ( $N = 28$ ).

Number of different text media	Number and proportion of lessons
One text medium	6 (18%)
Two text media	22 (72 %)
Three text media	0 (0%)

In the following, I present findings concerning the three types of text media separately: printed text media (4.1.1), digital media (4.1.2) and hypertext media (4.1.3), with examples and transcripts from the observed English lessons.

#### 4.1.1 Printed text media

Printed text was most frequently occurring medium in the data material. The video analysis with the text media category (see 3.4.2), identified 36 texts as printed text across the lower secondary classrooms, making 57% of the texts in use printed text. Printed texts were seen to have the most versatile reading form and included maps, textbooks, song lyrics, handouts and short stories. Table 8 displays an overview of the printed texts used in the classrooms.

From Table 8, we see that the lower secondary teachers utilised printed text for their students to read different text forms and genres. The selection of printed texts consisted of both fiction (short stories, song lyrics, novel excerpts, theatre play) and non-fiction (maps) as well as both inauthentic (textbooks, handouts) and authentic texts (the remaining ones). This selection suggests that what is required of students from the reading activity differs between the classrooms.

**Table 8.** Types of printed texts in the six lower secondary school classrooms.

School	Text type
S02	Short stories
S07	Maps, handouts
S13	Song lyrics
S17	Textbook, theatre play
S50	Novel excerpt, textbook
S51	Novel excerpts, short stories, factual texts

An identified pattern concerning the printed text category was that the students often spent multiple lessons reading the same text. This was, for example, the case in S17, in which the students spent four consecutive lessons reading, interpreting and discussing a theatre play. Similarly, in S07, the handout was used in four consecutive lessons, and in S51 the students worked with a selection of printed fiction and factual texts in two consecutive lessons.

### 4.1.2 Digital text media

The digital text medium was the second most frequent text medium used in these classrooms, and analysis revealed that 24 of 63 (38%) texts in the data material fell into the category digital text media. This medium was most frequently observed in the form of PowerPoint presentations, used by all English teachers in the six classrooms.

**Table 9.** Types of digital texts in the six lower secondary classrooms

School	Text type
S02	PowerPoint
S07	PowerPoint
S13	PowerPoint, song, music video
S17	PowerPoint, digital notebook, audiobook
S50	PowerPoint, song, film trailer
S51	PowerPoint, films

In most classrooms, digital texts such as the PowerPoint presentations, songs and music videos were used as a supplementary text media. In S50, the English teacher, Ragnar, let the students watch a trailer for the documentary film ‘The Ballet Boys’ by Indie film AS. In Example 1, we see how Ragnar asked the students to predict what qualifications were necessary in order to become a ballet dancer.

**Example 1.** Activation of prior knowledge (S50)

*Ragnar:* First of all I would like to ask you to talk to your partner for one minute: ‘What does it take to be a good ballet dancer? What skills do you need? [One minute later] What do you think?’

*Student 1:* You have to be strong.

*Student 2:* You need a good balance and strong legs.

*Student 3:* You will need focus.

*Student 4:* I think that a guy needs to be pretty confident because they are gonna wear a pink skirt.



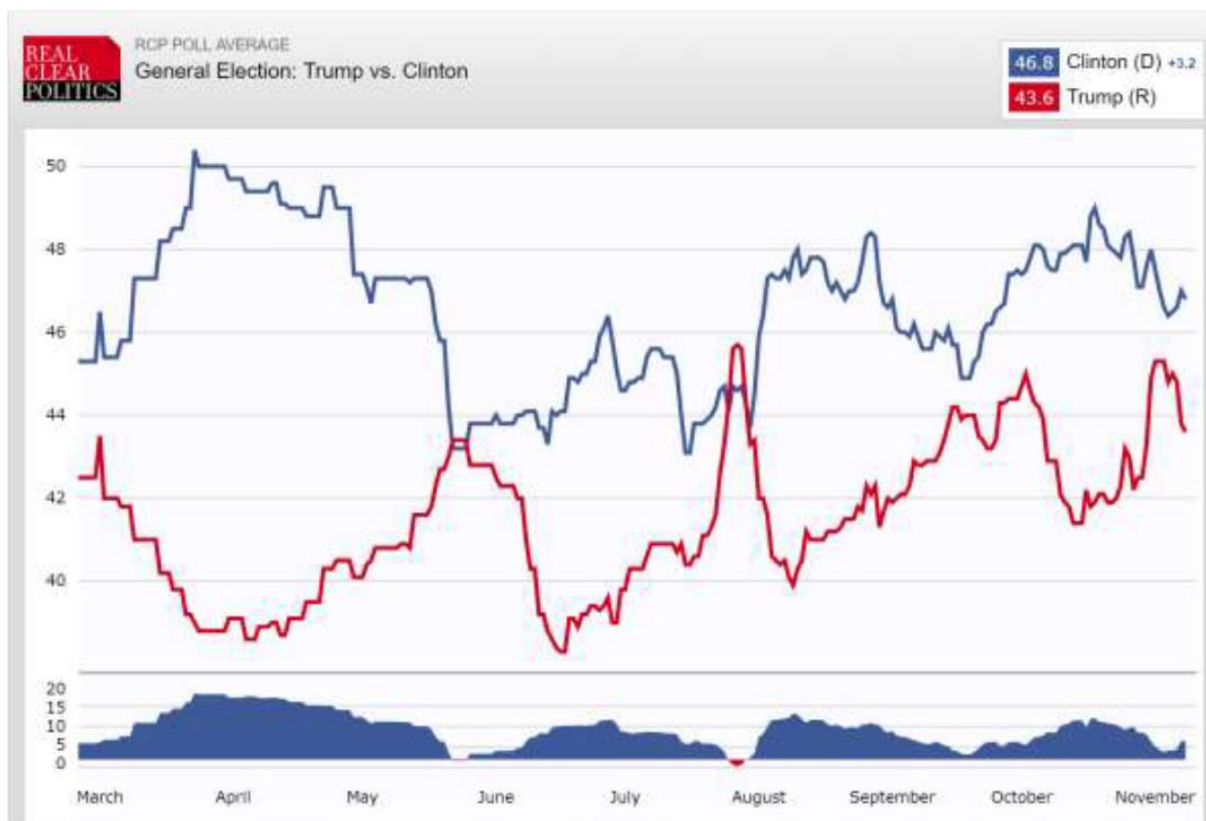
*Ragnar:* Okay. So that's your idea of a male dancers; they have to wear pink skirts. Okay, we'll see [laughter] Eh, but I agree. To be confident that is important.

