

# Laptops in English language teaching

Simon Alvring

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Content Supervisor: Larisa Gustavsson Oldireva  
Text Supervisor: BethAnne Yoxsimer Paulsrud



Stockholms  
universitet

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## Abstract

The aim of the study was to investigate the use of laptops in English language teaching, its benefits and disadvantages. Three classroom observations, six student interviews and three teacher interviews were carried out to answer the study's research questions, namely, what are the benefits and disadvantages of using laptops in the teaching of English at schools under study? How do teachers solve technical and pedagogical problems related to the use of laptops? What kinds of IT-support and possibility to develop teaching skills required by laptops are available for teachers of English?

Results of the study indicate that easy access to authentic English through laptops is a benefit when teaching English at two Swedish compulsory schools and one high school. Furthermore, the study has shown that laptops are beneficial tools when teaching writing proficiency and working with problem-solving tasks in the classroom. The results of the study have also pointed to the disadvantage in the use of laptops during classroom activities, which are caused by students who are engaged in browsing off-task websites. However, a solution to this could be to include these websites into English language learning activities. The data from the interviews with the three English language teachers have provided evidence about different possibilities for IT-support and IT-development for these teachers.

This study makes it clear that a successful implementation of one-to-one laptop programs requires teachers who can invest their time and energy into learning new technology, IT-development provided by the school and municipality through courses, workshops and visits at IT-fairs and other schools with one-to-one laptop program as well as a functional IT-support.

### **Keywords**

Laptops, one-to-one laptop program, English language teachers, Students, Swedish compulsory school, Swedish high school

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# 1. Introduction

One of the major challenges that educational institutions face today is to prepare students for the 21st century global workplace. Along with this is the growing prevalence of innovative and mobile instructional technologies in the classroom. (Chandrasekhar 2009, p.1)

The implementation of new technology is rapidly increasing in our society. The industrial society is moving into the information society. Säljö and Linderöth (2002, p.13) state that from a historical perspective, the implementation of information technology had a large impact on the way people live, work and consume. People in the industrialized world even enjoy themselves in different ways and children's toys look different as well compared to the time before the entrance of the information society (Säljö & Linderöth, 2002, p.14). Because of this, the way people take in information, knowledge and abilities has moved. Säljö and Linderöth (2002 p.19) discuss what consequences for school and education can these changes bring. According to these authors, this is a relevant question to take seriously and start on a discussion.

An important innovation that is included in information and communication technologies (ICT) is the laptop. Today it is integrated in the people of the industrialized world's professional and private lives. People use laptops to connect to the Internet, write articles, watch movies, to record and listen to music (Säljö & Linderöth, 2002, p.19). According to the core content in the curriculum for English, teachers in years seven to nine are supposed to use "different ways of searching for and choosing texts and spoken English from the Internet and other media" (Skolverket 2011, p.34). The curriculum reflects on what is needed to function in the information society.

Estling Vannestål (2009, p.12-13) points out that ICT can be used in English language teaching and learning in different ways. The author describes ICT as an arena for communication and as a tool to solve problems, create texts, audios, pictures and finally as an auto machine to practice, for example, grammar and vocabulary. Further, Estling Vannestål (2009) discusses and gives examples of the benefits and possibilities that occur when schools have access to ICT. This author also calls attention to the problems that occur when using ICT and how to avoid falling into these pitfalls. Estling Vannestål (2009) illustrates a problem area that would be of interest to investigate in-depth.

The present project will investigate how two compulsory schools and one high school<sup>1</sup> in the Stockholm area use laptops. Since these schools are partaking in a one-to-one laptop program (one laptop per student), the respective teachers should have an opinion and experience about the use of laptops. By observing lessons, interviewing teachers and students, the study will investigate the use of laptops from three different angles. The result of this study will possibly benefit today's teachers and teacher candidates by showing teachers' working styles, their problems and solutions when using laptops in English language teaching.

## 1.1. Aim and research questions

The aim of this study is to describe and analyze three teachers' use of laptops in their teaching of English at two Swedish compulsory schools and one high school with the purpose of discovering the benefits and disadvantages of using laptops in teaching and learning English. The main focus of the research is on the teacher interviews. The data from the teacher interviews will be compared with the results from the observations and student interviews. To achieve the aim, the following research questions have been formulated.

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<sup>1</sup>High School refers in this study to the Swedish Gymnasium

- What are the benefits and disadvantages of using laptops in the teaching of English at schools under study?
- How do the teachers solve technical and pedagogical problems related to the use of laptops during classroom activities?
- What kinds of IT-support and possibility to develop teaching skills required by laptops are available for teachers of English?

## 2. Background

### 2.1. Curriculum and syllabus

The national curriculum for the compulsory school does not specifically address the use of laptops but the following can be found about computers in the section on the responsibilities of the headmaster.

The working environment in the school is organized such that pupils have access to guidance, teaching material of high quality as well as other assistance in order to be able to independently search for and acquire knowledge by means of e.g. libraries, computers, and other learning aids. (Skolverket 2011, p. 20)

Here it is clear that the headmaster is responsible for providing the school with computers and other teaching material. In the equivalent for the Swedish high school a similar quote can be found about the responsibility for the headmaster.

Utbildningen utformas så att eleverna, för att själva kunna söka och utveckla kunskaper, får tillgång till handledning och läromedel av god kvalitet samt andra läroverktyg för en tidsenlig utbildning, bl.a. bibliotek, datorer och andra tekniska hjälpmedel. (Skolverket 2012, p.15) (The education should be formed in a matters where the students can independently search and acquire knowledge, access to guidance and teaching material of good quality as well as modern learning aids, such as libraries, computers and other technical tools.)

In other words, headmasters in Swedish compulsory schools and high schools have to ensure that his or her school has access to computers. The curriculum for the English core content for grades seven to nine, says that "different ways of searching for, choosing and assessing texts and spoken language in English from the Internet and other media" (Skolverket 2011, p.35) should be a reception core content, which implies that teachers are supposed to use for example laptops to access the Internet.

