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## MASTER'S THESIS

Teachers Must Learn To Be Quiet. Extensive Reading in Upper Secondary Education.

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#### Abstract

The topic of this thesis is extensive reading in upper secondary education. Research on reading in Norwegian education reveals that reading lacks status as a teaching method and that many teachers do not make reading in class a priority, often because they do not find the time to do so.

This study is a quantitative study that investigates how much reading an integrated extensive reading programme generates as well as any potential enhancements in vocabulary and reading speed generated by extensive reading. The purpose of this study is to provide empirical information about the potential merits of extensive reading in a Norwegian context.

The study adopts a quasi-experimental design. An integrated extensive reading programme was implemented in an English as a Common Core Subject class in the Specialisation in General Studies programme. The participants in the study sat a placement test prior to and following the programme and the results were compared to a control group that did not undergo such a programme.

The results of the study reveal that an integrated extensive reading programme generates substantially more reading than regular lessons. Additionally, this was not at the expense of reading to learn about a specific topic, often a concern amongst teachers. However, the results are inconclusive when it comes to whether the extensive reading programme has contributed more to vocabulary enhancement than regular lessons. The participants in the extensive reading programme did however have a larger increase in reading speed than the control group. This means that an integrated extensive reading programme is advantageous for improving reading speed.

These results must be considered in the context in which they were obtained, meaning they should not be generalised. The results nevertheless provide insight into the benefits of extensive reading in a Norwegian context, an insight that hitherto has been lacking.


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### 1.0 INTRODUCTION

Reading is a prerequisite for lifelong learning (Norwegian Directorate for Education and Training, "Framework" 8). In Norwegian compulsory and upper secondary education, reading was given increased priority in 2006 by implementing it as one of the five so-called "basic skills" as part of the curricular reform known as the Knowledge Promotion. The skills are "integrated in the competence aims where they contribute to the development of competence in the subject, while also being a part of this competence" (Norwegian Directorate for Education and Training, "Curriculum"). To develop reading, to become a better reader, different ways of reading need to be adapted to purpose and text type (Norwegian Directorate for Education and Training, "Framework" 8). One such way of reading often encouraged in classroom instructions is intensive reading (Faye-Schjøll 35), where instructions are focused on carefully checking comprehension, or studying grammar or vocabulary (Waring, "Intensive Reading"). When reading in a second language, the reader is required to have an adequate knowledge of precisely the second language's grammar and vocabulary to be able to maintain a reading speed that facilitates fluent reading. If not, the meaning will be more difficult to grasp (Faye-Schjøll 38). Consequently, adopting an intensive way of reading seems appropriate (Faye-Schjøll 36; 38). Another way of reading, also necessary to become proficient, is extensive reading, which is quite the opposite: text is read effortlessly, that is at a comfortable level with high level of understanding (Waring, "Glossary"), without the careful scrutiny of the text that distinguishes intensive reading (Palmer 215).

There are a number of international studies conducted over the past decades that confirm that extensive reading generates various linguistic gains, including improved reading rates and vocabulary acquisition, which are so crucial for becoming fluent readers. Despite this, research conducted on reading practices in Norway reveals that teachers do not prioritise reading, often because there is not enough time. Despite this, little research exists that might justify such a choice. As far as the author knows, no research has been conducted on the quantity of reading an integrated extensive reading programme in fact generates, and little research has been conducted on the potential benefits of an integrated extensive reading programme on vocabulary acquisition and reading speed. In all, sufficient information on the merits of an extensive reading programme in a Norwegian context is lacking.

### 1.1. Aim. In an attempt to provide such information, this master's thesis aims to investigate precisely how much reading an integrated extensive reading programme in upper secondary

education will generate as well as to what extent it enhances vocabulary knowledge and reading speed. There are thus three research questions:
(i): how much reading will an integrated extensive reading programme generate (compared to regular lessons with no such programme)?
(ii): will an integrated extensive reading programme enhance receptive vocabulary measured by knowledge about synonyms, antonyms, and foreign words?
(iii): will an integrated extensive reading programme increase reading speed, measured by questions about contents?

To answer these questions, an extensive reading programme integrated as a curricular component, that is within the existing curriculum, is implemented in an English as a Common Core Subject class in the education programme Specialisation in General Studies. Participants take placement tests prior to and following the extensive reading programme and any changes observed are compared to a control group, which is another class with no such programme.
1.2. Outline. First, a theoretical framework will be provided in chapter 2 , where reading and extensive reading research, both international and Norwegian, will be discussed, as well as the steering documents and the principles of an extensive reading programme. Chapter 3 will provide a description of the research method and material. In essence, the study is a qualitative study adopting a quasi-experimental design, where data is collected using statistical survey. Findings and subsequent discussions of findings will be presented in chapter 4, which constitutes the main part of this thesis. This chapter also offers a summary of major findings as well as comments on limitations and generalisation. Finally, concluding remarks are provided in chapter 5.

### 2.0. THEORETICAL FRAMEWORK

This section will discuss extensive reading and extensive reading research, international as well as Norwegian, the steering documents, and the principles of an extensive reading programme.
2.1. Extensive reading. Harold Palmer was the first to use the term extensive reading (ER) in foreign language teaching. He defined ER as the approach to teaching reading where students read a great deal of books quickly, "without giving more than a superficial and passing attention to the lexicological units of which it is composed" (205). Before extensive reading is discussed any further however, a brief introduction to the term reading and what it entails will be presented.

To read quite simply entails decoding letters into words. It nevertheless encompasses a lot more if meaning is to be established from a written text. To comprehend meaning is an interactive process, where the reader employs background knowledge, reading strategies and knowledge of the language (Faye-Schjøll 18). Reading is furthermore carried out for different purposes, and consequently in different ways. Skimming is used for overview; scanning to locate specific information; and careful reading, or intensive reading, where the purpose is to fully understand the text and its information. The latter is often encouraged in classroom instructions (Faye-Schjøll 35). This is also true of reading in the English subject in Norwegian secondary education; it often involves studying course books in detail (Birketveit et al., "Extensive Reading" 3). Another way of reading, however, is to read extensively, which means to read a lot of text fluently, at a comfortable level where the reading is typically enjoyable and rewarding. Fluent reading means that the reader with little effort recognises words and most of the reader's cognitive capacity can therefore be focused on comprehending the text (Huffman 19). Extensive reading is thus the opposite of intensive reading where "each sentence is subjected to careful scrutiny, and the more interesting may be paraphrased, translated or learned by heart" (Palmer 215). Intensive reading is important, but if this is the extent of learners' reading practice, they will never become fluent. Therefore, extensive reading is also necessary (Blair).

Extensive reading draws on implicit learning which is "acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply, and without conscious operations" (Ellis 3). Implicit learning takes place subconsciously, without awareness of what is learned. This results from gradual and multiple exposure to input (Suk 74), what Stephen Krashen referred to as the input-hypothesis
(2). According to Krashen, second languages are acquired by receiving so-called "comprehensible input" (2). Comprehensible input means input, whether oral or written, that is "a bit beyond" (2) the learner's current state of knowledge, or level. This current level Krashen defined as $i$, and the next level as $i+1$ (2). Comprehensible input is precisely what extensive reading provides (Suk 74).

It is however important to note that reading in a second language (L2) requires the pupils to have an adequate knowledge of the L2, that is of its grammar, vocabulary and discourse. The most important constraint that faces L2 readers is vocabulary knowledge (Faye-Schjøll 36). In fact, "a massive receptive vocabulary that is rapidly, accurately, and automatically processed ... may be the greatest single impediment to fluent reading by ESL students" (Grabe qtd. in Hellekjær, "The Acid Test" 62). The speed of reading is furthermore a constraint to L 2 reading, because to maintain a speed that facilitates fluent reading, the reader has to recognise words quickly. If a certain speed is not maintained, the reader will focus on each word individually rather than the overall meaning consequently making the meaning more difficult to grasp (Faye-Schjøll 38). Hence, enhancing vocabulary and reading speed should be emphasised in English as a Foreign Language (EFL) classrooms to facilitate fluent L 2 reading.

There are a number of studies conducted over the past decades continuously confirming that extensive reading generates various linguistic gains, including improved reading rates (i.e. speed of reading) and vocabulary acquisition (Elley and Mangubhai, 1983; Cho and Krashen, 1994; Mason and Krashen, 1997; Bell, 2001; Daskalovska, 2016). One example is Maria Pigada and Norbert Schmitt who in 2006 conducted a case-study which indicates that through extensive reading it is possible to acquire more vocabulary than previous studies had suggested. This is because degrees of vocabulary acquisition also need to be considered, that is partial knowledge of words, since vocabulary learning is incremental in nature. Other forms of word knowledge than only meaning, such as spelling and grammatical functions, are also learned from extensive reading (Pigada and Schmitt 7). Their research established that it is in fact possible to substantially increase vocabulary knowledge through extensive reading (21).

Nonetheless, concerns about how much effect extensive reading has, compared to other methods persist; input is not the only way to acquire language (Blair). The inputhypothesis has clear limitations, it is not specific as to how to define levels of knowledge, nor is it specific as to how much input is a sufficient amount (Gass et al. 132). Moreover, Ron Sheen argues that an explicit focus on grammatical forms is essential in language learning.

Similarly, Batia Laufer argues that an explicit focus on vocabulary is necessary. In sum, an implicit approach to language learning is insufficient, consequently making extensive reading insufficient.

However, a recent study by Namhee Suk strengthens the evidence for the effectiveness of extensive reading compared to intensive reading (IR). This study investigates an ER programme as an integrated curricular component, that is within an existing curriculum, and the impact ER has on various areas of L2 learning; vocabulary, reading rate, and reading comprehension (Suk 77). She finds that both groups (ER and IR groups) had improved their reading rates, but that the participants in the ER group had read more and consequently improved more (82). The most noticeable gain however, Suk finds in vocabulary acquisition (84). She presents two possible reasons for this; consistent exposure to graded readers over time, and consequently multiple exposure to words (84; 85). Also, because the ER programme is integrated within an existing curriculum, Suk's study sheds light on precisely the implementation of ER programmes in an EFL setting.

In 2018, Jiren Liu and Jianyuing Zhang published a meta-analysis to investigate the overall effectiveness of ER programmes on vocabulary learning in EFL. The analysis synthesises the data of 21 empirical studies. The meta-analysis also explores how the effectiveness of ER varies in terms of the instruction length and teaching methods. In sum, the meta-analysis reveals that ER has a significant effect on English vocabulary learning. The most appropriate length of ER instructions is one semester (less than three months). As for teaching methods, or instructional activities, Liu and Zhang find that vocabulary exercises and comprehension questions play significant roles in vocabulary learning (1).