[They watch the trailer]

After this sequence, Ragnar explained that the purpose for this strategy prompting was to remind students to reflect on or consider what qualifications certain hobbies and professions required. Whereas, in Ragnar's classroom, they used a digital text to supplement another digital text, other classrooms tended to use digital media texts to supplement a printed text media. For example, the teacher in S02, Anette, and the teacher in S17 who both used PowerPoint presentations in before-reading activities to prepare the students for reading the printed texts (e.g. short stories and theatre play). Another interesting finding was that some of the printed texts also had a digital version that were used as supplementary texts in some of these classrooms. For example, the students in S13 watched music videos and read the accompanying lyrics (printed) afterwards. These practices indicate that the printed and digital text media are in some cases combined to represent one multimodal text.

### **4.1.3 Hypertext media**

Video observations across classrooms and school years revealed that hypertexts in lessons with RSCI were present in two of six schools. The first example is from S07 in which the teacher and students read a poll from the 2016 U.S election on [www.telegraph.co.uk](http://www.telegraph.co.uk). On the Telegraph's webpage, there was a graph that illustrated Donald Trump and Hilary Clinton's chance of winning the election. See Figure 6.



**Figure 6.** Class reads a digital US presidential election poll in the 4th November 2016 issue of *The Telegraph* (S07). Source: Real Clear Politics.

The teacher Michael followed the graph with his finger and commented on major political events that coincided with larger changes to the popularity of the candidates.

**Example 2.** Reading a hypertext poll

*Michael:* It kind of looks like the New York skyline, doesn't it? Tall buildings and the suburban areas, and here is the Empire State Building coming up here, something like that. It looks like a map of New York city. But what do you read from, or... what do you read from this image, this graph? [Points to the bottom of the graph] This is way back in March, here we are in November. So, Student 1, you are first.

*Student 1:* We see that. We can see that it has swung a bit more. Eh... when we are closer to the... election.

*Michael:* [...] It's like a roller coaster ride, isn't it? Up and down and then a really tall point here. So, once, Donald Trump is regaining some control. Something must have happened to Hilary here [points at the

blue line's peak in April]. Just like here, because she had a big lead, didn't she? Over 50%. That's much.

*Student 1:* They really had a lot more polls at the end because up and down [...] just at the end there. And you can see that Hilary has lost... most recently but just gained a little just at the end there.

*Student 2:* Trump has less votes than Hilary but sometimes he goes above.

*Michael:* Right. Because there are some points where Trump is leading. Not for a long time, but it happens sometimes. And then right now in November, we're four days away from the election, and look how tight it is.

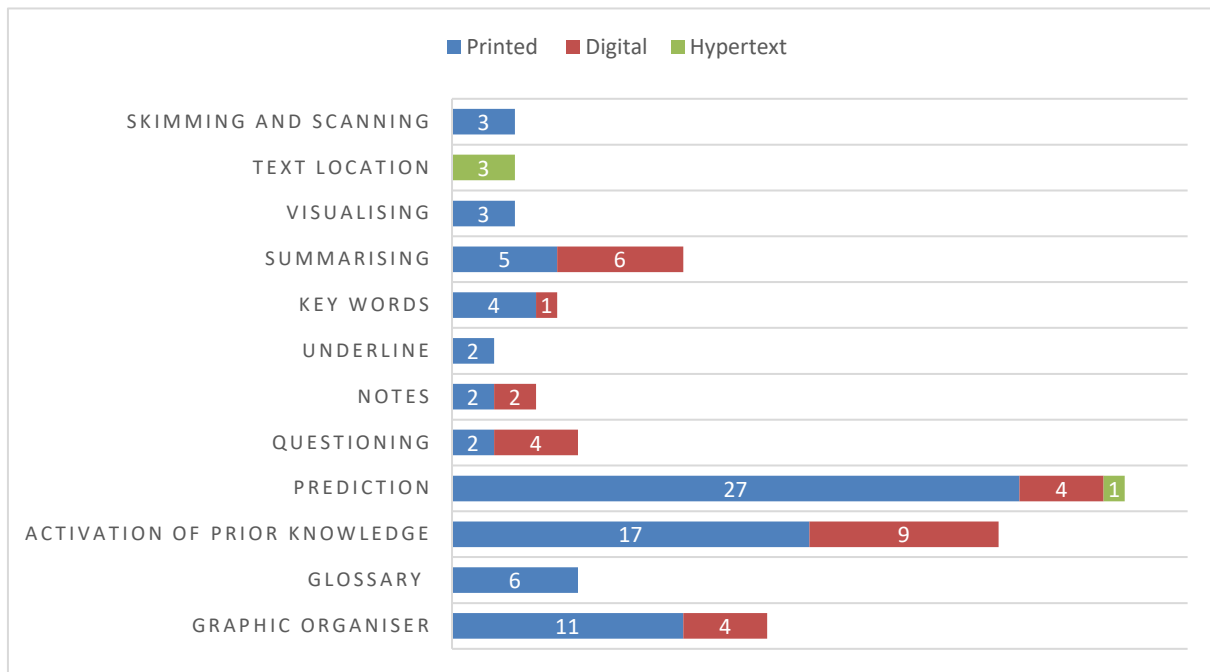
The second example of hypertext was in S13, where the teacher showed on the whiteboard UNESCO's homepage, and then read aloud for the students some information about the different world heritage sites.

#### **4.1.4 Summary**

In this section, I have answered RQ1: 'What texts are used in the video-recorded English lessons across 9th and 10th grade?'. The analysis of the video material indicates that in the lower secondary school classrooms, the students primarily read texts in the printed media, with digital text being the second most frequent text media. Hypertext media was the read less frequently in connection with RCSI and figured in two classrooms only. In addition, the analysis indicated that multiple text media were often present in the same lessons and sometimes comprise the same multimodal text. In the following section, I present findings on how reading comprehension strategies were used in combination with the three text media types, effectively answering RQ2.

## 4.2 Patterns between reading comprehension strategies and text media

The following section presents findings concerning how reading comprehension strategies were used in combination with different text media. Figure 7 illustrates the reading comprehension strategies identified across the data material and with which text media they were used.



**Figure 7.** Reading strategies and text media across schools and school year. Number of reading comprehension strategies = 116).

The numbers in Figure 7 suggest a similar pattern to Figure 5, which is that printed text (blue) is the most frequent text medium followed in descending order by digital (red) and the hypertext media (green). A striking difference, however, concerns the low percentage of reading comprehension strategies targeting at understanding the digital text media. Whereas digital text media accounted for 38% of the text media selection the classrooms, only 25% of the reading comprehension strategies were aimed at digital text media. Figure 7, moreover, shows that three reading comprehension strategies were used more frequently than others (e.g. Prediction, activation of prior knowledge and graphic organisers). Prediction was the only reading comprehension strategy that was used with all three text media and we see activation of prior knowledge and graphic organisers were used recurrently with both printed and digital media texts. In the following sections, there will be exemplified more in detail how the RCSI and use were manifested in the classrooms.