### 2.2. Previous research

Research on the use of laptop computers in teaching has been carried out in Sweden and internationally, especially the last decade (Cristaldi 2009). The studies that are relevant for this paper will be presented here.

In a seminar paper written by Witting (2011), a text analysis was carried out on the benefits of using laptops in English language teaching, which is in the same problem area as the under taken study. According to Witting (2011) the access to authentic material on the Internet is a benefit when working with laptops in the English language classroom, for example textual and vocal communication through chat-programs with classmates and peers in other countries. Furthermore Witting (2011) stresses that the production of multimedia files such as video and audio with the help of the laptops can make the students work creatively and use their spoken English during such projects and tasks. Other benefits that Witting (2011) describes are cooperative learning; students can help each other by sharing their knowledge and experience when it comes to using laptops. Furthermore, Witting

mentions the possibility of publishing different material on the Internet, which significantly widens the audience compared to a group of classmates and the teacher. This can increase students' motivation. Another benefit described in Witting (2011)'s seminar paper is the fact that students can easily work on their own level and speed, which can easily individualize teaching. Finally, portability is a benefit as well as the students are able to change location when working with laptops according to Witting (2011). It will be of interest to see if Witting (2011)'s benefits agree with the under taken study.

In a study from the US, carried out by Morrison, Lowther and Ross (2003), fifth-, sixth-, and seventh-graders' use of computers was examined. One group of students had access to a laptop each all the time during class. The other group only had access to five or six desktop computers in their classroom. The purpose of the study was to examine the impact of laptops in classrooms activities, students' use of technology, writing and problem-solving. Teachers, students and parents participated in the study. The results of the study revealed few differences in teaching methods but it showed that the laptop group used computers more often and without help or instructions. Also, the laptop group scored better than the control group on the writing tests. Finally the results also showed that the laptop group was significantly better on the problem-solving tasks that they were given. Three teachers from each group were interviewed in the study. Overall the teachers teaching with laptops were satisfied with the laptop-program. The most beneficial aspects of the program were easy access to research from the Internet and the students' increased computer skills (Morrison, Lowther & Ross 2003). The following results were also presented. The teachers all agreed that they had difficulties with monitoring the students' use of Internet and with technical problems; these were major disadvantages, though all teachers indicated that the positive aspects outweighed the negative aspects (Morrison et al. 2003, p.39). Monitoring the Internet means that the teachers cannot distinguish exactly what the students do when they access the Internet. The results show benefits and disadvantages of the use of laptops and are relevant for the study undertaken in this project.

Another study from the US, carried out by Chandrasekhar (2009), investigates the teachers' role in a one-to-one laptop program. The informants were six teachers who participated in the implementation of a one to one laptop program in South Carolina. They were interviewed and classrooms observations were carried out. Students' assignments from these teachers were examined to validate the data from the interviews and observations. Results from the study indicated that the value of a pedagogical vision and IT-support from the district, a strong belief by teachers to use technology and opportunities for qualified development and collaboration were essential parts for a successful one-to-one laptop program. The teachers stressed the value of using technology to engage students and increase their learning. The conclusion from the study revealed the importance of pedagogical vision and planning by the school district, which ensure that teachers believe in the one-to-one program. Since the research methods of Chandrasekhar's study are similar to the study undertaken here, their results can be compared and discussed.

In a study from New Zealand, Cowie, Jones and Harlow (2011), examine three years of evaluation of the impact of laptops in teachers' work situation. A total number of 2122 teachers answered a questionnaire. The result from the three-year evaluation indicated that school and departmental leadership are central to support teachers' use of laptops. The study indicated that teachers use laptops for lesson planning, preparation and reporting. The study acknowledged that colleagues are the principal source of professional development when using laptops in teaching. Finally the findings proposed that schools should consider how teachers could work collaboratively as a way to share and increase their use of laptops.

The Swedish Schools Inspectorate (2011) carried out an inspection of English in the Swedish compulsory school year six to nine. Observations, interviews and questionnaires were carried out in 22 schools in eleven counties. Students, teachers and headmasters took part in the study. One of the results indicated that computers were not often used in the English classrooms. During the 293 lessons observed, only a few involved computers and during interviews teachers expressed a strong wish for access to more computers (Skolinspektionen 2011). This finding is directly relevant to the aim of this project, which includes the analysis of classroom observations.

### **2.2.1 One-to-one laptop program**

The definition of one to one laptop program that is used in this paper refers to Penuel's (2006 p.330-1) definition of one-to-one initiatives. It states that the initiatives are "designed to provide each student with a computer to support academic learning" (Penuel, 2006, p. 330). Furthermore the author describes that different program managers have different approaches to if students are able to use their computers outside of school. All schools in this study have a one-to-one program in which the students have access to their laptops at all hours.

## **3. Method**

In this section the research methods will be presented and described.

### **3.1. Selection**

All three schools were chosen because of the fact that they had implemented a one-to-one laptop program. This assured that the teachers to some extent were using laptops in their teaching and had experiences and thoughts about the use of laptops. The teacher participants in this study were three English teachers at two different Swedish compulsory schools and one Swedish high school in the Stockholm area. The teachers have been given fictional names and have been teaching English for three (Christina), five (Victoria) and eighteen (Anna) years. All teachers were fully qualified. Victoria and Anna taught in the compulsory school year seven to nine and Christina taught at a high school.

The students that were interviewed were attending the selected teachers' classes. The students attended years seven, eight and twelve. Two students from each class were selected and asked for interviews by their teacher with the belief that they could give relevant data to the study. The students have also been given fictional names, Josefina and Alice (year seven), Viktor and Christian (year eight) and Sofia and Erica (year twelve). All caretakers of the compulsory schools' students had received a letter of content (Appendix 1) one week before the visit and returned it to their children's teacher before the study started.