Jeffrey Huffman aims to shed more light on the effects of extensive reading on reading rates. His study compares a one-semester college ER course with a one-semester IR course. He finds that the ER group had a mean reading rate increase of 20.73 standard words per minute, whilst the IR group had a mean increase of . 62 standard words per minute (1). This is a significant difference that Huffman attributes to the fact that the ER-group participants engaged in timed reading activities in class and were also encouraged specifically to increase their reading speed (28). He admits that "it is likely that these timed readings resulted in a stronger reading rate increase than would be seen in an extensive reading course without such activities" (28) but it nevertheless clearly demonstrates the effectiveness of extensive reading compared to intensive reading.

Stuart McLean and Greg Rouault also investigate the effects of extensive reading on reading rates but compared with grammar-translation (focus on forms). Their study
investigates, "which of the two treatments facilitated greater reading rate gain" (McLean and Rouault 95). While both treatments showed reading rates gains, "the ER group participants experienced significantly greater gains" (102). This the authors' assume to be the result of the ER students having read significantly more words (102), similar to the results in Suk's study. Furthermore, because the participants in the two groups spent the same amount of time on tasks, ER is presumably both more effective and more efficient for increasing reader rate than grammar-translation (103). In conclusion, extensive reading seems to be more effective in increasing reading rates than both intensive reading and grammar-translation (focus on form).

The limitations to the input-hypothesis, that is the inability to define levels of knowledge and sufficient amount of input, are in relation to extensive reading addressed and largely rejected by various other findings. Marcella Hu and Paul Nation find that learners must know at least $98 \%$ of the words in a fiction text to be able to read unassisted. This means that there should be no more than one unknown word for every 50 running words in a text (Hu and Nation 423). This in turn provides a guideline in helping pupils find reading material that allows for comprehensible input, that is their $i+1$. To establish what a sufficient amount of necessary input entails is undeniably complex. Richard R. Day and Julian Bamford, in their leading book Extensive Reading in the Second Language Classroom, in fact admit that "there is no particular amount of reading that qualifies for the term extensive" (84). Research has, however, been conducted since, and in their exploration of the core dimensions of ER, Rob Waring and Stuart McLean discuss various suggestions made, some of which are 300000 words; a book a week; or at least 2-3 graded readers a week (164). Despite this, L2 teachers are still not sure about how much pupils should read in order for extensive reading to be effective (Suk 86). The varying recommendations suggest that the amount of reading is not an absolute number of pages, nor hours, but "depends on teacher and student perception of how extensive reading differs from other reading classes" (Susser and Robb). This in turn will vary according to for instance type of programme and level (Susser and Robb). Setting a minimum requirement based on the number of words for different levels might therefore be more appropriate since it determines the amount of effort needed to engage in extensive reading more accurately. The table below (2.1) suggests reading goals for a 15 -week ER programme based on one graded reader per week, with an allocated 30 minutes of reading time in class and a recommended two to three hours out-of-class reading each week (Suk 86).

| Suggestions for Reading Goals, Based on One Graded Reader per Week for a 15-Week Extensive Reading Program |
| :--- |
| Book level (number of headwords) a Approximate number of words in a graded reader |
| Suggested reading goals |
| Elementary $(401-800)$ |
| Intermediate $(801-1,500)$ |
| Upper intermediate $(1,501-2,400)$ |

${ }^{\text {a Book levels (headwords) are based on The Extensive Reading Foundation Graded Readers Scale (Extensive Reading Foundation, } 2009 \text { b). }{ }^{\text {b }} \text { Extensive }}$ Reading Foundation. (2009). The Extensive Reading Foundation Graded Readers Scale. Retrieved from http://www.erfoundation.org/scale/ERF_Scale.pdf.

Table 2.1: Suggestion for Reading Goals (Suk 86)
2.1.1. Extensive reading research in Norway. Although the merits of an extensive reading programme have not been specifically researched in Norway, there are still several studies on extensive reading (Birketveit et al., 2018; Wauthier, 2012; Charboneau, 2016; Birketveit and Rimmereide, 2017). Laila B. Byberg investigates learners' experience with and motivation for reading in lower secondary education. The majority of learners were positive towards ER and viewed reading in English as important (Byberg 5). Line Larsen investigates the effect of ER (through the Early Years Literacy Program) on fluency and complexity in written skills in primary school. The experimental group scored higher than the control group across all measures (Larsen 2). In a recently completed longitudinal study among 11-13 year-old learners, Birketveit et al. also study the effects of ER on writing skills (as of 31 Dec. 2018, results yet to be published: https://app.cristin.no/projects/show.jsf?id=456130). Despite ER clearly being on the current agenda, few studies have been conducted in upper secondary education. As far as the author is aware, no study investigates specifically how much reading ER generates, nor the effects of extensive reading on vocabulary acquisition and reading rates. Elin L. Hauer, in her master's thesis, studies the effect of vocabulary acquisition, but in lower secondary education, although the primary focus of her research is on motivation and reading habits (2). She found that learners' attitudes towards reading had improved, but she could not draw any conclusion regrading vocabulary acquisition: "Unfortunately the gain in vocabulary has been difficult to measure in this study. The negative effect of guessing in modified cloze tests, true/false, and multiple choice tests questions the reliability of these test types" (Hauer 31).

Several studies are however conducted in upper secondary education on reading practices. In his doctoral thesis, Hellekjær ("The Acid Test") finds that Norwegian Englishpupils are often poor readers. This inadequate reading proficiency is "exacerbated by a counterproductive tendency towards careful reading with excessive focus on ascertaining the
meaning of unknown words" (4). This coincides with the results of Linn Hovd Faye-Schjøll, who in her master's thesis finds that reading is usually only conducted in order to cover the various learning objectives in the curriculum (131). Reading beyond this is not made a priority; most teachers do not prioritise reading in addition to the course book. This is often due to lack of time, there is so much to cover in class that there is no time to spare for reading and reading strategies (131). Claudine Wauthier also investigates pupils' reading habits as well as reading interests in her master's thesis. Her results show that it is difficult to motivate pupils to read, and that they therefore seldom do (2). A recent survey conducted by Norstat, a Norwegian market survey enterprise, for NRK, the Norwegian broadcasting corporation, confirms this; one in four between the ages of 15 and 25 does not read books except textbooks and required reading (Skrede).

In the spring of 2018, a survey was conducted as part of a pilot project for this master's thesis, amongst 12 teachers in a Norwegian upper secondary school to discover the attitudes towards and practices of reading (Bogen). This survey, which was based on a questionnaire, revealed similar tendencies as discovered by Hellekjær, Faye-Scjhøll and Wauthier; reading for pleasure is not made a priority. Teachers most often implement reading to learn about a specific topic, to cover the learning objectives, primarily by reading factual texts. Furthermore, $50 \%$ of the teachers agreed when presented with the statement "ER takes too much time" (Bogen 21). Based on this review, research into extensive reading and its potential merits in upper secondary education is necessary.
2.2. Steering documents. In 2006, as a part of the Knowledge Promotion (KP06), the Norwegian Ministry of Education and Research introduced the five basic skills. Hellekjær had argued that inadequate reading skills exacerbated by inadequate reading practices indicated an urgent need for changes in the syllabi as well as the teaching of EFL ("The Acid Test" 4). Several PISA-tests (Programme for International Student Assessment) also revealed that Norwegian pupils' reading proficiency was inadequate (Hellekjær, "Lesing"). Consequently, reading became one of the five integrated basic skills in the KP06. Reading as a basic skill in English is defined as follows:

Being able to read in English means the ability to create meaning by reading different types of text. It means reading English language texts to understand, reflect on and acquire insight and knowledge across cultural borders and within specific fields of study. This further involves preparing and working with reading English texts for
different reasons and of varying lengths and complexities. The development of reading proficiency in English implies using reading strategies that are suited to the objective by reading texts that are advancingly more demanding. Furthermore, it involves reading English texts fluently and to understand, explore, discuss, learn from and to reflect upon different types of information (Norwegian Directorate for Education and Training, "Curriculum").

Despite the implementation of reading as a basic skill as a means to better the situation, Hellekjær ("Lesing") argues that teachers are still not conscious of the consequences reading as a basic skill has for teaching EFL and that reading lacks status as an appropriate teaching method in EFL classrooms. Based on the review of extensive reading research and research on reading practices in Norway, Hellekjær is correct in his assumption; reading is not made a priority. To change the teaching of EFL to be able to fulfil the goals determined by the basic skill (as outlined above), Hellekjær advocates "putting strong emphasis on extensive reading, i.e. to develop vocabulary through incidental acquisition as well as reading fluency ... ." ("The Acid Test" 255). This has four direct consequences for English teaching; first, reading strategies must be taught; second, the course textbook is not enough to develop the basic skill; third, reading is an indispensable source for vocabulary enhancement and consequently reading a great deal is important; and fourth, the pupils should read books they enjoy and are interested in (Hellekjær, "Lesing").

While this dissertation is written, the Ministry of Education and Research is working on the renewal of all curricula from primary through upper secondary education, and it is set to be implemented in 2020 (Somerseth). While rather comprehensive renewals are proposed, the basic skills are maintained, which means that reading is still paid particular attention. For English as a Common Core Subject the renewal will entail, amongst other things, a renewal of the main focus areas; they will be delimited to three so-called core elements, "communication", "language learning", and "encountering English language texts" (Regjeringen 23, my trans.). The latter area states that texts will provide the foundation on which pupils understand and reflect upon the English-speaking world around them. The pupils will develop their competence through interpreting, reflecting upon and critically assessing different types of text (23, my trans.). This renewal will assumedly change the English subject, emphasising precisely texts to a much larger extent than what the existing curriculum does. In combination with reading as a basic skill, the renewal will consequently require even more of teachers in terms of knowledge about reading methods, including that of extensive
reading. Furthermore, extensive reading research on the acquisition of vocabulary (cf. Cho and Krashen 1994; Mason and Krashen, 1997; Pigada and Schmitt, 2006; Suk, 2017; Liu and Zhang, 2018) demonstrates the potential benefits for the focus area "language learning" as well. Language learning entails developing "knowledge about English as a system" which includes amongst others vocabulary knowledge. This will in combination with "strategies for language learning ... provide the pupils with choices and opportunities when they communicate and interact in English" (Regjeringen 23, my trans.)