### 4.2.1 Printed text and reading comprehension strategies

The findings suggest that teachers most frequently explained or prompted and students used most frequently reading comprehension strategies when working with the printed text medium. In fact, 71% of registered reading strategies applied to this text category. Example 3 illustrates how the teacher, Anette, prompted the student to predict the plot in the short story ‘The Lottery’. Prior to this example, the students had discussed their prior knowledge of and experiences with lotteries, and they had reached consensus on the aspect of chance regarding lotteries.

#### **Example 3.** Prediction (S02)

*Anette:* So, what do you expect from a text with this title ‘The Lottery’? What do you expect from it? [...] Just look at the title, what is you, your first thought? What do you expect?

*Student 1:* Ehh I think it is about a person who either wins something or loses something.

*Anette:* Yeah, that can be the case. Any other ideas, Student 2?

*Student 2:* I think it is about a lottery where the loser get killed – no – where where the winner get killed.

A similar case occurred in S50 in which the class predict the setting of the story ‘Witch child’ from the title. At the during-reading phase, there is evidence of strategy prompting and use in S02 where the students use graphic organisers and glossary while they read a short story.

In the after-reading phase, the classrooms use reading strategies that are targeted at structuring the information by writing notes, summaries or graphic organisers. Example 4 illustrates how the teacher in S51 prompts the students to summarise and create graphic organisers that will make them able to remember the content of the various short stories they have worked with that year.

#### **Example 4.** Key words and summary (S51)

*Teacher:* This is what I want the poster to include: It needs to have the topics we have covered, it needs to have the literature we have covered – movies or short films –, and then words associated with topics, which are all the

words we can think of that are good for what we have talked about. [...]  
So we need to think of words that are like, 'I'll remember that', oh yes'.

Here the teacher tried to make the students understand that they needed to make key words that would jog their memory in order to remember the content of the text.

#### **4.2.2 Digital texts and reading comprehension strategies**

The findings from the analysis of the digital text media showed that the classrooms generally used the same reading comprehension strategies here as for printed text media. Example 1, above, illustrated how teacher and students used reading strategies in collaboration when watching a film trailer. The following examples show how the classrooms used similar reading strategies to comprehend PowerPoint presentations as digital media.

Example 5 is from S07 where the teacher, Michael, gave a presentation about the Irish history, using a PowerPoint where bullet points appeared gradually as the teacher clicked on the presentation tool. His presentation was used throughout four consecutive lessons as a structuring element for the teacher's representation of content. At one point during the presentation, the teacher prompted the students to predict the content of the next bullet point.

##### **Example 5. Prediction (S07)**

*Michael:* If you were to make a guess, what comes next? Because there is one more bullet point, which is quite different. What do you think will come next? Student 1.

*Student 1:* Ireland breaks free from or release itself from Great Britain and becomes an independent country, or Ireland get their own main law.

*Michael:* Well, two very good suggestions. Because you are hoping for Ireland to become independent. Well, that's not it. It has to do with a vegetable. The next bullet point has to do with a vegetable that we like in Norway. That you often eat with meatballs. What do you often eat with meatballs in Norway? The kind of vegetable you don't like, but you are forced to eat anyway.

*Student 2:* The potato.

*Michael:* Yes, and what is it about Ireland and potatoes?

*Student 3:* The potato famine.

*Michael:* We have what we call the potato famine. Or the great famine [...].

[The teacher transitions to the next PowerPoint slide]

This example illustrates how the teacher deploys the digital text medium to prompt his students to use a reading comprehension strategy during a presentation. When reading this digital text medium, it required the students to follow a linear reading path, determined by the teacher. Therefore, the students needed to read the text at the speed and in the order the teacher had chosen, which required the students to continuously monitor their reading comprehension.

Another example from S07 occurred in a later lesson. Here the teacher displayed a picture of Irish immigrants on a boat, and asked his students to read the illustration and predict its backstory and its position in the debate on Irish independence.

**Example 6.** Prediction to understand digital text (S07)

*Michael:* This is from the illustrated London News in 1847, and Student 1 what do you think when you see this picture? [...] Who do you think made this drawing? Where does he or she come from? The person made the drawing.

*Student 1:* I was thinking about it. It could either be a journalist who spread a message about what the famine is.

*Student 2:* An Irish immigrant. Here, one person that moved from Ireland to London, started working in London news, and will explain how it was in Ireland.

*Michael:* Yes. This could be an Irish person trying to describe just how bad the situation is in Ireland. And this journalist or illustrator tries to tell the English, 'Come on! This is how bad it is. What about you stop bothering us.'

*Michael:* [...] If you were an English journalist, why would you make this drawing?

*Student 3:* Mhm I don't know, so people won't move to Ireland.

*Michael:* Absolutely, so you want to say, you want to spread a message about Ireland which is not positive.

*Student 4:* I would maybe say or try to say to the people that we shouldn't bother the Irish, but rather help them. Yeah, try to be nice.

*Michael:* Yeah perhaps! I mean that is the fun, or not fun part, but that is the interesting part of pictures. We have different views of what they are trying to express.

In this example, the teacher prompted a reading strategy targeted to help the students comprehend a multimodal digital text, and prediction was used to decode the information in the illustration. Illustrations contain visual information that is processed differently from verbal information and rely more on the reader's imagination. The teacher expressed this by telling the students that everyone has a subjective interpretation of illustrations. And this underlines that, similar to written texts, illustrations can be interpreted differently depending on the perspective.

Example 7 is another example with reading comprehension strategies and a PowerPoint presentation. The teacher in S07 was giving a lecture, and the students were taking notes from the PowerPoint. What happened next was that a student called out when the teacher changed slide. The teacher then realised that the student was writing down everything on the slide.

#### **Example 7.** Key words and note taking (S51)

*Teacher:* So, for this you would have to write everything? No! Don't write down everything, sweetheart. You are taking notes. Don't write everything.

[A student suggest they should write key words]

*Teacher:* Right. Key words. [Points at a bullet point on the PowerPoint] This one would be important. [...] You could write 'clear', 'statement', 'clear statements'. What else could you write [...] Like a key word [...] That's the core information here.



Here, the teacher stopped her presentation and had a small section where she repeated how to take notes and write down key words from presentations. The explicit instruction was in her modelling to the students which points from the presentation that were of importance, suggesting that they could either summarise the point in a clear statement or write key words to remember the information. The analysis revealed, moreover, that there were some situations where reading comprehension strategies were used with printed text and digital text at the same time. The following section presents the findings on these situations in further detail.

### **4.2.3 Reading strategies and the combination of printed and digital text media**

The video observations, furthermore, showed that there were situations in which RCSI was targeting a combination of printed and digital text media concurrently. For example, in S51, the teacher and the students used either the reading comprehension strategies written *summary* or *graphic organiser* to summarise the different text they had read throughout the entire school year. The list of texts, to which they applied one of these reading comprehension strategies, comprised a section of printed and digital media texts, and the reading comprehension strategy usage, therefore, did not distinguish between these types of text media.