### **3.2. Material**

#### **3.2.1 Observations**

An observations scheme (Appendix 2) was created according to the instructions from Johansson and Svedner (2010, p.41). The observation scheme was divided into the following categories: (1) time, (2) activities, (3) use of laptops, (4) teacher/students, (5) problems and solutions, (6) extra. In (1) time, the time and duration for each activity were noted. In (2) activities, what kinds of activities that take place were noted. The category (3) use of laptops have six under categories, which are: search, write, create, video, audio and on task. Here it was noted down if they use laptops in these ways and if they were on task during the lesson. The next category, (4) teacher/students, showed who using the laptops. In the fifth category, namely (5) problems and solutions, notes were taken when it occurred any problems and how the problems are solved. The final category, that is (6) extra, is used if something occurs that does not fit in the other categories but still is of interest for the study. One observation per class was carried out.

#### **3.2.2 Interviews**

According to Johansson and Svedner (2010, p.30), qualitative interviews are frequently used among teacher candidates, since they often give interesting information about teachers' view on their own

teaching. This teacher qualitative interview includes ten questions (Appendix 3). Closed interview questions were included to get background information, for example, how long have you been an English teacher? Open-ended interview questions were added so the teachers can express their thoughts freely about the subject, for example what are your thoughts about using laptops in your teaching? The questions were created to gather data that can answer the research questions. Direction and supportive questions were added at different times during the interviews to make sure that the researcher had understood the informant correct or wanted the informant to clarify answers or to go further in their reasoning. The time for the teacher interviews was set to maximum 30 minutes and ten minutes for the student interviews. The student interview questions (Appendix 4) were constructed to verify the answers from their teachers.

Qualitative interviews were chosen over structured interviews as a data collection instrument since they give in-depth understanding about teachers' thoughts and attitudes when used in a correct way. Structured interviews can give a wider perspective and are more suitable when carrying out a quantitative study.

### **3.3. Procedure**

A pilot study was conducted in October 2010 with two teachers and included two interviews and four observations. The findings of this study served as a starting point for the study conducted for the purposes of the present project during May 2012. The questions were well understood by the teachers in the pilot study but some of the questions did not lead to the research questions and were because of this revised for the use in the present study. The interviews in the pilot study were conducted in English. In the present study the teachers and students were interviewed in Swedish, their mother tongue, which enable the informants to better express themselves. The informant teachers were contacted by email and were asked if they wanted to participate in the study. The two teachers at the compulsory schools sent an email with the letter of consent to their students' parents. The parents were informed that the study would include observations and interviews. They were also informed that the study was about the use of laptops. During the observations the researcher was placed in a corner at the back of the classrooms to get a good overview of the students and the teacher, except for the last observation, where the researcher moved around since the class worked in small groups at different locations. The teacher and the students were told that the researcher would observe the lesson and that they could not ask for help. The materials used were a pen, an observation scheme and a laptop. Because of problems with printing, the second and third observations were written on the observations scheme, on the laptop, instead of on a piece of paper.

Before the interviews the interviewees were asked if they agreed to be recorded, and they were assured that the data would be treated confidentially and erased when the study was completed. The interviews were carried out in a group room or a classroom where the risk for interruption was minimized. The students were interviewed two and two directly after the observed lessons and the teachers where interviewed during the same day when it suited the teachers' schedules. Upon completion of the data collection the recorded material was transcribed and the answers from the teachers were categorized. The observations schemes were transcribed into running text.

### **3.4. Validity and reliability**

According to Cohen, Manion & Morrison (2000) it is important for effective research to include validity. The authors continue to state that it is impossible to create a research that is 100 percent valid. It should instead be seen as a continuum where the researcher should strive to minimize invalidity and maximize validity (p.105).

Since the aim of this study is based on how English teachers use and think about laptops in their teaching, qualitative research interviews and observations will give a good possibility to reach that aim and answer the research questions and in that way strive towards validity. By investigating how teachers teach in the classroom (observations), the teachers' attitude (teacher interviews) and students' attitude (student interviews); this study will include triangulation that will increase the study's validity.

Cohen et al. (2000) write “triangulation is a powerful concurrent validity, particularly in qualitative research” (p.112). To increase the validity a pilot study was carried out. By doing pilot classroom observations and pilot interviews the data gathering methods validity increased (Cohen et al. 2000, p.129).

To create reliability each observation followed the same procedure and each interview was carried out with the same procedure (Johansson & Svedner 2010, p.83). The interview questions were formulated to give answer to the research questions and were well understood by the informants. According to Johansson and Svedner (2010) this creates reliability (p.83).

### **3.5. Ethical considerations**

All data in this study have been collected in accordance with Swedish research council’s (2002) requirements. The informants were informed that they could cancel their participation at any time without any explanation. According to Johansson and Svedner (2010, p.32), this will increase the trust between the interviewee and the researcher and increase the possibility to be given trustworthy answers. The interview questions were formed with the ethical considerations in mind. The information gathered was only used for this study and erased when the study was done. To retain the informants’ anonymity they all have been given fictitious names in this study.

### **3.6. Methods of analysis**

The observations schemes were transcribed into running texts and finalized with an observer summary. The analysis of the transcribed interview data was carried out with a close reading with based on the aim and research questions. According to Cohen et al. (2000), the researcher is to study the data from the interview and define categories in what has been said in the interviews. This has been done in the results section which analyses the teacher interviews in terms of categories related to the study’s research questions. According to Kvale (1997, p.174) the analysis method context concentration is beneficial when carrying out research interviews. In context concentration the content that the interviewee reveals is compromised in concise content. This method has been used on the transcription of the teacher and student interviews. The analysis was finalized with systematical searching for correlations and contrasts between classroom observations, student interviews and teacher interviews.

## **4. Results**

This section presents the analysis of material provided by the study of three classroom observations, six student interviews and three teacher interviews. Since the observations were carried out first, they are presented first. Then the data from the six student interviews are reported, and finally the three teacher interviews are presented. The classroom observations are presented individually and the student interviews are presented in relation to the interview questions. The teacher responses are grouped around categories linked to the research questions.