Robert Waring ("The Inescapable Case") argues the need for ER in all language programmes, and that ER is in fact a completely indispensable part of any language programme. He argues that course books, by their design, cannot provide the necessary amount of vocabulary needed for language acquisition to occur. He does however address the concerns raised by explicit learning advocates, when he distinguishes between learning to use the language and learning about the language. The former necessitates an implicit approach, while the latter necessitates an explicit approach where students learn how language items work; their form and function. He strongly advocates ER in tandem with a taught course, where massive amounts of text provide the opportunity for learners to consolidate the language that was learnt in the "studying about" phases ("The Inescapable Case"). Considering both the existing English curriculum and the impending renewal, there is ample cause to implement such a programme. However, like previously discussed, teachers do not make this a priority.

Based on existing research on the effects of ER, and a review of the steering documents, there is overall strong evidence to support the implementation of an ER programme as an integrated part of the English course. Despite this, teachers do not choose to do so, as research on extensive reading and reading practices in Norwegian upper secondary education throughout the last decade has revealed. Reading lacks status as a teaching method, there is insufficient knowledge about the possible effects of ER, as well as a common conception there is not enough time to read. These concerns are however difficult to address, considering the lack of research on extensive reading and its potential merits in Norwegian upper secondary education. Research into the merits of extensive reading is therefore warranted.
2.3. Principles of extensive reading programmes. When extensive reading is adopted as an approach to language teaching, students read "a lot of easy material in the new language" (Bamford and Day, qtd. in Suk 74). This definition, first and foremost means that readers
should read large amounts of texts. In order for the reader to be able to read large amounts, the reading material needs to be within their reading-proficiency level, that is not too difficult. Richard Day and Julian Bamford further elaborate on this definition by providing ten principles for teaching extensive reading. The principles are based on the intensive reading approach proposed by Ray Williams in his publication "Top ten principles for teaching reading." (Williams). Day and Bamford extend the discussion to extensive reading; they argue that "these ten principles are ... the basic ingredients of extensive reading" ("Principles" 136).

First, the reading material must be accessible; it must be within the reading competence of the pupils in the foreign language (Day and Bamford, "Principles" 136;137). Like previously discussed, it is important the learners read within their $i+1$. Graded readers are therefore often preferred, because they allow pupils to read texts that are age-appropriate and reflect their language ability (137). Second, "the success of an extensive reading program depends largely on enticing the students to read" (137). Therefore, a variety of texts needs to be available to them; books, magazines, fiction, non-fiction etc. Williams (42) gives the advice that teachers should aim to discover what their pupils are interested in reading. Teachers should "ask them what they like reading in their own language, peer over their shoulders in the library, ask the school librarian ...". Third, the learners choose themselves what to read; learners can select texts they expect to understand and enjoy. They are furthermore free to stop reading anything they find to be too difficult, or uninteresting. Fourth, the learners read as much as possible. This is the "extensive" in extensive reading, and the most critical element (Day and Bamford, "Principles" 137; 138). As previously discussed, there is no absolute number to determine this because it depends on context (cf. Susser and Robb), but when learning to read, the amount of time spent reading is naturally crucial to learning (Day and Bamford, "Principles" 138). Fifth, the purpose of reading is usually related to pleasure, information and general understanding. This distinguishes extensive reading from both the usual classroom practice and academic reading. The focus shifts from comprehension or knowledge to personal experience. Therefore, the learner's goal, whether it is passing of time, obtaining information or simply enjoying the story, is sufficient to fulfil the purpose of reading. Sixth, reading is its own reward. It is its own experience and is therefore seldom followed by comprehension questions from the teacher. Teachers may instead ask the pupils to complete various follow-up activities in order to, for instance, track how much the pupils read, or monitor the pupils' attitudes towards reading. Nevertheless, the learner's experience of reading is at the centre. Seventh, reading speed should be faster rather than slower. The incentive of extensive reading is reading fluency. Therefore, pupils are discouraged from
using dictionaries when they come across words they do not understand. Extensive reading is opting for the general meaning, keep reading, and practise such strategies as guessing meaning from context. Eight, reading is individual and silent. It therefore contrasts with the way texts are traditionally used in classrooms. It allows pupils to discover that reading is a personal interaction with the text, an experience they are responsible for themselves. Extensive reading also allows them to read at their own pace (138). It can be organised in different ways, for instance inside a classroom where a lesson is set aside for silent reading, and where teachers can experience "the most beautiful silence on earth, that of students engrossed in their reading" (Henry, qtd. in Day and Bamford, "Principles" 139). Ninth, teachers guide their pupils. As an approach to reading, extensive reading is very different from usual classroom practice. Therefore, pupils need introduction to extensive reading, and teachers must walk the pupils through the methodology; explaining their choice and also that there will be no test after reading - their own experience is what matters. The pupils also need to be introduced to the library; the different reading materials available and their difficulty levels. Finally, the teacher is a role model of a reader (Day and Bamford, "Principles" 139). The teacher teaches by examples, reflecting the attitudes and behaviours of a reader. Teachers "sell reading" (Henry, qtd. in Day and Bamford, "Principles" 139). Teachers should also commit to reading what the pupils read, so that they can share reading. In that way, teachers can tailor-make recommendations to individual pupils, and the EFL reading classroom can be a place where pupils and teachers experience and share the value and pleasure of reading (Day and Bamford, "Principles" 139).

### 3.0. METHOD AND MATERIAL

This study is a quantitative study; it has a rather large sample ( $\mathrm{n}=42$ ) and is based on a hypothesis from which the research questions are derived, the research questions are thus arrived at deductively (McKay 8). The object of the study is to summarise data in numerical indices, data that is collected using statistical survey and hence presented using statistical analysis (7). Furthermore, the study aims to investigate cause and effect, whether an extensive reading programme will have a positive effect on vocabulary enhancement and reading speed. Therefore, the study adopts a quasi-experimental design. In brief, the quasi-experimental design has three central elements: 1) it compares changes observed in an experimental group exposed to an experiment with the changes observed in a control group that has not been exposed to the same experiment; 2) data is collected in a time series, meaning that the state of both groups is investigated prior to the experiment and after the experiment, preferably in an identical manner; and 3) there is a deliberate manipulation of whatever aspects are deemed the potential cause. These aspects are only manipulated in the experimental group, not in the control group (Jacobsen 111; 112). The experiment in this study is an integrated ER programme with a duration of 10 school weeks, meaning that the aspect deemed as the potential cause is extensive reading.

A limitation to the quasi-experimental design is that informants are not randomly selected. This is because it is in practice impossible to do so (Jacobsen 115). In this study, the informants in the two groups are pupils in already established classes that can not be changed. Non-randomised groups are problematic because the two groups might as a consequence not be directly comparable. Measures can however be taken to mitigate this, by comparing groups that are similar based on certain relevant criteria (116). In this study, the informants in both the experimental group and the control group are pupils in two out of five classes in total in the Specialisation in General Studies programme. The minimum admission requirement to the programme was 4,29 (on a scale from 1-6, 6 being the highest), and so all pupils in both groups have a good level of proficiency. Those accepted to this programme are in turn randomly assigned to the five different classes.

Two types of primary data will be collected using survey research. First, the effect of the ER programme will be measured using placement tests in a time series, that is, a pre-test prior to the ER programme, and a post-test after the ER programme is concluded. The mapping tool Kartleggeren (Kartleggeren) will be used for this purpose. Kartleggeren is used to map all the pupils in the school in several subjects including English in the beginning of the school year, and therefore the software and its user interface is familiar to the pupils. Second,
to measure the amount of reading the ER programme generates compared to regular lessons with no ER programme, the informants in the experimental group submit Reading Record Forms where they register how much they read every week in hours (time) and pages (amount) and the teachers in both groups compile reading lists of the texts the classes have read during the duration of the ER programme.

In order to determine causality, three criteria need to be fulfilled: a correlation between cause and effect must be established; cause needs to come before effect; and the results need to be controlled against other relevant aspects, or variables (Jacobsen 114). In this study, if the experimental group gains more than the control group on any of the various tests, the first criterion would be fulfilled. If randomised samples ensure similar, comparable, groups and the experimental group gains more than the control group on any of the tests, it is fair to presume the ER programme was the cause of this, i.e. the second criterion would be fulfilled. The third criterion is fulfilled as long as the relevant aspects are controlled for, for each task (cf. Jacobsen 114). Therefore, the different results will be controlled for several variables.
3.1. Informants. The informants for this study are pupils in upper secondary education, more specifically, pupils in their first-year (VG1) in the Specialisation in General Studies programme. The pupils have thus studied English for 10 years. The extensive reading programme was executed as part of the curriculum and was therefore mandatory for all the pupils. 22 pupils agreed to participate in the research project $(\mathrm{n}=22)$. A second class in the General Studies programme, randomly chosen, was asked to function as the control group. 20 pupils agreed to participate in the research project $(\mathrm{n}=20)$. Thus, the total amount of informants is $42(\mathrm{n}=42)$.
3.2. Kartleggeren. Kartleggeren is created by Fagbokforlaget, one of the major publishers of textbooks in Norway, and is "a market leading, web-based mapping tool" (Kartleggeren, "Om", my trans.). In English, it measures reading proficiency, spelling, and vocabulary. These areas are measured based on different tasks, for instance tasks that include wordpictures; scanning; dictations; and antonyms. To complete the endeavour that the pupils are asked to perform by Kartleggeren it is necessary to complete all the tasks. The research focus of this thesis, however, is on a reduced, more limited number of tasks.

To measure vocabulary, the survey includes the tasks that measure knowledge about synonyms, antonyms and foreign words. To know a word according to Nation (in Gass et al. 196) entails knowledge of form, meaning and usage. Form includes knowledge about spoken
and written properties; meaning includes knowing the meaning of various forms, what concepts are included as well as associations; usage includes grammatical functions, collocations and constraints on use. There is, however, a distinction made between receptive and productive knowledge, where the aforementioned aspects are a part of a learner's receptive knowledge. Productive knowledge, on the other hand, entails knowing how to pronounce or spell a word, knowing the precise meaning in various contexts, and knowing the precise context of use (Gass et al. 197). According to Gass et al. (197), learners generally have a larger receptive than productive vocabulary.