Similarly, in S13 the teacher prompted her students to use strategies that targeted both printed and digital text media at the same time. First, she combined both text media when they worked with the American Revolution, asking the students to watch and read an animated song on YouTube. In Example 8, the teacher had previously played the song to the class and afterwards handed out the printed lyrics. Next, she instructed the students to form pairs and make a summary or graphic organiser in the form of a comic strip (e.g. in eight squares) to do so:

#### **Example 8.** Graphic organisers and summary (S13)

*Teacher:* With your learning partner, I want you to read the lyrics to ‘No more Kings’ [...] and after each verse I want you to talk about ‘Okay, what happens here?’ And then you read the whole song, and after that, individually, you can choose whether you want to write a summary about this to remember this part of the American history. Or I have [...]

blank sheets here. You can make a comic – tegneserie<sup>1</sup> – that illustrates what happens in the text.

*Teacher:* I want your comic to be a summary of the text. So that if you were to give me a summary of the text, the comic can help you. But you don't have to make one square of each verse; you can present it the way you want. [...] The most important thing for me is that when I ask you in a couple weeks, maybe next year, that you will remember some of the story, the main parts.

Although the teacher in this example combined two different text media, they can in fact be considered different modes of one multimodal text that is composed of images, sound, movement and written language. From the observation, however, it was clear that the digital text medium was the main medium, as the printed text was not introduced until after the students had watched and read the digital text. Conversely, in S51, digital texts were used in such a manner that they appeared to be supplementary to printed texts.

#### **4.2.4 Hypertext and reading comprehension strategies**

The findings show that when hypertext was read, two reading strategies were used: text location and predication. These reading comprehension strategies occurred in two classrooms (S07 and S13), so the data material has its limitations. Example 9 shows how a teacher modelled the strategy text location to show his students how to search for and select a relevant source. As mentioned, the topic of the lesson was the U.S presidential election and they searched for the latest electronic poll (see Figure 6) to see who the leading candidate was. The teacher used the class computer, which was connected to a projector and the students looked at the whiteboard.

##### **Example 9.** Text location (S07)

[The teacher opened an internet browser]

*Michael:* So, we will google [accessed google.no] [he entered 'U.S election' in the search bar]. Det engelske ordet for meningsmåling er<sup>2</sup> 'poll' [added:

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<sup>1</sup> Translation: Comic

<sup>2</sup> Translation: The English word for poll is

‘poll 2016’]. Today is the 4<sup>th</sup> of November. [He pointed to the different search hits] Telegraph.co.uk. We trust the Telegraph. [He clicked on the search hit, then accessed a new webpage and scrolled down through the hypertext, and the poll in Figure 6 was displayed on the whiteboard] See? Any polls here? Right.

The teacher modelling in Example 9 showed many key features of the text location strategy. The first thing he did was to tell the students how to create an adequate search word that generated many hits on goal related information. Next, the teacher read aloud some of the links from the search results and decided to follow a link to the Telegraph.co.uk. Michael told the class that this was a trustworthy source. Lastly, the teacher navigated the webpage, located the poll, before explaining to the students how they could read the graph, as mentioned above. A similar situation occurred in Example 10, where the teacher (S13) modelled for the students how to navigate UNESCO’s homepage. Before the instruction, the teacher had located the webpage, and she then explained to the students the different features displayed, such as a map that exhibited all the world heritage sites.

**Example 10.** Text location (S13)

*Teacher:* [Pointing at the whiteboard] These are all the sites in the world. The yellow ones are cultural sights, and the green and yellow ones are mixed sites, both cultural and natural, and do you see there are red marks? [...] These are in danger of distinction. In danger of disappearing.

[The teacher moves the marker to another point of the screen]

*Teacher:* Here you can order by country for instance. You can find Norway. You can find something about the site, or year, and if you scroll down here. [Scrolls down the list of heritage sites], here we see different kinds of sights in danger.

Example 9 and 10 illustrate two different aspects of the text location strategy. The teacher in S07 was mostly concerned with modelling how to create a reading path and how to use prior knowledge and predictions to locate information adequate to the reading goal. Conversely, the text location modelling in S13 was targeted at how to navigate and use the different devices

on a webpage to locate information and creating a reading path within the hypertext. The teacher explicitly instructed the students in how to search for more information about one of these sites on their computers or smartphones. The video recordings of this the lesson captures the computer screen of one of the students, and it is in fact possible to observe how the student accessed different pages on Google and Wikipedia following the teacher’s explicit RCSI.

#### 4.2.5 Summary

In Section 4.2, I have aimed at answer RQ2: ‘How are reading comprehension strategies instructed and used in relation to different text media?’ The analysis suggests two main findings: First, that in these classrooms, students generally used the same reading comprehension strategies across text media, and second, that printed text was the medium with which the students were most often prompted to use such strategies.

### 4.3 Responsibility for reading comprehension application

The following section addresses findings concerning who had the responsibility for the reading comprehension strategy application targeted at the different types of text media (i.e. RQ3). In the analysis of responsibility, I followed the step of the *Gradual release of responsibility* model (McVee et al., 2018), (see 2.3.1).

**TABLE 10.** Overview of strategy responsibility

Strategy responsibility	Numbers and Percentage
Teacher responsibility	5 (4.3%)
Shared responsibility	108 (93,2%)
Student responsibility	3 (2,5%)

The responsibility distribution displayed in Table 10 indicates that an overwhelming majority of all observed RCSI and use in these lower secondary school classrooms concerned shared responsibility between teachers and students. The distribution shows that the teachers in the data material seldom provided explicit instruction of reading strategies (i.e. teacher responsibility) and instead seemed to prioritise instruction such as the prompting of strategy use. It should, however, be noted that the distribution number of situations where students

employed reading comprehension strategies independently was likely to be much higher than the recorded numbers as reading comprehensions can only be registered with an audio or visual cue. Thereby, the method excludes, for example, reading comprehension strategies being used independently by the students when they did not comment on their strategy use verbally.

### **4.3.1 Teacher responsibility**

A pattern that characterises the data material is that there was little evidence of teachers taking the responsibility for RCSI in the form of direct or explicit strategy instruction. In many cases, the teacher asked the students to perform different reading comprehension strategies without providing them with ample explanations of application. However, there is some evidence of teacher providing the students with direct instructions across text media. For example, Example 4 which illustrated how the teacher (S51) provided the students with explicit RCSI to help the students to make graphic organisers and choose key words to revisit and summarise the text they had worked with that school year. Because the text selection in this classroom included both printed stories and films, this RCSI was targeted at both printed and digital text media. Other examples of teacher taking the responsibility for RCSI that directly targeted digital text media occurred in a later lesson in S51, where the teachers explicitly instructed the students in how to use key notes to a PowerPoint presentation (Example 7). Also, the teacher in S50 provided explicit RCSI when he elicited the students had insufficient prior knowledge about the 1960s, and the teacher modelled how to graphically organise their prior knowledge.