## 4.1. The classroom observations

### 4.1.1 The 8<sup>th</sup> grade class observation

The first observation was carried out in Victoria's classroom during a 50-minute English lesson with an 8th grade class in which 17 students attended the lesson. During the introduction of the lesson Victoria went through the instructions for a writing project about relationships between humans. She started by writing on the whiteboard. Four students out of 17 had their laptops open and three were logged in on Facebook; one student looked at *Teknik magasinet's* homepage during the lesson introduction. One student did not have her laptop and was instructed to write by hand.

After ten minutes, Victoria connected her laptop to the digital multimedia projector and showed the lesson plan and grading criteria from the school's online platform, *Skolportalen*. During this presentation, five more students opened their laptops, and one started writing. All in all, eight were not on task; instead they were logged in on Facebook, looking at YouTube and searching on Google. Victoria noticed this and asked the students to focus on her presentation of the lesson plan and grading criteria.

20 minutes after the lesson started, the students were divided into groups of three and four to discuss their thoughts about the writing project. During these discussions, all 17 students were on task; three used their laptops to look at what they had written so far. After the group discussions, the students were instructed to continue or start writing their stories about a relationship. The final 20 minutes, between twelve and 15 students were on-task. The students who were off task were talking to each other or surfing the Internet. The teacher asked two students to look up words in an online dictionary when they asked her for a translation of a Swedish word. One student had problem with his charger, so he was asked to write with a pen and paper. Victoria finished the lesson by reminding the students to save their stories about relationships.

#### Observer's summary:

Victoria was comfortable using her laptop during the lesson's introduction. The students used their laptops for word processing stories about different relationships. Eight different students out of 17 students were logged in to off task homepages during the 50-minute lesson at different times.

### 4.1.2 The 12<sup>th</sup> grade class observation

The second observation was carried out in Christina's classroom during a 90-minute lesson in the course English C. The course is structured to prepare the students to take the Certificate in advanced English (CAE). Eight students attended the lesson. During the introduction, Christina did not use her laptop when she explained how they would do a listening exercise in which students should write down their answers on answer sheets. One student had her laptop open during the introduction. Christina connected her laptop to a pair of loudspeakers and carried out the listening exercise. The students wrote their answers on a piece of paper, and no one had their laptops open during the exercise.

After 30 minutes, the exercise was finished, and the students handed in their answer sheets. Christina offered the students writing exercises and started correcting the students' answers. She noted down their results in her laptop and handed the students their results and a key one by one. After 60 minutes of the lesson, Christina finished correcting the students' answer sheets and said that she uploaded more exercises at the school's platform so that the students could download them at anytime. During the 30 minutes after the exercise was finished, two students used their laptops. They were working with presentations for another course. One student added a text and pictures to a PowerPoint presentation, and the other one also worked with a PowerPoint presentation and discussed with Christina and two other students how to make audience printouts. The class was dismissed after 70 minutes, 20 minutes before the lesson was scheduled to end.

### **Observer's summary:**

Because of the lesson's purpose, practice for the Certificate in advanced English (ACE), the students did not use laptops for the classroom activity but laptops have been used in a supportive fashion. Christina used her laptop to carry out the listening exercise, to note down students' results and upload other listening and writing exercises for the ACE to the school's online platform.

#### **4.1.3 The 7<sup>th</sup> grade class observation**

The third observation was carried out in Anna's classroom during a 60-minute lesson with a 7<sup>th</sup> grade class. 26 students attended the lesson. Anna started the lesson by showing the instructions for a project called Cooking-show, which the class had started at the previous lesson. She used her laptop easily to show parts of her project presentation. The students had been divided into groups of four at the previous lesson and were at different stages of their cooking shows. After the 10-minute introduction, the groups moved to different rooms to work on their cooking-show project. Two groups were editing their films, two groups were filming, one group was looking for music to add to their cooking-show, and one group went to buy groceries. During this observation the observer moved around in five minutes intervals to follow the activities in which the different groups were engaged, except for the group that went to the grocery store.

One group used one laptop to edit their film and started to upload their film to an editing program. While they waited for the film to upload, the students looked at YouTube clips and listened to music on Spotify. When the teacher entered the room, she asked them to find words which they found difficult to understand and add them to their cooking-show wordlist; the students then looked up words in online dictionaries such as *Google translate* and *ord.se*. The other group that worked with editing was located in another classroom and used one laptop. The students were not able to upload their film to their laptop and asked the teacher for help. Anna sent the students to the IT-support located in the school. They returned in 15 minutes, with the film uploaded and started to edit their cooking-show film.

The first group of students who were filming was located in a group room next to the classroom. The four students in the first group did not use their laptops; instead they used a smart phone to record, when they described their ingredients that they were supposed to use in their cooking-show. The second group that was filming started to film, but was told by their teacher to write a script first since the students did not know what to say in front of the camera. They then sat together with one laptop, discussed what to write and finally wrote a script. The group who selected songs to their cooking-show was located in a group room, four students with one laptop each. They listen to music on Spotify and tried to select songs. Two students looked at different YouTube videos that were not related to their project. When ten minutes remained of the lesson, the teacher gathered all the students in the classroom. All students had their laptops closed and listened to Anna, except one student who had his laptop open and looked at funny pictures.

### **Observer's summary:**

Anna used her laptop to show the project introduction. Four student groups out of six used laptops to edit films, create wordlists, select songs and write scripts. The students tended to use one laptop per group. At different times, laptop off-task activities were observed in these groups, such as watching YouTube films and entering off-task websites.

## **4.2. Results from the student interviews**

As previously stated (see 3.1), six students were interviewed. In this subsection, the students' responses to the interview questions are summarized.

- Question 1: *Do you use your laptop during your English lessons? If yes, in what way?*

The year seven student Josefina described how she used her laptop for different writing tasks and movie editing. Alice in the same grade said that she used her laptop to practice words, explaining that she compiles vocabulary lists checking the website *Glosboken*, which she finds easy to work with. She would also listen to music on low volume when she carried out writing tasks. Alice described how she used the Keynotes program to create presentations and find pictures appropriate for her presentation with the help of *Google*.