The tasks in Kartleggeren primarily measure receptive word knowledge. The task on synonyms provides the pupil with two lists, comprised of 10 words each. The pupil is to connect the words with similar meanings. The task on antonyms provides the pupil with words where he or she then writes the word with the opposite meaning. Spelling errors are permitted since the purpose of the task is to measure vocabulary, not orthography. That is, productive knowledge is not taken into consideration here. In the task on foreign words, the pupil is provided with a list of words, and a text where several words are omitted and replaced with empty boxes. The pupil is to insert words in the appropriate boxes and correct choices are inserted in the text, whilst incorrect choices are not. The latter task is perhaps closest to testing productive knowledge, considering it tests the pupil's ability to use a word in a sentence, i.e. in context. However, the test does not measure whether the pupil would know the precise context of use for each of the words, if presented separately out of context.

To measure reading speed, the survey includes the tasks called "reading comprehension 1 " and "reading comprehension 2 ". The two tasks on reading comprehension are fairly similar. In both the tasks, the pupil is to read a text focusing on its content, but only one line of text is clearly showing at a time. Following each text is a multiple-choice exercise on the contents of the text. In the first task, the pupil decides for how long each line of text is visible, whilst in the second task, this is determined by the programme (Kartleggeren, "Testene").

The pre- and post-tests are identical. As discussed, a quasi-experimental design relies on data collected in a time series in precisely an identical manner (Jacobsen 111). When the tests are identical it strengthens the validity of the research because consequently it is certain the same aspects are tested and measured. However, identical tests could weaken or at least affect the results because the informants might remember the tasks when sitting the post-test. For instance, the texts the pupils are asked to read to measure reading proficiency will be familiar to them and they might read them more fluently than during their first encounter.

This is unavoidable but it will not affect the results, as both the experimental group and the control group will have been given the same tests.
3.3. The project. The ER programme is based on the principles of Day and Bamford. This, for instance, means that no assessments are based on the programme, the pupils choose what they want to read themselves and are allowed to change books if they do not enjoy what they read, or find it too difficult.

First, the pupils were asked to suggest two books for their fellow classmates in the class notebook in Microsoft OneNote. Those who had never read a book, or had never read an English book, were told they could suggest a TV-series or a film they liked that was based on a book, or the English original or possibly an English translation of any book they had read in Norwegian. Following this, the pupils were introduced to the library's online database by their teacher and given some time to search for books available via the library. They were also informed of the time scheduled to visit the library to borrow books, this took place the following week, and that preferably they should have decided on a book by that time. The visit to the library was scheduled with the librarian so that he was available to help guide the pupils find or possibly order the titles they were looking for. The pupils were then informed of the final deadline for having procured a book, by whichever channel they saw fit, and the class was allowed to agree on which lesson of 45 minutes during the week they wanted to allocate for weekly silent, individual reading sessions. The informants in the research project were instructed to read 1 hour each week at home as well.

Before the project commenced, the informants received Reading Record Forms (RRF) (Appendix 1) and Vocabulary Journal Forms (Appendix 2) via an e-mail that also contained instructions on how to fill them in. The informants were required to keep these forms throughout the entire project and submit following date of completion. According to results from Liu and Zhang's meta-analysis, teachers should include vocabulary exercises in order to promote vocabulary learning during ER programmes (12). The Vocabulary Journals thus formed the basis for fortnightly Vocabulary Discussion Groups (VDG) in class. Here, the pupils were divided into groups of three where each pupil presented the words they had noted in their journals during the past weeks to the members of their group. Each group was also to decide on a favourite word, or words. These words were in turn written down on A3 printouts of trees, illustrating how as the tree grows, so will (hopefully) the pupils' vocabulary.

### 4.0. FINDINGS AND DISCUSSION

This section will provide a presentation of the research findings and a discussion of these in light of the three Research Questions (RQ):
(i): how much reading will an integrated extensive reading programme generate (compared to regular lessons with no such programme)?
(ii): will an integrated extensive reading programme enhance receptive vocabulary measured by knowledge about synonyms, antonyms, and foreign words?
(iii): will an integrated extensive reading programme increase reading speed, measured by questions about contents?

All results from Kartleggeren is measured in percentages where 100 \% denotes the national average and is referred to as the norm (Kartleggeren). All numbers from Kartleggeren thus denote a percentage. The norm is based on previous, similar tests in similar groups and was updated this school year (2018/2019). 240000 tests form the norm basis (Kartleggeren). Based on this norm, Kartleggeren also provides a maximum score for each of the tasks (Appendix 3). Kartleggeren provides results for each individual participant as well as aggregated results for the entire group.

The section is structured so that it addresses the research questions in turn, first with a presentation of the findings followed by a discussion of these. This is followed by a summary of all findings. Finally, comments on limitations and generalisation are provided.
4.1. Findings $R Q(i)$. To be able to determine the amount of reading in the experimental group, the informants submitted RRFs where they registered the amount of reading conducted throughout each week. The RRFs were submitted by all experimental group informants ( $\mathrm{n}=$ 22) by the end of the ER programme. These forms include the 45-minute-lesson allocated for reading at school every week as well as any reading conducted at home during the duration of the ER programme. It is worthwhile noting that a 45 -minute-lesson does not provide 45 actual minutes of reading as time is lost to the everyday routines of any lesson, such as registering attendances, and settling down for the task at hand. Approximately 40 actual minutes of reading each week at school is therefore a more accurate number, meaning that the prescribed amount of reading each week amounts to 100 minutes. It is also necessary to note that amidst the weeks of the ER programme was the Easter holiday. The informants were encouraged but not required to read during the holiday, and 14 chose to do so, leaving 8 to have read only
during school weeks. To be able to say something about the amount of reading conducted by each informant in relation to the others, grounds for comparison need to be similar. As a consequence, when presenting and comparing the amount of reading conducted, an 11-week duration of the ER programme will be the premise.

The informants have read 318 hours in total, that is an average of 14 hours per informant with a range of 19 , ranging from 7 to 26, and a standard deviation of 5 (graph 4.1). Mean reading time per week per informant is presented in minutes to more precisely render the numbers. Mean reading time per week per informant averages at 79 minutes with a range of 103 , ranging from 39 to 142 minutes a week, and a standard deviation of 25 . The average mean reading time is thus somewhat less than the prescribed amount of 100 minutes per week (graph 4.2). Individual results reveal that $23 \%(\mathrm{n}=5)$ reached or exceeded the reading goal, 18 \% (n $=4$ ) were within $80 \%$ of the reading goal, the majority; 41 \% (n $=9$ ), were within $60 \%$ of the reading goal, $9 \%(\mathrm{n}=2)$ were within $50 \%$ of the reading goal and $9 \%(n=2)$ read less than 50 \% of the reading goal (table 4.1).


Graph 4.1: Total amount of reading in hours per informant


Graph 4.2: Mean reading time per week per informant on the basis of prescribed 100 minutes

| Reading goal | Number of informants | Percentage of sample |
| :--- | :--- | :--- |
| $>100 \%$ | $\mathrm{n}=5$ | $23 \%$ |
| $>80 \%$ | $\mathrm{n}=4$ | $18 \%$ |
| $>60 \%$ | $\mathrm{n}=9$ | $41 \%$ |
| $>50 \%$ | $\mathrm{n}=2$ | $9 \%$ |
| $<50 \%$ | $\mathrm{n}=2$ | $9 \%$ |

Table 4.1: Individual reading goals

The informants have also registered the number of pages they have read, so that it would be possible to determine individual wordcount, considering this is a more precise measurement. Determining the wordcount of books is however difficult as publishers seldom provide this information and consequently confirmed wordcounts are hard to acquire. The number of words the informants have read have therefore been calculated using the website Reading Length, a "participant in the Amazon Services LLC Associates Program" (Reading Length). The website states that "word count estimates are not guaranteed to be accurate", but it does provide information on the method of reaching the wordcount estimate for each book (Reading Length), and states explicitly the reliability of that method. However, to consider the margin of error, wordcounts of three titles are tested against two other websites: Renaissance Learning's Accelerated Reader Bookfinder ${ }^{\text {TM }}$ (www.arbookfind.com) and Word Counters (www.wordcounters.com). No consistent discrepancy between the estimates was discovered (Appendix 4). Some titles had a lower wordcount whilst other titles had a higher wordcount on the different websites. The wordcounts presented in this master's thesis are therefore not exact calculations, but estimates. They nonetheless render a reasonably accurate picture of the amount of reading this ER programme has generated.

To determine the amount of words each informant has read, the total number of words as denoted by Reading Length will be divided by the total number of pages and then multiplied with the number of pages the informant has read (total number of words / total number of pages * pages read). The number of pages as denoted by Reading Length will be considered the correct number of pages for each title. If the number of pages the informant has registered for a single title surpasses the number denoted by Reading Length, the
informant will be considered to have completed the novel(s). Several informants have read more than one title but not all of these have clearly denoted the number of pages for each title, making it difficult to ascertain whether all titles are completed. To account for this, the total number of pages per title (as denoted by Reading Length) will be subtracted from the total amount of pages the informant has read, starting with the first title that is listed.

In total, the informants have read 2479325 words, an average of 112697 words, albeit with a range of 235 564; the minimum wordcount is 39436 and the maximum wordcount is 275 128. The standard deviation is 61 451. In order to contextualise, J.K. Rowling's Harry Potter and the Philosopher's Stone has 75980 words, Jane Austen's Pride and Prejudice has 98600 words, F. Scott Fitzgerald's The Great Gatsby has 49155 words, and Fyodor Dostoevsky's Crime and Punishment has 203145 words (Reading Length). Individual wordcounts are presented in graph 4.3.


Graph 4.3: Individual wordcount ER programme

To be able to compare the amount of reading in the experimental group with the control group, reading lists from both groups' classes were collected. All teachers in Norwegian upper secondary education are at liberty to choose what texts to read as long as it is in compliance with the course curriculum, consequently course textbooks are not required. The school in which this research project was conducted, however, uses textbooks as a common practice, and all classes in the Specialisation in General Studies programme use the textbook Targets published by Aschehoug. This means that the majority of the texts the classes read throughout the year are similar. The two classes' teachers have compiled reading lists of the various texts the experimental group and control group classes have read during
the duration of the ER programme. For the experimental group class, this comes in addition to reading conducted as part of the ER programme.