Similarly, with hypertexts, Example 2, 9 and from S07 and example 10 from S13 showed how the teachers modelled and explicitly instructed the application of the strategy text location, so that the students could search for information independently and be able to navigate hypertext webpages.

### **4.3.2 Shared responsibility**

Shared responsibility took the shape of the teacher reminding or prompting the students to use reading comprehension strategies when working with different text media. A clear example of this occurred in S02. The students were reading a printed short story and the teacher prompted the students to use a word wall while they read:

**Example 11.** Graphic organiser (S02)

*Anette:* [...] I also want you to focus on vocabulary; I have got a word wall for you here if you want – if you want one. [Some of the students raise their hands and the teacher hand them a sheet of paper].

This is a good example of strategy prompting because the teacher only suggested that students should use a word wall, emphasising that the use of the strategy was voluntary. Additionally, the teacher did not explain how to use the reading comprehension strategy during the lesson, suggesting that it was a strategy she had instructed in a prior lesson, and that the responsibility of application was gradually transferred to the students.

When the students worked with digital texts (S13), Example 8 illustrates how the responsibility for reading comprehension strategy use was shared between the teacher and the students. Here, the students had less of choice, but they could choose whether they wanted to write a summary in full sentences or use a graphic organiser to summarise the historical event of the American Revolution. Similar to Example 11, where the teacher (S02) did not provide explicit instruction on how to conduct the reading comprehension strategy, suggesting that the student knew how and why to use it. There was no evidence of shared responsibility for strategy use with hypertexts.

### **4.3.3 Student responsibility**

Students' individual responsibility for strategy use was registered when the students performed a reading strategy or talked about strategy usage not prompted by the teacher. An interesting example of student responsibility occurred in S13 as students were working with the UNESCO hypertext mentioned above. After the teacher had talked to the students about the different UNESCO world heritage sites and the students had been asked to find information of one of the sites on their own, the camera captured the screen of one student sitting in the back of the classroom. While I briefly referred to this above, I want to elaborate here on how the student assumed responsibility for his own strategy use in the classroom. The student opened an internet browser and accessed the search bar on the top of the page and typed in a couple words. The internet page changed to a result screen on google, and the student scrolled down the results page, gradually up and down. The student then accessed Wikipedia. The student scrolled down to the centre of the page and accessed a hyperlink, which brought the student to another Wikipedia page. The student sat silently and looked at

the screen for three minutes, seemingly reading the hypertext information. When the teacher began to talk to the class, the student in question went back to the original Wikipedia page and looked up at the teacher.

This sequence illustrated how the student applied the strategy text location in order to find information online. What most characterised the strategy use was when the student scrolled up and down on the Google result page and decided to follow one of the links. By doing so, the student considered the usefulness of the links before choosing one. When the student entered the Wikipedia page, he repeated the same process, in which he navigated through the page and found another link that took him to another page. Because the student remained on this hypertext page, it is plausible to assume that he found a suitable text.

With digital texts, there were no observable situations of purely student responsibility for strategy use. With the printed text media, a student in S51 verbally reported to the teacher that a reading strategy concerning text structure had been useful in other classes. The interaction indicated that the student was able to see the strategy's usefulness and was able to use it across subjects in an interdisciplinary manner.

#### **4.3.4 Summary**

In Section 4.3. I have aimed to answer RQ3: 'To what extent reading comprehension strategies explicitly instructed by the teacher or used independently by students?' The analysis of the video data to answer this research question suggests that the responsibility of reading comprehension strategy use in the observed English lessons were mainly the teachers' responsibility or shared between the teacher and the students.

### **4.4 Summary of chapter**

To summarise the findings from the video observation of the 28 lower secondary school English lessons concerned with reading various text media, indicate that the students typically read and used reading comprehension strategies with printed text media. Digital texts were often present in English lessons in the form of PowerPoints, and there was evidence of two classrooms using reading comprehension strategies with this text type. Hypertexts were used in two classrooms, where the teachers instructed a specific reading comprehension strategy

for internet-reading, namely text location. Lastly, the responsibility of using strategies was typically the teachers' or shared between the students and the teachers.



## 5 Discussion

In this MA thesis, I have examined the overarching research question: *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?* In this chapter, I begin discussing my findings from the video observation in the light of the theoretical framing and prior research in Chapter 2.

Here, I discuss my contribution to the research field of teaching English in lower secondary schools in Norway. The research from this MA thesis provides new knowledge about the link between text media selection (categorised as printed, digital and hypertext) in six lower secondary school classrooms and RCSI and use when engaging with different text media categories. Although one prior LISE study has analysed what goes on in the name of reading comprehension strategy use in English (Brevik, 2019a), the categorisation into the three text media categories has not been done before, or which strategies are used to understand texts in these categories. Therefore, to the best of my knowledge, similar research has previously not been conducted in the English subject in a Norwegian context. The video recordings from the LISE project has facilitated a systematic observation of how both teachers and students interact in English lessons when working with reading comprehension strategies and has offered insight into the printed, digital and hypertext culture in these lower secondary school classrooms, which is unprecedented in a Norwegian context.

In the following sections, I discuss first the text culture in these classrooms and the implications that reading texts from different media and modalities may have on students' reading comprehension (5.1). Next, I discuss the implications of the finding that most reading comprehension strategies in these classrooms were used to understand printed text and whether these strategies can be used to improve students' reading comprehension with other text media as well (5.2). Third, I argue that there is a need for teaching specific reading comprehension strategies that are designed for hypertext or internet reading (5.3). Forth, I argue that reading comprehension strategies are important tools for students in their process of reading and learning to learn from different text media (5.4). Lastly, I discuss some didactic implications based on the results of my MA thesis.

## 5.1 What characterises the text culture in English lower secondary classrooms?

The analysis of the text culture in English lessons, in terms of the text media selection, identified that printed, digital and hypertext media were present in these English lessons in lower secondary schools. The findings showed, moreover, that the printed text medium was the most frequently read and represented about 57% of all text in these classrooms. The digital medium was also used in all the classrooms but less frequently (38%), while the hypertext medium was used in two classrooms and three lessons only (4%). Within the categories of printed and digital texts, the results indicated that the classrooms read a variety of text types, ranging from a theatre play to a map (i.e. printed), and from PowerPoint slides to music videos (i.e. digital). This variety in text types requires the students to adjust how they approach the reading activity (RAND, 2002), because different text media have different characteristics and ways of presenting the information to the reader. For example, the students in the classroom where they read a map (S07) had to use a different approach to the reading activity compared to the students who read short stories (S02), and in turn, the same students had to adjust their reading when reading a map compared to reading PowerPoint slides. Catterson & Pearson (2017) refer to this knowledge as ‘metadiscursive awareness’ and they argue that students need to be exposed to a wide reading of text types and learn how different academic disciplines convey information, in order to meet the different demands from texts in the 21<sup>st</sup> century. Therefore, the students in the classroom with the map and the PowerPoint slides might have chosen a non-linear reading path in which they scanned the map for information, while they similar to other students who read short stories, had a linear reading path where they read the PowerPoint in chronological order. Thus, what kind of text types students are engaged with in the English classroom might determine how and to what extent the students develop their reading comprehension.