Viktor from eight grade said that they wrote many short stories on their laptops during their English lessons. He added that English probably was the subject where they used their laptops the most. Viktor admitted that on occasions when he gets bored during the lesson, he visits off-task websites such as Facebook. His classmate Christian had a similar experience and added that he sometimes played games; however, during lessons where they used laptops very much, it did not happen as often. Viktor and Christian mentioned that they used their laptops to practice vocabulary and grammar. Viktor stated that PowerPoint is one of the most enjoyable ways to learn English, and Christian agreed saying “man får välja någonting och gör en presentation om liksom, då kan man liksom välja något som man är intresserad av, och då blir det mycket roligare att skriva också” (*You get to choose something and then, like, make a presentation about it, where you can choose something you are interested in. Then it is a lot more fun to write as well*).

Sofia from year twelve said that she uses her laptop to do school work and if she has time to spare, she logs in to Facebook and her email. Erica from the same grade mentioned that they use their laptops mostly for writing and occasionally to do certain exercises. Sofia added that they did use laptops for listening and writing exercises and that they also used a chat-program to discuss books that they had read.

- Question 2: *Do you use your laptop outside the classroom? If yes, in what way?*

Josefina mentioned that she uses her laptop very much outside the classroom, for homework and for leisure-time activities such as connecting to Facebook. Alice added that many students sit outside the classroom and play different games on laptops.

Christian and Viktor maintained that they used their laptops outside the classroom, for schoolwork as well as for extramural activities such as Facebook and playing games. Viktor mentioned that it was more fun to do assignments on the computer, and Christian added that it is practical to have all assignments and documents on your laptop. Christian continued saying that it is quite practical to use one laptop and not to switch when at school or at home and Viktor was of the same opinion.

Sofia and Erica said that they used their laptops every day outside the classroom. They both agreed that they mostly used them for schoolwork. Sofia mentioned some examples such as writing book analyses and practicing for tests. Erica gave examples such as writing speeches, practice on these and different listening exercises. When it came to extramural online activities, Sofia and Erica mentioned that they logged on to Facebook, read different blogs, online magazines and newspapers.

- Question 3: *What do you think about your computer knowledge?*

Josefina and Alice said that they are satisfied with their computer knowledge when it comes to schoolwork. Christian and Viktor agreed in that they were satisfied with their computer knowledge as it worked well for different school tasks, which they were given. Viktor said that there had been a computer day at their school on which all students had workshops on the Microsoft Office programs Word, Excel and PowerPoint. Sofia maintained that she was very content with her computer knowledge; she mostly used Microsoft Word, PowerPoint and surfed the Internet, which she believed that she managed well. Erica added that she was constantly developing her computer knowledge since they used laptops in almost every subject.

- Question 4: *What do you think about your teacher's computer knowledge?*

Alice and Josefina both agreed that their English teacher (Anna) often taught with help of her laptop and did it in a satisfying way. Alicia maintained that it is much more exacting to watch a presentation

when Anna uses her laptop instead of when she writes on the whiteboard, saying “då gör hon värsta Keynote presentationen och det är mycket roligare att kolla på”. (Then she makes an incredible Keynote presentation and it is much more fun to watch).

In Christian’s opinion, his teacher (Victoria) had a little more computer knowledge than her students. Viktor, on the other hand, thought that they were on the approximately same level.

Sofia and Erica agreed that their English teacher (Christina) has a high level of computer knowledge. Sofia described how Christina introduced new ways of doing tasks; for example, she explained: “vi skulle ju filma vår PowerPoint som vi skulle hålla och då fanns det något program som man kunde screen-filma på skärmen”. (We were supposed to video record our PowerPoint that we would present and then there was a program that recorded the screen). Erica added that Christina had showed them animations when they did not want to video record themselves, saying “med så här videoklipp, spela in våra röster och sen göra videoanimationer”. (With film-clips, record our voices and then make video animations).

- Question 5: *Do you have help of your laptop when you learn English? If yes, in what way?*

Josefina stated that she learns to spell in English with the word processing program’s spell check and that it is easier to edit her texts compared to handwriting, with for example copy and paste functions. Alice explained that the laptop helps her to learn words, saying that “glosorna blir lättare alltså man lär sig snabbt och på ett enkelt sätt”. (the wordlists become easier, I mean that you learn them in an easy and fast way).

Viktor talked about practicing glossaries online; for him it is an easy and fast way to practice word spelling at the website *Glosboken*. Christian added that they did not have that much wordlists in year eight but that he used the synonym function in Microsoft Word to learn new words and to develop his writing skills.

Two high school students, Sofia and Erica, agreed that they had help from their laptop when learning English. Sofia encounters the language every day on her laptop through social media, tweeting in English and changing the language in Facebook’s settings to English. She said that she develops her own English vocabulary when reading English articles, whether it is a gossip article or a serious article in *The Guardian*. For Erica the use of the Internet is a beneficial way to increase her vocabulary. Sofia and Erica both agreed that it is more motivating to learn words in contexts, which they are interested in, compared to traditional word tests. Erica explained: “det är nog bättre att få ett ord i taget, sen börjar man använda dem, tillslut kan man dem och vet i vilka sammanhang man kan använda dem i, och så där”. (It is probably better to get a word at the time and then start using them, eventually you know them and can put them in context, and so on). Sofia said that she uses *ord.se* to look up words while Erica prefers using *tyda.se*.

#### **4.2.1. Summary of the student interviews**

All of the interviewed students maintained that they used their laptops for writing in certain contexts; they also stated that they used laptops to improve their vocabulary. The four compulsory school students used the website *Glosboken* to practice words, and the two high school students said that they learned vocabulary when they read in English on the Internet. All the students explained that they used their laptops outside the classroom for different types of schoolwork and extramural activities.