The experimental group has read 11 pieces of literature, of which 9 were factual and two were pieces of fiction, more specifically short stories. The control group has read 19 pieces of literature, of which 8 were factual and 11 were various pieces of fiction; 4 short stories; 3 poems and 2 lyrics; 1 personal text; and 1 novel excerpt (Appendix 5). In all, the control group has read more texts than the experimental group as part of the regular lessons, albeit of varying genres and lengths.

| Reading | Experimental group | Control group |
| :--- | :--- | :--- |
| Factual texts | 9 | 8 |
| Fiction | 2 | 11 |
| Total | $\mathbf{1 1}$ | $\mathbf{1 9}$ |

Table 4.2: Amount of reading experimental group and control group reading lists
4.1.1. Discussion $R Q(i)$. Based on the findings, the experimental group has in total read more than the control group during the duration of the ER programme. The ER programme has thus generated more reading than regular lessons with no integrated ER programme. It is however important to note that this is during the duration of the programme, and that the findings do not indicate whether such a programme leads to an increased amount of reading throughout the entire school year Furthermore, the reading generated by the ER programme is naturally extensive. Whether this has been at the expense of teaching other ways of reading, the results do not reveal. The information provided by the reading lists in both groups are limited to the quantity of reading in class, it does not address the ways of reading, whether the texts are for instance read extensively or intensively, nor what teaching methods that have been adopted.

The reading lists also reveal that the control group has read more texts assigned by the teacher than the experimental group, and that the majority of these are pieces of fiction, 11 fictional texts in the control group compared to 2 in the experimental group. As teachers are free to choose what texts to read as long as it is in compliance with the curriculum, how many poems are read compared to the number of short stories or lyrics is often a matter of personal preference. This is because the curriculum only states that the pupils are to "discuss and
elaborate on different types of ... literary texts" (Norwegian Directorate for Education and Training, "Curriculum") and this is in turn a matter of interpretation from the individual teacher. The results however make it clear that the experimental group has read fewer "different types" of texts during the duration of the ER programme than the control group. The two groups have however in all respects read the same amount of factual texts, 8 and 9 in the control group and experimental group respectively, that is texts designed to learn about a specific topic in order to cover the learning objectives. Both Faye-Schjøll and Bogen found that teachers in fact most often use reading for this purpose and that they find reading to take up too much time, because "there is so much to cover during [first grade]" (Faye-Schjøll 130). These results however indicate that the ER programme has not been at the expense of reading to learn about specific topics.

The discussion above makes it clear that many teachers believe they do not have time to read but that this is not necessarily the case. Considering the limited amount of information available about how much reading ER generates and its potential benefits, one can see how such a conception prevails. The intention of RQ(i) is therefore to provide such information empirically. It is however of crucial importance to note that the intention is not to conclude whether the amount of reading conducted in the experimental group during duration of the programme is sufficient. As Susser and Robb point out, this depends on both the teacher's and the pupils' perceptions of extensive reading and thus varies according to level as well as programme. The theoretical framework did however provide suggestions (Suk 86), and reviewing the amount of reading conducted in the ER programme in the light of these suggestions is pertinent. The suggestions should however be considered with care, because they are categorised by book level based on the Extensive Reading Foundation Graded Readers Scale (Suk 86). The informants in the experimental group are described as having a good level of proficiency. Therefore, not one of the informants have read graded readers. All informants have read full-length novels albeit varying in length and difficulty, for instance $A$ Game of Thrones by George R.R. Martin, Harry Potter and the Chamber of Secrets by J.K. Rowling, and Me Before You by Jojo Moyes. Therefore, the suggestions made for the advanced book level are most relevant. Nevertheless, a graded reader on an advanced level is still graded and presumably the reader will read more words than the reader of a full-length novel.

The suggested reading goal is based on a 15-week-duration programme with a weekly reading goal of 150 - 210 minutes per week and $300000-525000$ words in total. An 11-week-duration programme with a 100 minutes per week reading goal suggests a total reading
goal of 192500 words, granted that the higher reading goal tallies with the higher number of minutes per week. The results however revealed that only $23 \%$ of the informants had reached or exceeded the reading goal of 100 minutes per week. The majority of informants ( $41 \%$ ) were within $60 \%$ of the reading goal, that is 60 minutes per week. That would be a 115500 words reading goal in total, and the average amount of words read during the ER programme in this study was 112 697. The fact that the majority of informants read 60 minutes per week is furthermore relevant because the amount of reading generated by the ER programme is thus for the majority of pupils generated primarily by reading in class. Teachers who might be discouraged from implementing ER programmes by rather large out-of-class reading goals (homework) will hopefully find this encouraging. The table below provides information on the individual minutes read per week and the total wordcount per informant.

| Minutes per week | Total word count |
| :---: | :---: |
| 39 | 96629 |
| 40 | 63795 |
| 55 | 79455 |
| 55 | 121283 |
| 60 | 48172 |
| 61 | 98963 |
| 64 | 120667 |
| 65 | 99295 |
| 68 | 49366 |
| 68 | 116139 |
| 70 | 90981 |
| 76 | 39436 |
| 76 | 81628 |
| 91 | 130165 |
| 92 | 60783 |
| 93 | 60804 |


| 94 | 180132 |
| ---: | ---: |
| 104 | 130584 |
| 104 | 108750 |
| 107 | 176610 |
| 111 | 275128 |
| 142 | 250560 |

Table 4.3: Time per week and total amount of words

### 4.2. Findings $R Q(i i)$. To answer RQ(ii), the results from the tasks that measure knowledge

 about synonyms, antonyms and foreign words are significant. The maximum possible scores for these tasks are 135 for synonyms, 136 for antonyms and 139 for foreign words.The aggregated results for the experimental group in the pre-test were 127 for synonyms, 122 for antonyms and 131 for foreign words, an average of 127 . In the post-test, the aggregated results for the experimental group were 129 for synonyms, 120 for antonyms and 131 for foreign words, an average of 127. Based on these aggregated results, vocabulary enhancement in the experimental group is insubstantial.

| Task | Pre-test | Post-test | Gains |
| :--- | :--- | :--- | :--- |
| Synonyms | 127 | 129 | 2 |
| Antonyms | 122 | 120 | -2 |
| Foreign words | 131 | 131 | 0 |
| Average | $\mathbf{1 2 7}$ | $\mathbf{1 2 7}$ | $\mathbf{0}$ |

Table 4.4: Experimental group aggregated results vocabulary enhancement

To create a more nuanced picture however, it is necessary to also consider the individual results ( $\mathrm{n}=22$ ). These results are presented in the tables below; table 4.5 presents the results from the synonym task, table 4.6 the results from the antonym task and table 4.7 the results from the foreign words task. All tables are arranged in ascending order based on the pre-test results. The results reveal that in the pre-test, 14 informants scored the maximum
score of 135 on the synonym task, i.e. 64 \%; 4 informants scored the maximum score of 136 on the antonym task, i.e. $18 \%$; and 17 informants scored the maximum score of 139 on the foreign words task, i.e. $77 \%$. Any potential vocabulary enhancement for these informants will consequently not be registered in this survey.

| Pre-test |  | Post-test |
| ---: | ---: | ---: |
| 77 | 108 | Gains |
| 88 | 90 | 31 |
| 117 | 128 | 2 |
| 117 | 123 | 11 |
| 123 | 128 | 6 |
| 128 | 123 | 5 |
| 128 | 135 | -5 |
| 128 | 128 | 7 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 123 | 0 |
| 135 | 135 | -12 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 123 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
|  |  | 0 |

Table 4.5: Experimental group individual results synonym task

| Pre-test | Post-test | Gains |  |
| ---: | ---: | ---: | ---: |
| 81 | 68 | -13 |  |
| 109 | 109 | 0 |  |
| 109 | 122 | 13 |  |
| 109 | 122 | 13 |  |
| 109 | 95 | -14 |  |
| 109 | 122 | 13 |  |
| 109 | 122 | 13 |  |
| 122 | 136 | 14 |  |
| 122 | 122 | 0 |  |
| 122 | 122 | 0 |  |
| 122 | 122 | 0 |  |
| 122 | 109 | -13 |  |
| 122 | 122 | 0 |  |
| 136 | 109 | -13 |  |
| 136 | 136 | 0 |  |
| 136 | 122 | -14 |  |
| 136 | 136 | 0 |  |
| 136 | 136 | 0 | 0 |
| 136 | 122 | -14 |  |
| 136 | 136 | 0 |  |
|  | 136 | 0 |  |

Table 4.6: Experimental group individual results antonym task

| Pre-test | Post-test | Gains |
| ---: | ---: | :--- |
| 50 | 77 | 27 |
| 82 | 116 | 34 |
| 127 | 139 | 12 |
| 127 | 139 | 12 |
| 127 | 139 | 12 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |


| 139 | 139 | 0 |
| ---: | ---: | ---: |
| 139 | 139 | 0 |
| 139 | 59 | -80 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | -12 |
| 139 | 127 | 0 |

Table 4.7: Experimental group individual results foreign words task

The aggregated results for the control group in the pre-test were 113 for synonyms, 118 for antonyms and 118 for foreign words, an average of 116. In the post-test, the aggregated results for the control group were 122 for synonyms, 121 for antonyms and 130 for foreign words, an average of 124. Based on these aggregated results, the control group has enhanced their vocabulary.

| Task | Pre-test | Post-test | Gains |
| :--- | :--- | :--- | :--- |
| Synonyms | 113 | 122 | 9 |
| Antonyms | 118 | 121 | 3 |
| Foreign words | 118 | 130 | 12 |
| Average | $\mathbf{1 1 6}$ | $\mathbf{1 2 4}$ | $\mathbf{8}$ |

Table 4.8: Control group aggregated results vocabulary enhancement

It is necessary to consider the individual results for the control group as well ( $\mathrm{n}=20$ ). These results will also be presented in tables below; table 4.9 presents the results from the synonym task, table 4.10 the results from the antonym task and table 4.11 the results from the foreign word tasks. All tables are arranged in ascending order based on the pre-test results. These results reveal that in the pre-test, 5 informants scored the maximum score of 135 on the synonym task, i.e. 25 \%; 6 informants scored the maximum score of 136 on the antonym task, i.e. $30 \%$; and 12 informants scored the maximum score of 139 on the foreign words task, i.e. $60 \%$. Any potential vocabulary enhancement for these informants will consequently not be registered in this survey.

| Pre-test | Post-test | Gains |
| ---: | ---: | ---: |
| 53 | 67 | 14 |
| 61 | 123 | 62 |
| 88 | 135 | 47 |
| 97 | 104 | 7 |
| 104 | 117 | 13 |
| 104 | 108 | 4 |
| 112 | 128 | 16 |
| 112 | 117 | 5 |
| 115 | 117 | 2 |
| 117 | 135 | 18 |
| 123 | 128 | 5 |
| 123 | 128 | 5 |
| 128 | 135 | 7 |
| 128 | 123 | -5 |
| 128 | 128 | 0 |
| 135 | 135 | 0 |
| 135 | 135 | 0 |
| 135 | 123 | -12 |
| 135 | 135 | 0 |
| 135 | 128 | 7 |
|  |  | 0 |