The fact that the students in these classrooms most often read texts in a printed text medium might, furthermore, have been a contributing factor to facilitating the students’ reading comprehension. Mangen et al.’s (2013) suggest that adolescent readers who read the same text on paper and in a pdf document on screen experience less efficient reading comprehension when the text is in a digital medium. Researchers argue that reading texts in a digital medium comes with a higher cognitive cost than reading on paper and that the reader needs more time to achieve the same level of reading comprehension (Ackerman &

Goldsmith, 2011; Kerr & Symons, 2006). Interestingly, in my study, the analyses of the different text media show that the classrooms tended to read longer texts when these were printed compared to the digital texts. As mentioned, the printed texts in these classrooms comprised short stories, theatre plays and excerpts from novels, while digital texts included film trailers, songs and PowerPoint presentations. This observation aligns with Ackerman and Goldsmith (2011) who argue that, 'people appear to perceive the printed-paper medium as best suited for effortful learning, whereas electronic medium is better suited for fast and shallow reading of short texts' (p. 29). This relationship between printed and digital texts can be illustrated in the way S02 used text media. The students spend considerable time in all six video-recorded lessons reading short stories in a printed text medium, with the teacher showing a few slides from a digital presentation to structure the before-reading activity and give them brief information about the short story. It can be useful for teachers to know about this extra cognitive load when they plan reading activities. It is, of course, necessary that students learn to read texts on screen as well as on paper. However, if the goal of the reading activity is not related to learning how to read in different media, it might be beneficial for some students' reading comprehension to have the text on paper (Mangen et al., 2013). However, the classroom practices in the LISE classrooms different from the ones in Mangen et al.'s (2013) effect study: The LISE classrooms engaged in L2 reading activities, the digital text media did not have a printed counterpart and they tended to read the printed and digital text media together, basing their reading comprehension on information from both text media. That way, the student practiced building their reading comprehension from reading both texts on screen and paper, which is an important skill to master in today's society (Brevik, 2019b).

Conversely, in a large meta-study of reading stories in an L2 among children, adolescences and adults, Jeon and Day (2016) showed that web-based stories had higher effect on readers' comprehension than paper books when reading in L2, and that effect was greater on older readers. The classroom practices in this MA study, however, seem to be more in line with Ackerman and Goldsmith's (2011) argument that people tend prefer reading more effortfully on paper when the observation identified that only two of the six classrooms in the study read texts online.

### **5.1.1 Multimedia reading**

Even though S02 is a good example of how the classrooms could work with a single text medium, the analysis in my MA study showed that the English lessons typically combined the printed and the digital text medium in the reading activities. Indeed, in 72% of the lessons, the students combined two different text media, although none used all three text media in the same English lesson. Across the classrooms, the relationship between the printed and the digital text media might be seen to resemble Ackerman and Goldsmith's (2011) description that printed texts are for effort learning whereas digital texts are used as sources for quicker or more superficial information, as e-mails, chats and social media posts. However, because the classrooms in my MA study combined these ways of reading the same text (i.e. music video and lyrics of the same song, or printed story and one or more film adaptations), the students' text representation is constructed through different modes of expression, suggesting that the reading activities can be conserved multimedia (RAND, 2002). When texts with different modes of expression are read in combination, the surface code can be constructed in innumerable ways through combining sound, movement, written words and illustrations, and each combination requires the readers to adjust their reading to elicit and synthesise information from different modes. Therefore, because the reader in such situations must connect the different information sources, Cho (2014) argues that students benefit from strategic actions that facilitate making meaning from the text, for example activating prior knowledge, paraphrasing, making inferences and identifying main ideas in digital texts. In my MA analysis, an example of how different text media were integrated occurred in S13, where the students used reading comprehension strategies to link and create meaning between the digital and the printed texts about the American Revolution. First, the teacher played an animated song (YouTube music video) from which the students had to construct meaning from both visual and audial information (Walsh, 2005). Then, the students read the song lyrics, thus, reinforcing and combining their comprehension of the written words with their audio-visual text representation, in line with RAND's (2002) definition of multimedia texts. Last, the teacher prompted the students to summarise the texts by writing or creating a graphic organiser to represent their comprehension of the texts and the historical event. In this activity, the students were prompted to choose a reading comprehension strategy that enabled them to adjust and display their reading comprehension based on the combination of the printed and digital text.

The example from S13 was a typical example of how the classrooms in the video recordings approached multimedia reading. The teachers would first present a digital medium text (e.g. an image, song or film) to introduce the students to the topic of the English lesson and to prompt the activation of prior knowledge, followed by a longer reading activity with a printed text medium, where other reading comprehension strategies were suggested and/or applied. This general practice indicates that the students in these English classrooms would regularly need to apply some form of meaning making strategies to create a coherent text representation between the digital and the printed text media.

## **5.2 Reading comprehension strategies used in the classroom**

Based on prior research findings that printed text was the most common text media in lower secondary school classrooms (see 4.1), it was not an unexpected finding that most of the reading comprehension strategies used and instructed in the LISE classrooms in my MA study were targeted at the printed text media. However, it was somewhat unextend that many of the reading activities in these English classrooms combined printed and digital media texts, and also that the same reading comprehension strategies were used to understand different types of texts. Cho (2014) who argues that the same reading strategies can be used across printed and electronic texts, but hypertext reading requires own reading strategy. The pattern across the six classrooms in this MA study, therefore, aligns with Cho's (2014) findings. Here, the classroom practices show that they used the same reading comprehension strategies with the printed and digital text media, and they used another strategy (text location) when they read hypertexts.

The identified classroom practices suggest that the teachers instructed and students used reading comprehension strategies that aligned with prior research, arguing that reading comprehension strategies are most efficient when applied flexibly (Duke & Pearson, 2002). Duke et al. (2011) argue, moreover, that students develop their proficiency with reading comprehension strategies through being provided with opportunities to use the same strategies with a diversity of texts because students need to learn to identify comprehension issues in different text and learn how to approach these (Brevik, 2014, 2015). In line with this view, the text selection in the lower secondary school classrooms in my MA study included different

text media and modalities which seemed to provide the students with potentially different comprehension issues.

Returning to S13, where the same reading comprehension strategies were used with printed and digital text media, the students watched and read a combination of the animated music video, the song lyrics, choosing either written summaries or used graphic organisers as reading comprehension strategies to summarise their comprehension of the content in the multimodal text. Here, the reading comprehension strategies were used in a manner that could help the students synthesise information from different sources (e.g. written words, sound, movement) into one text representation. Thereby, the comprehension strategies could help them make the connection between the different modalities in the text they read in the reading activity. S51 was another classroom where the reading activities included different texts from printed and digital media. Importantly, and different from S13, there was no evidence in S51 that the reading comprehension strategies were used to connect the digital and the printed texts. Instead, the reading comprehension strategies in S51 were targeted at one text medium at a time to comprehend and summarise the content of the text in question. Interestingly though, in the analysis of how the reading comprehension strategies were applied across the classrooms, I did not detect any difference in use when the students applied the same reading comprehension to different text media.