When it comes to computer knowledge, all six students were satisfied with their level; they were also satisfied with their teachers’ computer knowledge. Alice (7<sup>th</sup> grade), Erica (12<sup>th</sup> grade) and Sofia (12<sup>th</sup> grade) said that their English teachers’ use of laptops inspired them. All the interviewed students maintained that they used laptops to improve their English language. The four compulsory school students described how they used laptops to improve their English writing and vocabulary. The two high school students stated that they developed their English by reading on the Internet and looking up words that they did not understand.

## 4.3. Results from the teacher interviews

As stated before (see 3.1), three teachers were interviewed; two taught at a Swedish compulsory school (Victoria and Anna) and one taught at a Swedish high school (Christina). Here the results will be presented in terms of benefits and disadvantages in the use of laptops in English language teaching and learning. The section has four sub-sections that are connected to the research questions.

### 4.3.1 Disadvantages of using laptops

All three interviewed teachers agreed that students' off-task focus is a disadvantage when using laptops in the classroom. They all maintained that students entered off-task websites such as Facebook, YouTube and played different games during lessons. Anna mentioned that some students played games during break and could not stop focusing on the game when returning to the lesson. She also observed that these students were less active physically than they used to be before the implementation of the one-to-one laptop program.

Christina and Victoria maintained that students attending class without a laptop created a problem if they had planned to work with laptops. Victoria said "nackdelarna, som idag så är det några som har glömt datorerna, då är det inte så lätt som att, här får du en till penna liksom, det finns inga extra datorer på det sättet". (Disadvantages, as you saw today there are some students that had forgotten their computers, then it is not as easy as, here you have a new pen, there are no spare computer in that way). In her opinion, the motivation to write in English decreased among these students. Victoria also stated that her students' spelling proficiency had decreased because of the use of spell-check in word-processing programs and the use of text message- and chat-language. Anna described how during different problem-solving projects in which the students needed to take responsibility over their project, some students failed to take part in problem-solving activities, lost focus and entered off-task websites instead.

### 4.3.2 Benefits of using laptops

The three interviewed teachers all stated that access to the Internet is a benefit when teaching English. All three teachers also described an easy access to authentic English on the Internet as a benefit.

Christina (high school teacher) expressed her appraisal of this benefit as follows: "det underlättar ju vissa delar av undervisningen något enormt, med att hitta saker att läsa, hitta saker att lyssna på, att titta på, alltså rent i material så finns det ju så himla mycket att använda sig av på nätet". (It facilitates some parts of the teaching enormous, to find things to read, listen and watch, I mean when it comes to material there are a huge amount on the Net that you can use). She described how laptops function as an inspiration for students; laptops seem to increase their motivation. She also mentioned that with laptops and access to the Internet new methods to learn English are available and they are easy to use. Christina described how she used these new methods such as chat-discussions, creating films and animations, and making subtitles for YouTube videos. She stated that these methods would not work without access to the Internet. She described the method to make subtitles as an excellent way to practice listening and writing proficiency with videos which students find interesting. Christina stressed that with the help of the laptop she could easily link the students' extramural activities to her classroom activities and in that way enhance her students' motivation to learn English. Anna also maintained that with laptops her students could easily create audio, films and presentations in English, which she saw as a benefit when teaching English. She mentioned that she used different websites to practice grammar and vocabulary since they supply students with fast answers, inform the students if the exercise has been done correctly or not.

Anna and Victoria explained how the use of their online platforms made it easier to organize information, tasks and the students' development plan. Victoria said that her school used one platform (*Skolportalen*) for student tasks and for communication between a teacher, students and parents; she saw this as a great benefit when using laptops. Anna described that at her school they used one platform (*Unikum*) for lesson plans, connections to the curriculum, grading criteria, evaluations, absence reporting system and students' individual development plans and one platform (Google sites) for students' tasks. Since students shared their documents with Anna, she could follow, for example, her students' writing process in real time, which she saw as a benefit when using laptops. She

mentioned that laptops and *Unikum* make it possible for her to work in a more efficient way when it comes to individual students' development. Anna maintained that her students' evaluations, the national curriculum and syllabus could be easily linked together and worked with through *Unikum* and students' laptops. She said:

Där man ser hela elevens läroprocess faktiskt och jag använder det jättemycket i min undervisning på det viset att mina elever lägger in sina utvärderingar där och kan hela tiden återkoppla till dem vad det står i kursplanen och läroplanen liksom. På ett naturligt sätt, det hade jag inte kunnat göra om vi inte hade datorerna. (There you can see the student's entire learning process and I use it a lot in my teaching, by letting the students put their evaluations there and we can connect them to the curriculum and syllabus in a natural way that would not have been possible without the laptops).

Victoria described how students used laptops as a tool and concluded that when working with laptops facilitate the writing process and help to develop English writing proficiency. She stated that her students had become better to express themselves and writing much faster when writing on laptops.

#### **4.3.2 Technical and pedagogical problems and solutions**

This sub-section includes the results regarding technical and pedagogical problems and solutions when using laptops in English language teaching. Christina stated that there are some basic conditions that must work when you use laptops in English teaching, "...att datorerna håller en hyfsad kvalité och att nätverket fungerar som det ska". (...that the computers have a decent quality and that the wireless fidelity is well functional). She continued by saying that students of today get tired fast and their motivation declines if the laptops or network do not work properly. Christina presented a solution to the problem with students surfing on to off-task websites on their laptops, saying "... jag försöker få in det i undervisningen istället, är de på Facebook hela tiden, men då får vi väl använda Facebook på något vis eller vad dem nu spelar". (...I am trying to integrate it in the education instead, if they are on Facebook all the time, then we have to use Facebook in some way or the game they play). She explained how she created Facebook groups for all her courses, made the students change language into English and use the Facebook-chat for different discussions online. Furthermore, she said that other teachers had created book groups on Facebook where students should write a reading log and comment on each other's logs.