Table 4.9: Control group individual results synonym task

| Pre-test | Post-test | Gains |
| :---: | :---: | :---: |
| 68 | 109 | 41 |
| 81 | 81 | 0 |
| 95 | 109 | 14 |
| 109 | 95 | -14 |
| 109 | 122 | 13 |
| 109 | 122 | 13 |
| 109 | 136 | 27 |
| 122 | 122 | 0 |
| 122 | 136 | 14 |
| 122 | 122 | 0 |
| 122 | 136 | 14 |
| 122 | 122 | 0 |
| 122 | 122 | 0 |
| 122 | 95 | -27 |
| 136 | 136 | 0 |
| 136 | 136 | 0 |
| 136 | 136 | 0 |
| 136 | 136 | 0 |
| 136 | 122 | -14 |
| 136 | 122 | -14 |

Table 4.10: Control group individual results antonym task

| Pre-test | Post-test | Gains |
| ---: | :--- | :--- |
| 0 | 18 |  |
| 53 | 127 | 18 |
| 70 | 107 | 74 |
| 93 | 139 | 37 |
| 98 | 139 | 46 |
| 114 | 139 | 41 |
| 127 | 139 | 25 |
| 127 | 139 | 12 |
| 139 | 139 | 12 |


| 139 | 127 | -12 |
| ---: | ---: | ---: |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 127 | -12 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |
| 139 | 139 | 0 |

Table 4.11: Control group individual results foreign words task
4.2.1. Discussion $R Q(i i)$. The aggregated results clearly reveal that the control group has a larger enhancement in vocabulary than the experimental group, both on average and for each of the individual tasks, i.e. synonyms, antonyms and foreign words.

| Task | Pre-test <br> experimen <br> tal group | Pre- <br> test <br> contr <br> ol <br> group | Post-test <br> experimen <br> tal group | Post- <br> test <br> contr <br> ol <br> group | Gains <br> experimen <br> tal group | Gains <br> contr <br> ol <br> group | Control <br> group vs. <br> experimen <br> tal group <br> gains |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Synony <br> ms | 127 | 113 | 129 | 122 | 2 | 9 | 7 |
| Antony <br> ms | 122 | 118 | 120 | 121 | -2 | 3 | 5 |
| Foreign <br> words | 131 | 118 | 131 | 130 | 0 | 12 | 12 |
| Average | $\mathbf{1 2 7}$ | $\mathbf{1 1 6}$ | $\mathbf{1 2 7}$ | $\mathbf{1 2 4}$ | $\mathbf{0}$ | $\mathbf{8}$ | $\mathbf{8}$ |

Table 4.12: Average aggregated results experimental group versus control group

There are however variables that need to be considered in order to compare the groups more accurately. First, the individual pre-test maximum scores in the two groups. When an informant scores the maximum score, the test will not be able to register any potential enhancement in vocabulary. Any differences between the groups in the number of informants that score the maximum score on each of the tasks will affect what conclusions can be drawn. On the synonym task, 64 \% in the experimental group scored the maximum score whereas 25 \% scored the maximum score in the control group. On the antonym task, 18 \% in the experimental group scored the maximum score compared to $30 \%$ in control group. On the foreign words task, 77 \% in the experimental group scored the maximum score compared to $60 \%$ in the control group. To conclude that the control group has enhanced their vocabulary more than the experimental group based on these number would therefore most likely be erroneous.

| Task | Experimental group | Control group |
| :--- | :--- | :--- |
| Synonyms | $64 \%$ | $25 \%$ |
| Antonyms | $18 \%$ | $30 \%$ |
| Foreign words | $77 \%$ | $60 \%$ |

Table 4.13: Maximum scores experimental group and control group

Therefore, to control for this variable, that is maximum scores, the informants in question will be removed from the samples for each task in both groups. As a consequence, each sample now has a different size and thus the experimental group samples and control group samples are not directly comparable. To remedy this, results are presented as sample average for each task: the pre-test post-test gains measured in percentage points per sample divided by sample size, multiplied by ten for increased readability (p.p. / $(\mathrm{n}=\mathrm{x})$ * 10). By doing so however, the numbers are not directly comparable with the aggregated results (cf. table 4.12), and therefore it is necessary to convert the aggregated results into sample average as well.

The aggregated results when converted to sample average are for the experimental group, 0,9 on the synonym task, $-0,9$ on the antonym task and 0 on the foreign words task, with an average of 0 . For the control group, the results are 4,5 on the synonym task, 1,5 on the antonym task and 6 on the foreign words task, with an average of 4 . When controlled for
maximum scores, the experimental group scores 8,8 on the synonym task, 0,5 on the antonym task and 38 on the foreign words task, an average of 15,8 . The control group scores 8,6 on the synonym task, 5 on the antonym task and 41,3 on the foreign words task, an average of 18,3 . First of all, these numbers now reveal that the experimental group has a more substantial vocabulary enhancement than the aggregated results revealed. However, so has the control group, albeit not as substantial as the experimental group. This is made clear by comparing the two pre-test versus post-test average results, control group vs. experimental group gains, which has decreased from 4 to 2.5 percentage points.

| Task | Experimental group <br> gains | Control group <br> gains | Control group vs. <br> experimental group <br> gains |
| :--- | :---: | :---: | :---: |
| Synonyms | 0,9 | 4,5 | 3,6 |
| Antonyms | $-0,9$ | 1,5 | 2,4 |
| Foreign words | 0 | 6,0 | 6,0 |
| Average | $\mathbf{0}$ | $\mathbf{4 , 0}$ | $\mathbf{4 , 0}$ |

Table 4.14: Aggregated results presented as sample average

| Task | Experimental <br> group gains | Control group <br> gains | Control group vs. <br> experimental group <br> gains |
| :--- | :--- | :--- | :--- |
| Synonyms | $7 /(\mathrm{n}=8)=8,8$ | $13 /(\mathrm{n}=15)=8,6$ | $-0,2$ |
| Antonyms | $1 /(\mathrm{n}=18)=0,5$ | $7 /(\mathrm{n}=14)=5$ | 4,5 |
| Foreign words | $19 /(\mathrm{n}=5)=38$ | $(\mathrm{n}=8) 33-41,3$ | 3,3 |
| Average | $\mathbf{1 5 , 8}$ | $\mathbf{1 8 , 3}$ | $\mathbf{2 , 5}$ |

Table 4.15: Pre- versus post-test results controlled for maximum scores, sample average

A second variable that needs to be considered is the initial test scores, that is the word knowledge that each informant had to begin with. Despite measures to ensure the two groups are as similar and thus as comparable as possible, the experimental group has higher pre-test scores on all tasks compared to the control group and this consequently needs to be taken into
consideration. The experimental group and control group respectively, score 127 compared to 113 on the synonym task, 122 compared to 118 on the antonym task, and 131 compared to 118 on the foreign words task, an average of 127 compared to 116 . The control group posttest results are on average lower than the experimental group pre-test results. This means that despite the somewhat larger vocabulary enhancement in the control group, their vocabulary level is still lower than that of the experimental group. Based on these numbers, it seems those who are initially less proficient developed their vocabulary the most. This is in line with the law of diminishing returns; "the better your English is to begin with, the harder it is to make further progress" (Wood) and could possibly explain the larger enhancement found in the control group.

| Task | Pre-test <br> experimental <br> group | Pre-test <br> control <br> group | Post-test <br> experimental <br> group | Post-test <br> control group |
| :--- | :--- | :--- | :--- | :--- |
| Synonyms | 127 | 113 | 129 | 122 |
| Antonyms | 122 | 118 | 120 | 121 |
| Foreign words | 131 | 118 | 131 | 130 |
| Average | $\mathbf{1 2 7}$ | $\mathbf{1 1 6}$ | $\mathbf{1 2 7}$ | $\mathbf{1 2 4}$ |

Table 4.16: Pre- and post-test results experimental group and control group

In sum, based on these findings it is difficult to conclude with any certainty that the integrated ER programme has contributed more to receptive vocabulary enhancement than regular lessons.
4.3. Findings $R Q$ (iii). To answer RQ(iii), the results from the two tasks that measure reading speed, "reading comprehension 1 " (RC1) and "reading comprehension 2" (RC2) are significant. The maximum possible scores for these tasks are 165 for RC1 and 194 for RC2.

The aggregated results for the experimental group in the pre-test were 114 for the RC1 task and 130 for the RC2 task, an average of 122. In the post test, the aggregated results for the experimental group were 137 for RC1 and 140 for RC2, and average of 139 . Based on
these aggregated results, the reading speed in the experimental group has increased with an average of 17 percentage points.

| Task | Pre-test | Post-test | Gains |
| :--- | :--- | :--- | :--- |
| Reading comprehension <br> 1 | 114 | 137 | 23 |
| Reading comprehension <br> 2 | 130 | 140 | 10 |
| Average | $\mathbf{1 2 2}$ | $\mathbf{1 3 9}$ | $\mathbf{1 7}$ |

Table 4.17: Experimental group aggregated results reading speed

Individual results ( $\mathrm{n}=22$ ) are also necessary when investigating reading speed to be able to account for the initial aggregated findings more accurately. These results are presented in the tables below; table 4.18 presents the results from RC1 and table 4.19 the results from RC2. Both tables are arranged in ascending order based on the pre-test results. The results reveal that in the pre-test, 7 informants scored the maximum score of 165 on the RC1 task, i.e. 32 \%; and 4 informants scored the maximum score of 195 on the RC2 task, i.e. 18 \%. Any potential enhancement in reading speed for these informants will thus not be registered in this survey.

| Pre-test | Post-test | Gains |
| ---: | :--- | :--- |
| 41 | 124 | 83 |
| 41 | 83 | 42 |
| 41 | 124 | 83 |
| 41 | 124 | 83 |
| 83 | 165 | 82 |
| 83 | 83 | 0 |
| 83 | 165 | 82 |
| 83 | 83 | 0 |
| 124 | 124 | 0 |
| 124 | 83 | -41 |


| 124 | 124 | 0 |
| ---: | ---: | ---: |
| 124 | 165 | 41 |
| 124 | 124 | 0 |
| 124 | 165 | 41 |
| 124 | 165 | 41 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 124 | -41 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |

Table 4.18: Experimental group individual results RC 1 task

| Pre-test | Post-test | Gains |
| ---: | ---: | ---: |
| 49 | 49 | 0 |
| 97 | 146 | 49 |
| 97 | 146 | 49 |
| 97 | 195 | 98 |
| 97 | 49 | -48 |
| 97 | 49 | -48 |
| 97 | 146 | 49 |
| 97 | 97 | 0 |
| 97 | 97 | 0 |
| 97 | 49 | -48 |
| 146 | 195 | 49 |
| 146 | 146 | 0 |
| 146 | 195 | 49 |
| 146 | 195 | 49 |
| 146 | 195 | 49 |
| 146 | 195 | 49 |
| 146 | 97 | -49 |
| 146 | 146 | 0 |


| 195 | 195 | 0 |
| ---: | ---: | ---: |
| 195 | 195 | 0 |
| 195 | 146 | -49 |
| 195 | 146 | -49 |

Table 4.19: Experimental group individual results RC2 task

The aggregated results for the control group in the pre-test were 116 on the RC1 task and 88 on the RC2 task, an average of 102. In the post-test, the aggregated results for the control group were 124 for the RC1 task and 107 for the RC2 task, an average of 116. Based on these results, the reading speed in the control group has increased with an average of 14 percentage points.

| Task | Pre-test | Post-test | Gains |
| :--- | :--- | :--- | :--- |
| Reading comprehension <br> 1 | 116 | 124 | 8 |
| Reading comprehension <br> 2 | 88 | 107 | 19 |
| Average | $\mathbf{1 0 2}$ | $\mathbf{1 1 6}$ | $\mathbf{1 4}$ |

Table 4.20: Control group average aggregated results reading speed

The individual results $(\mathrm{n}=20)$ of the control group are also presented in ascending order based on pre-test results, in the two tables below; table 4.21 presents the results of the RC1 task and table 4.22 the results of the RC2 task. These results reveal that in the pre-test, 6 informants scored the maximum score of 165 on RC1 task, i.e. $30 \%$. On the RC2 task however, no informants scored the maximum score of 195.

| Pre-test | Post-test | Gains |
| ---: | :--- | :--- |
| 41 | 83 | 42 |
| 41 | 124 | 83 |
| 83 | 165 | 82 |
| 83 | 83 | 0 |


| 83 | 41 | -42 |
| ---: | ---: | ---: |
| 83 | 124 | 41 |
| 83 | 124 | 41 |
| 83 | 165 | 82 |
| 124 | 124 | 0 |
| 124 | 41 | -83 |
| 124 | 165 | 41 |
| 124 | 165 | 41 |
| 124 | 41 | -83 |
| 124 | 124 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 165 | 0 |
| 165 | 83 | -82 |

Table 4.21: Control group individual results RC1 task

| Pre-test | Post-test | Gains |
| ---: | :--- | :--- | ---: |
| 0 | 97 | 97 |
| 49 | 97 | 48 |
| 49 | 146 | 97 |
| 49 | 146 | 97 |
| 49 | 49 | 0 |
| 49 | 97 | 48 |
| 49 | 146 | 97 |
| 49 | 97 | 48 |
| 97 | 146 | 49 |
| 97 | 97 | 0 |
| 97 | 146 | 49 |
| 97 | 97 | 0 |
| 97 | 49 | -48 |
| 97 | 49 | -48 |


| 97 | 49 | -48 |
| ---: | ---: | ---: |
| 146 | 146 | 0 |
| 146 | 97 | -49 |
| 146 | 146 | 0 |
| 146 | 97 | -49 |
| 146 | 146 | 0 |

4.22: Control group individual results RC2 task
4.3.1. Discussion $R Q$ (iii). The aggregated results reveal that the experimental group has a larger increase in reading speed on the RC1 task, and a lower increase in reading speed than the control group on the RC2 task. On average the experimental group has a somewhat larger increase than the control group, that is 3 percentage points.

| Task | Pre-test <br> experiment <br> al group | Pre- <br> test <br> contr <br> ol <br> group | Post-test <br> experiment <br> al group | Post- <br> test <br> contr <br> ol <br> group | Gains <br> experiment group <br> al | Gains <br> contr <br> ol <br> group | Experimen <br> tal group <br> vs. control <br> group gains |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| RC1 | 114 | 116 | 137 | 124 | 23 | 8 | 15 |
| RC2 | 130 | 88 | 140 | 107 | 10 | 19 | -9 |
| Avera <br> ge | $\mathbf{1 2 2}$ | $\mathbf{1 0 2}$ | $\mathbf{1 3 9}$ | $\mathbf{1 1 6}$ | $\mathbf{1 7}$ | $\mathbf{1 4}$ | $\mathbf{3}$ |

Table 4.23: Average aggregated results experimental group and control group

The two variables controlled for when interpreting the results on vocabulary enhancement will also be controlled for here, that is the individual maximum scores in the two groups as well as initial test scores, i.e. what reading speed the informants had to begin with.

On the RC1 task, 32 \% in the experimental group scored the maximum score of 165, whilst 30 \% in the control group scored the maximum score. On the RC2 task, 18 \% in the experimental group scored the maximum score of 195 compared to $0 \%$ in the control group.

| Task | Experimental group | Control group |
| :--- | :--- | :--- |
| RC1 | $32 \%$ | $30 \%$ |
| RC2 | $18 \%$ | $0 \%$ |

Table 4.24: Maximum scores experimental group and control group

As previously discussed, any discrepancies in the number of informants in each group having achieved the maximum score will affect what conclusions can be drawn. This is because the groups are as a consequence not directly comparable. On the RC1 task, the groups are essentially similar in this regard and thus more easily comparable than on the RC2 task, where there is an 18 percentage point discrepancy between the two groups (cf. table 4.24). It is therefore possible to conclude that the experimental group has a larger increase in reading speed on the RC1 task than the control group. Such a conclusion can however not be made for the RC2 task without further consideration of the numbers. Therefore, the informants having achieved the maximum scores will be removed from the samples. The reasoning and procedure for calculations is similar to the account found in the discussion of RQ(ii) (p.p. / (n $=\mathrm{x}) * 10$ ). The results when controlled for maximum scores for the RC2 task are for the experimental group 9 and for the control group 9,5 (table 4.25). Here as well, it is necessary to convert the initial aggregated results to sample average for comparison. The initial average aggregated result on the RC2 task for the experimental group when converted to sample size is 4,5 , whilst the control group result is the same as when controlled for maximum scores because there were no maximum scores for this task, that is 9,5 (table 4.26). These numbers reveal that the experimental group has a larger increase in reading speed on the RC2 task than the initial aggregated results reveal and that the relative gain is practically identical to that of the control group.

| Task | Experimental <br> group gains | Control group <br> gains | Control group vs. <br> experimental group <br> gains |
| :--- | :--- | :--- | :--- |
| RC2 | $17 /(\mathrm{n}=18) * 10=9$ | $19 /(\mathrm{n}=20) * 10=$ <br> 9,5 | 0,5 |

Table 4.25: Pre- versus post-test results controlled for maximum scores, sample average

| Task | Experimental <br> group gains | Control group <br> gains | Control group vs. <br> experimental group <br> gains |
| :--- | :--- | :--- | :--- |
| RC2 | $10 /(\mathrm{n}=22) * 10=$ | $19 /(\mathrm{n}=20) * 10=$ | 5 |
|  | 4,5 | 9,5 |  |

Table 4.26: Aggregated results presented as sample average

The second control variable is initial reading speed, i.e. the pre-test scores for both groups. The experimental group scored an average of 114 on the RC1 task, and the control group and average of 116, essentially similar results. On the RC2 task however, the experimental group scored an average of 130 and the control group scored an average of 88 . This needs to be considered when comparing the results. McLean and Rouault for instance state that it can be expected that that more proficient readers might not experience similar gains in reading rates as less proficient readers (103). Huffman as well surmises that "lowperforming readers gain more from the extensive reading approach" (29). To examine whether such a correlation can be found in the data collected here, the Excel CORREL function is used to determine the correlation coefficient of the two variables pre-test score and measured reading speed gain. The correlation coefficient assumes a value that ranges from -1 $-(+) 1$. If the correlation ratio differs from 0 , a statistical correlation between the two variables is per definition established. A negative sign denotes a negative correlation; a high value correlates with a low value and vice versa, and a positive sign denotes a positive correlation; a high value correlates with a high value and a low value correlates with a low value. The closer to 0 (zero), the weaker the correlation. The closer to 1 (whether negative or positive), the stronger the correlation (Jacobsen 331). Determining what specifically constitutes a strong correlation is often based on expectations; when anticipating a strong correlation, a correlation of for instance 0,30 might be deemed weak (335). Despite expectations, a rule of thumb is according to Jacobsen (335) that ratios below 0,30 are deemed weak, ratios ranging from 0,30-0,50 are deemed average, and ratios above 0,50 are deemed strong. Here, the anticipated result is nevertheless a strong negative correlation; a low pre-test score corresponds with a high increase in reading rates and vice versa. On the RC1 task there is a $-0,72$ correlation between pre-test scores and reading speed gains for the experimental group, and a $-0,51$ correlation for the control group. On the RC2 task there is a $-0,17$ correlation between pre-test scores and reading speed gains for the experimental group and $-0,71$ correlation for the
control group. In all, there is a fairly strong negative correlation between the two variables, meaning lower pre-test scores generate higher gains and vice versa. Based on this, the gains in the experimental group are relatively more significant considering they are the more proficient group.