More flexible RCSI and use was, however, identified in S07. The reading comprehension strategy used in S07 illustrated how classroom practices that promoted flexible reading comprehension strategy use can manifest itself in the English classroom. First, the students chose different approaches to how they used the strategy prediction when the teacher, Michael, gave the PowerPoint presentation on the Irish revolution (i.e. digital text), including an illustration (i.e. digital text), before the students read the Irish Declaration of Independence (i.e. printed text). Here the students changed their predictions depending on whether the media text consisted on words only or words and illustrations. These examples showed in line with Brevik's (2019a) study that when the students based their predictions on written text only, the predictions were either laden with historical facts based on prior knowledge about historical events, or on guessing. However, when students used prediction with a multimodal text (i.e. the illustration), some of the students' predictions were also laden with visualisation based on the context of the illustration. This situation aligns with Paivio's (1986) dual-coding theory through which he argues that illustrations are processed differently from written

language and can therefore provide different aspects to the comprehension of text. Walsh (2005) elaborated on this theory by arguing that students need to rely more on imagination in order to comprehend the logic of illustrations. The sequence in S07 illustrated how discussing the historical context of the illustration allowed the students to front different views on why the illustration was created and argued from both an Irish and English point of view. These two examples from S07 illustrate how reading comprehension might be applied differently according to the different modalities of a text.

### **5.3 Strategies and hypertext reading**

Another key finding from the video observation in this Ma study is that only two of the classrooms in the sample read hypertexts in the recoded lessons. In combination with hypertext, two reading comprehension strategies were identified: activation of prior knowledge and text location. Prior research on reading comprehension proficiency argue that strategies have transference value to other text types (Duke et al., 2011; Zhang & Duke, 2008); however, it is also argued that the text structure in online text environments present a new spectre of challenges to reading comprehension that needs to be addressed by specific reading comprehension strategies (Cho, 2014; Cho & Afflerbach, 2017; Song & Cho, 2018). Afflerbach and Cho (2010), therefore, emphasise how students need to learn new strategies designed for hypertext reading, but that they also need to learn to adjust the application of the reading comprehension strategies they already know.

Activation of prior knowledge is one of the strategies that have been characterised as effective in line with prior research (Brevik, 2014, 2019a; Cho & Afflerbach, 2017; Grabe, 2009) and from the observation across schools and school years in this MA study, I found that teachers instructed and students used the reading comprehension strategies to solve a broad range of comprehension issues in different text media. For the hypertext, the teacher in S07 activated prior knowledge to help their reading navigation and to find credible source among hyperlinks. Cho (2014) categorises such application of activation of prior knowledge as a part of what he labels ‘information evaluation’ and he argues that this is an imperative step for finding goal related information.

Text location was the second reading comprehension strategy that was used with reading of hypertexts. Contrary to the activation of prior knowledge, it is a reading strategy that has no

counterpart for offline (i.e. printed) reading (Cho, 2014). Findings from prior studies in Norway (e.g. Frønes, 2017) have shown that reading comprehension strategies for online navigation is crucial for students while reading in a hypertext environment. It is, therefore, auspicious to see lower secondary school teachers addressing the topic of reading strategy for online reading in the English classroom. Furthermore, UDIR (2019) argues that necessity of students developing their digital skills in the English L2 classroom: ‘Digital skills are an important part of the subject because information online is often in English’ (UDIR, 2019, my translation). The examples from S07 and S13 illustrate how teachers can model internet navigation in the L2 classroom. Whereas the teacher’s modelling in S07 was more concerned with demonstrating to the students how to find a credible source, the teacher’s modelling in S13 was concerned with how to navigate and use online tools, both examples showed that reading hypertext required a different approach from printed or digital reading, and that readers’ interaction with the hypertext is what determined their reading comprehension. Together, these examples from the six lower secondary school classrooms showed that English teachers not only worked with reading skills in the L2 English classroom, but also that some classrooms students worked with the digital aspect of L2 reading comprehension, while at the same time developing the students’ digital skills.

## **5.4 Learning to learn in English**

Through the systematic observation of the 28 L2 English lessons in lower secondary school across two school years, the findings from my MA thesis support research that claims that students develop facility with reading comprehension strategies through guided practice from the teacher (Brevik, 2019; Duke et al., 2011; McVee, 2018) and through exposure to a diversity of texts (Duke et al., 2011; RAND, 2002). The end goal of all RCSI is to enable students to become independent readers, which means enabling them to monitor their reading comprehension using reading comprehension strategies and to repair the comprehension issues they encounter using adequate reading strategies on a daily basis (Brevik, 2014, 2019a). The process of students being able to integrate reading comprehension strategies to benefit their own learning is not something that can be achieved after a lesson. Researchers argue that teachers have a significant impact on students’ learning processes (Klette, 2013) and students develop their proficiency with reading strategies through teacher scaffolding when



they encounter a text with different structures or more complex vocabulary (Duke et al., 2011).

A key finding from this MA thesis is that 93% of all observed RCSI and use in the lower secondary classroom seemed to be a shared responsibility between the teacher and students in the observed classrooms. The low amount of explicit strategy instruction can be due to the video-recorded English lessons being in grades 9 and 10, and that the teachers deemed it more suitable to provide explicit strategy instruction in grade 8 (Brevik, 2019). The teachers in these English lessons might therefore have decided to prompt or refer to reading comprehension strategies that they knew the students had previously received explicit instruction on, thereby explaining why it would indeed be expected that the teachers engage with strategy prompting rather than explicit strategy instruction in these grades (Brevik, 2019).

These practices of strategy collaboration among teachers and students in the L2 classroom aligns, furthermore, with arguments presented by August et al. (2009) and Brown (2017), who state that explicit RCSI is not necessarily well suited for the L2 classroom, because the students are in the process of developing their L2 competence, and to a greater extent need experience with the use of strategies. Hence, the dominant amount of shared responsibility for reading comprehension strategy use found in these classrooms is considered a suitable approach for students to acquire strategic knowledge in the L2 classroom (Brevik, 2019a; Brown, 2017).

Nonetheless, in line with Duke et al. (2011) and McVee et al.'s (2018) presentation of the gradual release of responsibility model, the findings of this MA study also showed that teachers to a certain extent did engage in explicit instruction of reading strategies, but that such instruction involved modelling rather than mere explanation. The teacher in S51 provided reading comprehension strategy modelling of key notes when realising that some of the students were not using the strategy in class and the teachers in S07 and S13 who provided explicit modelling of text location while showing navigation of hypertext (see also Brevik, 2019a).