Victoria and Anna described problems with students' off-task browsing through their laptops at school. Their colleagues discussed if they should turn off the access to, for example, Facebook. Victoria mentioned that they had decided not to limit access to Internet, as students should learn to focus on schoolwork. She stated that when working with year eight and nine, the focus problems could be connected to a grade which students aim at. In Anna's opinion, Facebook could be great; she herself has a Facebook page where she gives information to her students and she mentioned that other teachers also use Facebook in their teaching. Facebook is her students' way to communicate; she argues that "för dem är det den naturliga kanalen. Det är så de kommunicerar". (for them it is the natural channel. It is how they communicate). Anna said that when she uses Facebook instead of the school's homepage, she gets much more response from her students.

Victoria said that she found it important that her students could write by hand and that when she teaches writing she varies between writing with laptops and by hand. She also observed that her students often use informal language when writing in English because of the use of chat- and text message-language outside school. Victoria added that her solution to this problem is to emphasize and work with differences between informal and formal language.

#### **4.3.3 Teachers' development and IT-support at school**

All three teachers agreed that their IT-knowledge was on a good level. Anna maintained that she does not handle technical problems. If students have technical problems, she sends them to their IT-support. Regarding pedagogical problems, she felt comfortable to use the school's software and help her students if any problems occurred. On the subject of teachers' development, Anna said that her school had made a great investment in the one-to-one-laptop-program during the last two years. Thus, Anna was one of five teachers who attended a course at Apple, which inspired her colleagues to use laptops

in their teaching. She also said that she and her colleagues had visited the British Education and Training Technology fair (Bett-fair) in London as well as schools with one-to-one laptops programs, which was an inspiring experience.

Christina stated that her IT-knowledge level is high because of her great interest in laptops and time spent on computer mediated teaching. She also mentioned that there is money for development but that she had not used that opportunity yet. Christina mentioned that she often used tutorials on YouTube when she wanted to learn how to use specific software, in that way educating herself. Christina said that she would like to get more knowledge about games that her students play so that she could use them in her future teaching. Victoria would like to have more time to develop her IT-knowledge, and she said that their municipality had an IT-group with the focus on development in the municipal schools; teachers at her school could either invite or visit the municipal IT-group. She also indicated that her school could become better to take advantage of the IT-colleagues' knowledge. Victoria also wanted to understand and work with software so that she could follow her students' learning progress. When it came to IT-knowledge, Victoria maintained that she takes one step at a time, but she would like to have more time to find new pedagogical tools, which she can use with laptops. Anna described her school's IT-support as well functioning. They had one staff member working fulltime with the technical support for students and teachers. This school had a teacher who also works as an IT-pedagogue at the school. Anna said that from this teacher she and her colleagues could get help with methodological problems related to the use of laptops in their teaching.

In contrast, Christina described her school's IT-support as very poor. She mentioned that even though teachers and students could contact the janitor for hardware support, but when it came to pedagogical support, teachers came to Christina, since she often used laptops in her teaching.

Victoria said that the municipal schools had gone through a large change when the municipality had started implementing one-to-one laptop programs in their schools; then the increased amount of laptops was a problem for the municipal IT-support. In her opinion, the IT-support had become better as it is a complex process to implement so many laptops, going from the situation when only teachers had laptops to the situation when teachers and students each have laptops.

#### **4.3.4. Students' use of laptops**

According to Christina, it is important that teachers should have a well-defined purpose when working with laptops; she claimed that her students felt that using laptops is a part of their everyday life. Classroom activities that suit best when using laptops are, according to Christina, those that are impossible or very hard to carry out without laptops, such as subtitling YouTube videos, creating animations and partaking in chat-discussions online.

Victoria described the word processing program Word as a great tool when the students learn to write in English. In her opinion, working with software through students' laptops where you can follow your students' writing process could be beneficial for teaching English. This is something she would like to use in the future. Anna said that she used the word-processing program Google docs and was able to follow her students' writing process. She saw it as a beneficial tool when teaching writing. According to Victoria and Anna, the access to information through laptops and the Internet is a suitable classroom activity, but Victoria added that she as a teacher must be aware and teach her students to be critical of the Internet sources, saying "det är mycket som kommer med det här fantasiska verktyget som vi behöver behandla med källkritik och så, kan man lita på Wikipedia?" (There are a lot of things that come with this amazing tool, with criticism of sources and so on, can we trust Wikipedia)? Anna stated that problem-solving assignments are most suitable for students' use of laptops.

## **4.4 Data analysis**

In this section, the three different types of data will be analyzed in relation to the research questions formulated in the section on aims (section 1.1).

#### **4.4.1 What are the benefits and disadvantages of using laptops in teaching English at schools under study?**

The classroom observations, the student interviews and the teacher interviews indicated that access to laptops creates an opportunity to have access to authentic English and learn the language in a fast, creative way. At the same time, all three types of data showed that access to Internet through student laptops makes it easy for students to browse off-task websites and not to focus on the intended classroom activity.

Anna, a compulsory school teacher, mentioned that some of the students at her school played computer games on their laptops during breaks and had problems focusing on schoolwork during the lesson. She also noticed that these students had been less active physically during recess and saw this as a disadvantage of the one-to-one laptop program.

Another disadvantage that the teacher interviews with Christina and Victoria revealed was the problem with nonfunctional laptops or students who had forgotten laptops at home. Christina and Victoria maintained that student's motivation could decrease because of the lack of functioning laptops. Christina added that when the laptops were functioning well, they stimulated and increased students' motivation to learn English. She also mentioned about new methods which she used when teaching English with laptops, such as, for example, making subtitles to YouTube-videos which in Christina's opinion is an easy and beneficial method to practice listening and writing proficiency.

Victoria argued that her students' spelling proficiency decreased, which she saw as a disadvantage of the one-to-one laptop program. She also described how laptops facilitated the writing process; according to her observations, her students had become better at writing in English. This proves the benefit of using laptops when teaching writing proficiency.