In sum, the experimental group has a larger increase in reading speed than the control group. The research questions ask whether an integrated reading programme will enhance reading speed, and in order to determine this it is necessary to consider whether the three criteria for causality are fulfilled. The first criterion demands a correlation between cause and effect; since the experimental group that has undergone the deliberate manipulation of partaking in an ER programme has improved more than the control group, this criterion is according to Jacobsen (114) fulfilled. The second criterion demands that cause comes before effect; the two groups need to be randomised and similar, and if the experimental group has improved more than the control group, the ER programme is the likely cause of this.
Measures have been taken to ensure the groups are randomised as well as similar, and so this criterion is also fulfilled. Despite this, the results have revealed that the two groups are not in fact completely similar, the experimental group is more proficient. This is however controlled for in the analysis of the results. Other variables have also been controlled for and therefore the third criterion, control against other relevant variables, is fulfilled as well. Internal validity of a study is furthermore strengthened if the results coincide with other studies (Jacobsen 215), and these results tally with the studies of McLean and Rouault, and Suk. The former study concludes that the gains observed in reading rates "are believed to be the results of the ER group participants having read substantially more words" (McLean and Rouault 102), and the latter study concludes that "it seems that more reading in a shorter period of time may have contributed to the significant effect [on reading comprehension] in this study" (Suk 85; 86). In light of these results, it is reasonable to conclude that the integrated ER programme has increased reading speed.
4.4. Summary of findings. RQ(i) asks how much reading an integrated ER programme will generate compared to regular lessons with no such programme. Information about the quantity of reading generated by extensive reading in a Norwegian context has previously been lacking. If teachers find themselves discouraged from engaging in extensive reading due to this, this research question aims to mitigate this. In addition to reading different kinds of texts as part of regular lessons, the experimental group has on average read 112697 words, which is a bit more than the number of words in Harry Potter and the Prisoner of Azkaban (Reading

Length). The majority of informants have read 1 hour every week, of which 40 minutes were in class. The control group has in the same period read 19 different pieces of literature in class, including but not limited to factual texts, short stories and poems. The experimental group has thus read substantially more than the control group during the programme.

RQ(ii) asks whether an integrated ER programme will enhance receptive vocabulary measured by knowledge about synonyms, antonyms, and foreign words. Both groups have an enhanced vocabulary, but vocabulary enhancement is in fact larger in the control group. The experimental group has higher pre-test scores, thus this group had a more advanced vocabulary to begin with. This could explain the smaller enhancement. However, the overall results make it difficult to conclude that the ER programme has enhanced receptive vocabulary more effectively than regular lessons.

RQ(iii) asks whether an integrated ER programme will increase reading speed, measured by questions about contents. Here as well, both groups have seen an increased reading speed, but a larger increase is seen in the experimental group in the first of two tasks. For the second task, the actual gains are almost similar in the two groups, yet the gains are relatively greater in the experimental group. This is due to higher pre-test scores in the experimental group, meaning this group read at a faster speed to begin with. Based on correlations between pre-test scores and reading speed gains it seems more proficient readers gain less from extensive reading than less proficient readers. Given these points, combined with the fact that the experimental group has read substantially more than the control group, the integrated ER programme has increased reading speed.

### 4.5. Limitations and comments on generalisation. There are of course limitations to this

 research, and two issues in particular should be mentioned. First, the thesis disregards factors concerning the informants that might affect the results, in particular perhaps the informants' native languages, and also whether all informants in fact have been enrolled in Norwegian schools since $1^{\text {st }}$ grade. Second, the scope of the Kartleggeren is too limited, meaning too many informants achieved the maximum possible scores, particularly on the vocabulary tasks. Despite measures taken in the analysis to control for maximum scores, more accurate results would be accomplished with a test allowing for and testing a more advanced and nuanced vocabulary as well as a faster reading speed.To be able to generalise, it is first of all necessary to choose informants randomly to ensure a representative selection. Representative selections make it possible to determine that what applies to the sample, also applies to everybody the research aims to say something
about (Jacobsen 289). Here, that would be pupils enrolled in the Specialisation in General Studies programme. This study was conducted with an experimental group and a control group that are a representative selection of first grade pupils enrolled in the Specialisation in General Studies programme. This is because they are allocated school places based on their permanent address of residence, and then randomly assigned to classes, as is the common practise in Norway (cf. Forskrift til opplæringslova, §6-9).

Second, in order to generalise, level of confidence must be determined, that is with how much confidence assumptions can be made. The most common confidence level is $95 \%$. This provides the basis for margin of error, or leeway. The higher the confidence level, the larger the margin of error. Consequently, the larger the sample, the smaller the margin of error is (Jacobsen 291). According to Jacobsen (291), a sample size smaller than 100 units complicates reasonable analysis of the information in terms of generalisation, and margins of error become very high. The experimental group and control group in this research consist of 42 informants in total. This was initially described as a "rather large sample", yet it is too small to make any certain generalisations.

### 5.0. CONCLUSION

This thesis addresses three research questions, attempting to provide new information about the merits of an integrated extensive reading programme in upper secondary education. This is done first by investigating and researching how much reading an extensive reading programme might generate; and second, by investigating and researching other linguistic gains extensive reading might generate, namely vocabulary acquisition and reading speed.

In order to accomplish this, an integrated extensive reading programme was implemented in one class where one lesson each week was allocated for individual, silent reading following the principles of extensive reading programmes outlined by Day and Bamford. Participants in the research project registered the amount of reading they conducted each week, as well as taking a placement test prior to and following the programme to measure any potential gains in vocabulary and reading speed. These results were compared with the results of a control group, a class with no integrated extensive reading programme.

The results of this study provide insight into the potential benefits of an extensive reading programme, but must considered in the context in which the study was carried out. Generalising is not possible, because the sample is too small. It would therefore be interesting to conduct a larger study examining potential reading rates gains compared to the positive results found in this study. Further research is also necessary to determine any potential vocabulary gains from an extensive reading programme, where tests that allow for a wider, more nuanced vocabulary are employed.

All in all, the results of this master's thesis provide further insight into the potential benefits of extensive reading. The curriculum does provide room to implement it, and reading will be a priority also in the forthcoming curricular renewal. Based on my results here, I encourage all teachers to simply be quiet, and include more individual, extensive reading in their EFL-lessons.

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## Appendices

Appendix 1: Reading Record Form

| Day and date of week | Book title | Autho r | Publisher | Star <br> t <br> date <br> (dd- <br> mm) | Finis <br> h <br> date <br> (dd- <br> mm) | Readin g time (hours) | Level; <br> too <br> easy, <br> good <br> level, <br> too <br> difficul <br> t | Page <br> s |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Monday | Harry <br> Potter and the <br> Philosopher <br> s Stone | J.K. <br> Rowlin <br> g | Bloomsbur <br> y | $\begin{aligned} & 15.0 \\ & 3 \end{aligned}$ |  | 0.5 | Good | 10 |
| Tuesday |  |  |  |  |  |  |  |  |
| Wednesda y |  |  |  |  |  |  |  |  |
| Thursday |  |  |  |  |  |  |  |  |
| Friday |  |  |  |  |  |  |  |  |
| Saturday |  |  |  |  |  |  |  |  |
| Sunday |  |  |  |  |  |  |  |  |
| Week total |  |  |  |  |  |  |  |  |

Appendix 2: Vocabulary Journal Form

| Date | Vocabular <br> y Item | Source | Gloss | Defintio <br> $\mathbf{n}$ | Word <br> Class | Synony <br> $\mathbf{m}$ | Antony <br> $\mathbf{m}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 07.02.201 <br> 9 | Shuddered <br> (to <br> shudder) | HP and the <br> Philosopher <br> 's Stone | e |  | erøss <br> especiall <br> y <br> because <br> of fear <br> or <br> revulsio | Verb <br> (to <br> shudder | Shiver, <br> tremble |

Appendix 3: Kartleggeren maximum possible scores; tasks in question highlighted.

| ENGELSK <br> TRINN | ORDBILILER | SKANNNG | SKUMMING | LESEEERDIGHET1 | LESEFEROLGHET2 | DIKTAT | VEIGSkRIVEMATE | FINNFEIENE | SYNONMMER | ANTONYMER | FREMMEDORD | OROVALG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 121 | 182 | 209 | 162 | 200 | 234 | 169 | 1087 | 288 | 281 | 617 | 255 |
| 6 | 113 | 143 | 155 | 143 | 167 | 171 | 145 | 511 | 186 | 195 | 435 | 204 |
| 1 | 108 | 124 | 133 | 127 | 141 | 140 | 132 | 294 | 143 | 154 | 260 | 168 |
| 8 | 108 | 128 | 164 | 207 | 224 | 169 | 136 | 347 | 178 | 181 | 201 | 185 |
| 9 | 105 | 118 | 145 | 166 | 197 | 145 | 128 | 253 | 146 | 149 | 151 | 154 |
| 10 | 104 | 114 | 135 | 151 | 179 | 135 | 123 | 215 | 134 | 134 | 135 | 140 |
| VGS | 105 | 123 | 149 | 165 | 194 | 134 | 122 | 220 | 135 | 136 | 139 | 137 |

## Appendix 4: Wordcount check

\(\left.$$
\begin{array}{|l|l|l|l|}\hline \text { Title } & \begin{array}{l}\text { Reading Length } \\
\text { wordcount }\end{array} & \begin{array}{l}\text { Accelerated Reader } \\
\text { Bookfinder } \\
\text { TM }\end{array} \\
\text { wordcount }\end{array}
$$ \quad \begin{array}{l}Word Counters <br>

wordcount\end{array}\right]\)| Everything, |
| :--- |
| Everything |

## Appendix 5: Reading lists

| EXPERIMENT GROUP | CONTROL GROUP |
| :---: | :---: |
| 1. Discussing Cultures (factual text) <br> 2. Values \& Boiled Eggs and Jumping Fishes (factual texts) <br> 3. The Caribbean (factual text) <br> 4. Brackley and the Bed (short story) <br> 5. South Africa (factual text) <br> 6. Blood Diamond (factual text + film) <br> 7. Baker, Aryn. Blood Diamonds. Time Magazine. URL: <br> http://time.com/blood-diamonds/ <br> (Feature article - factual text) <br> 8. Australia - The Island Continent (factual text) <br> 9. New Zealand and the Maori (factual text) <br> 10. Butterflies (short story) <br> 11. The Two Faces on India (factual text) | 1. Understanding Britain (factual text) <br> 2. My Polish Teacher's Tie (short story) <br> 3. British Government (factual text) <br> 4. Northern Ireland Today (factual text) <br> 5. Father and Son (short story) <br> 6. I'm Nobody (poem) <br> 7. If I Can Stop One Heart From Breaking (poem) <br> 8. There Is No Frigate Like a Book (poem) <br> 9. The USA - A Patchwork Nation (factual text) <br> 10. 12 Years a Slave (factual text + film) <br> 11. Thank You, M'am (short story) <br> 12. The River (lyrics) <br> 13. In the Ghetto (lyrics) <br> 14. American Government (factual text) <br> 15. I Am an Undocumented Immigrant (personal text) <br> 16. Looking for Alaska (novel excerpt) <br> 17. Canada (factual text) <br> 18. The Moose and the Sparrow (short story) <br> 19. Australia - the Island Continent (factual text) |