A common finding across these L2 English classrooms was that the reading comprehension strategies were targeted at different text media than what they had worked with in previous lessons. The teachers in S50 and S51 adjusted the reading strategy responsibility when they

observed that some students did not use reading strategies during the English lessons (i.e. during the reading of a printed text about the 1960s in S50 and during the PowerPoint presentation in S51), and the teacher assumed the responsibility for this situation. In the following strategy modelling, these teachers both pointed out how and why the students should use activation of prior knowledge, graphic organisers and key notes strategically and tailored the application of the strategies to the printed text (S50) and to the PowerPoint presentation as a digital text medium (S51). Similarly, the teachers in S07 and S13 assumed teacher responsibility of strategy instruction and use from the beginning of the lesson, although there had been evidence of shared responsibility in previous lessons. In both classrooms, both teachers modelled how to read hypertext, and their reading strategy modelling of text location was characterised by the novelty of the hypertext medium. Here, the teachers showed that adjusting the responsibility for the reading comprehension strategies is a necessary step of the learning process, and the students are more likely able to perform internet navigation with text location when they do research or learning from hypertexts.

Of note, the video recordings showed that in later lessons there were evidence of students assuming responsibility for using reading comprehension strategies independently with text location (i.e. in S07 and S13). The connection between the teachers' modelling of the reading comprehension strategy and the students' independent strategy use seems obvious in these recordings due to the close proximity of the modelling and the individual application, suggesting the importance of teacher modelling to enable students to independently and consciously choose reading comprehension strategies for their own learning purposes.

## **5.5 Didactic implications**

Based on the findings from my MA thesis, I would like to suggest some didactic implications English teachers can consider adopting to their teaching practices.

The first implication of my MA thesis is that I recommend English teachers integrate various text media in their English lessons. Different text media have different characteristics, which encourage different approaches to how to engage with text. In turn, providing students experiences with different approaches of how to read and understand a text is valuable for students both in and out of school. Moreover, hypertext media have gradually become important in today's society and provide access to authentic English language situations.

From the video observation I have conducted in my MA study, I have seen how teachers include a variety of text media, such as illustrations, songs and audio books into the reading activities, and how this seem to benefit students' reading comprehension. At the same time, this varied text media selection can also present many potential comprehension issues to the students. It is, therefore, important that student learn to become aware of comprehension problems while reading and address them with reading comprehension strategies. A variety of texts can, moreover, support students' proficiency with reading comprehension strategy as they learn to use them in different contexts (Duke et al., 2011).

Another recommendation is that teachers prioritise a combination of explicit strategy instruction and the prompting of the use of internet-specific reading comprehension strategies. Hypertexts are steadily growing to become our primary information outside of school source outside of school (Brevik, 2019b) and from observation, there is evidence of students (e.g. S13) using the same reading comprehension strategy (text location) the teacher modelled prior in the lesson.

The next implication I suggest is that teachers need to take an active role in the students' learning of reading strategies. Becoming proficient with reading comprehension strategies is a time-consuming and not something students learn from a single lesson. I suggest, therefore, teachers to follow the principle of the *Gradual release of responsibility model* (Gallagher & Pearson, 1983; McVee et al., 2018) and continuously elicit the students' potential for independence and provide explicit instruction when they struggle and more independence when they show proficiency. From the video observation, the findings showed that the responsibility for reading comprehension strategies was commonly shared between the teachers and students across schools and school year, and it appeared to be an efficient way of introducing strategies into the English lessons. And in cases, where the teacher understands that students do not use the strategies efficiently, it is possible for the teacher to have more responsibility and provide more explicit instructions, as shown in some of the classrooms (e.g. S51).

## 6 Conclusion

In this final chapter, I conclude my MA thesis, by referring to the main findings and suggesting some topics of further research the link between reading comprehension strategies and different text media.

This thesis has centred on the overarching research question: *What characterises the relationship between different text media in English in lower secondary school classrooms and the instruction and use of reading comprehension strategies?* In order to answer this question, I have analysed in-depth 28 video-recorded L2 English lessons from six Norwegian lower secondary school classrooms across year 9 and 10, collected by the LISE project. For each recording, I have analysed what text media that were used in these English lessons, while reading comprehension strategies were instructed by the teachers or used by the students. Furthermore, I have identified the links between the texts being read and what strategies used to comprehend these, and also who had the main responsibility for the use of the observed reading comprehension strategies – teachers and/or students.

The first main finding showed that printed texts were the dominant text media in the English lessons in these lower secondary classrooms, followed by digital text media, which were used in all six classrooms and hypertext media, which were used in three lessons only, at two different schools. The manner in which the classrooms used the texts, however, indicated that they frequently engaged in multimedia reading by combining printed and digital text media in the same reading activity (e.g. Mayer & Moreno, 2003).

The second main finding indicated that the classrooms used a variety of reading comprehension strategies with different text media, and that the same strategies were used with different reading strategies. The two classrooms with hypertext showed, in addition, evidence of use of text location: a reading strategy designed for internet reading and navigation (e.g. Cho, 2014).

The third main finding showed that the responsibility for the use of reading comprehension strategies was typically shared between the teacher and the students (McVee et al., 2018). This shared responsibility took the form of strategy collaboration characterised by the teachers initiating or prompting the students to choose reading comprehension strategies, while the students were the ones who used the strategies to understand the texts in question.

## 6.1 Suggestions for further research

In a Norwegian context, there has been conducted little research into reading comprehension strategies and text media in the L2 English classroom and there are many facets of this field that requires more research. My first suggesting is in line with Brevik (2019a) who argues that studies with observational design could benefit from student and teacher perspectives though showing them video segments for stimulated recall interviews (e.g. Greene, 2007). These interviews could provide more information on what teachers think when they select text media in the English lessons and their approaches to RCSI. Similarly, student perspectives can provide information on how they approach different text media with reading comprehension strategies.

Further, only two prior studies have examined reading comprehension strategies in upper secondary school (Brevik, 2015, 2017), and I suggest is to conduct a similar video study in upper secondary school with a larger sample. When students are older and expected to have a higher English reading proficiency, and it would be interesting to analyse how this potentially higher proficiency affects the text media selection in the classroom and whether students using reading comprehension strategies more independently. Video data could provide new insights and nuances into RCSI in upper-secondary school, which could not be captured by *in situ* observations of classroom instruction.

## 6.2 Concluding remarks

Writing this thesis has been a fascinating and educational process. Having observed such a multitude of approaches in action has enriched my perspective of the different ways one can instruct reading strategies, and I have generated many ideas during this research on how I implement strategies in my own teaching. I have also become more aware of the importance of implementing different text media in English teaching and what opportunities and challenges that come with reading in different text media. I hope that this study can bring attention to the importance of employing a varied text media selection in English teaching and that reading strategies are effective tools that, when deployed consciously and efficiently, can improve students' reading comprehension.

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