The seventh grade classroom observation included a project in which the students were expected to solve a problem when making a cooking-show with help of cameras and laptops. The finding from this observation agreed with what the compulsory schoolteacher Anna said during the teacher interview. Anna maintained that the most beneficial classroom activities, when working with laptops, are problem-solving tasks in which laptops are used as tools. Furthermore, the results from the seventh and eighth graders' interviews indicated that the students got inspired and motivated when working with problem-solving tasks. Victoria also found that working with laptops as tools is beneficial.

A final benefit that was revealed by the compulsory schoolteachers Anna and Victoria was the use of online platforms. Both teachers said that their platforms facilitated communication with students and parents. Anna mentioned that she could work with her students' individual development plans in a more beneficial way through the platform with help of student laptops. She could also follow her students' writing process since they wrote with an online word-processing program (Google Docs). Victoria added that this was something she would like to work with, as this method was a benefit for writing process.

#### **4.4.2 How do the teachers solve technical and pedagogical problems with laptops in their teaching?**

To judge from my experience as an observer, technical problems occurred during the seventh and eighth grades observations. In the seventh grade classroom, one group had problems with uploading their video to the laptop; the students were asked by Anna to contact the IT-support staff, and they returned later with the problem solved. Thus, the observation of Anna's classroom conformed to her description of the school's IT-support in the teacher interview. In the eighth grade classroom, one student had a laptop charger that did not work. The student was then suggested by Victoria to write by hand. According to the compulsory school teacher Victoria and the high school teacher Christina, these kinds of problems occur, and teachers need a backup plan for such occasions.

Pedagogical problems occurred during the seventh and eighth grade observations. Off-task activities were noted during these two classroom observations. During the eighth grade observation the students wrote stories with their laptops. Victoria described the laptops as great tools to practice and develop students' writing skills; however, she indicated that her students had become worse when it came to spelling because of the word processing programs such as word check and the general use of

computer and text message language. Her solution was to make students write by hand together with writing on laptops and, at the same time, teach students differences between formal and informal language. It is interesting that the eighth grade student Christian said that by using the word-processing program Microsoft Word, he developed his written English, for example, by using the synonym tool, which agrees with Victoria's response to this interview question. Hence, teaching written proficiency by means of laptops and word processing programs can be both a benefit and a disadvantage depending on how laptops are used.

As described in 4.4.1 above, the problem with students surfing on off-task websites occurred in two observations and was mentioned by all the interviewed teachers and students. Anna and Victoria mentioned that they and their colleagues discussed the possibility of banning off-task websites which students used to surf. Victoria stated that one solution to this problem with students in eighth and ninth grade is to show the connection between being on-task and the grade, which students are aiming for. By contrast, Christina suggested integrating these off-task websites in her teaching, and Christina's solution agreed with her students' interview responses regarding the use of Facebook and computer games in classroom activities. In sum, the pedagogical problems highlighted in this study are spelling, the use of spelling checkers and off-task websites, and how to integrate these websites in English language teaching.

#### **4.1.3 What kinds of IT-support and possibility to develop their methodology when teaching with laptops are available for the teachers of English?**

The efficiency and availability of IT-support varied between the three teachers' schools. Thus, Anna indicated that the IT-support at her school functioned sufficiently well, Victoria described her school's IT-support as functional and becoming better and better after the implementation of the one-to-one laptop program, whereas Christina described her school's IT-support as dysfunctional when it came to pedagogical support. The eighth grade students (from Victoria's class) described the quality of the technical support as low; they also mentioned that laptops got easily broken.

All three teachers maintained that their IT-knowledge was on a good level, and the results from the student interviews agreed with this. During the classroom observations all three teachers used their laptops in an efficient and pedagogical way. When it comes to the possibility for IT-development, the three teachers' situations looked different. For Anna, the opportunity to develop her IT-methodology was great, and she described her visits to the Bett-fair in London, British schools with laptop one-to-one programs and a pedagogical course at Apple, which she had attended and inspired her colleagues to take. Victoria mentioned that all municipal schools had the possibility to contact the municipal IT-group for further development of IT-skills and that her school worked to increase the IT-knowledge for all members of the school staff. Christina mentioned that her high school had money for development, but it was up to each teacher to apply for it. Christina also added that she often learned by watching tutorials on YouTube if she wanted to use laptops in her teaching.

## **5. Discussion**

In this section, the method of the project will be discussed and the project's results will be compared with findings of previous research. This discussion will be concluded by reflections on the project's implication into English language teaching and future studies.

Since the study includes three classroom observations, six student interviews and three teacher interviews, its results cannot be generalized to other English teachers. Hence only tentative conclusions can be drawn about the teachers under study, and these conclusions should be verified in future studies in the same area. Since the methodological triangulation of classroom observations, student and teacher interviews has worked out well, the present results' validity can be considered high. The reliability can be considered thorough since the procedure was the same when carrying out

teacher interviews, all student interviews, and the same observation scheme was used for all classroom observations. However, the student interviews were carried out with two students at the same time, which might decrease the validity of results since the students could have influenced each other when responding the interview questions. If it had been possible to redo the interviews today, interviewing all the students one by one to ensure that they did not influence each other, would had been a change to consider. The twelve-grade classroom observation did not give much data since the classroom activity did not involve laptops. If the opportunity to do a new classroom observation with an activity including the use of laptops, it could have provided more data related to the research questions of this project.

It makes sense to start discussing the findings of this study by comparing them to the paper on the same topic by Witting (2011). Thus, the following benefits brought by laptops into English language teaching, which are highlighted in Witting's paper, can be conformed to the undertaken study's findings (Witting 2011, p. 2-6). First of all, authentic material from the Internet. It is provided by, for example, textual and vocal communication through chat-programs with classmates and peers in other countries. The high school teacher Christina specifically highlighted this benefit, but she did not mention the peers-from-other-countries factor. Witting (2011) describes this type of authentic material "as some kind of modern pen pals". Another benefit is the production of multimedia files such as videos and audio (Witting 2011, p.3). Students are able to work creatively and use their spoken English during such projects and tasks. This benefit was noted in the present study's observations as well as in student and teacher interviews.

However, there are benefits that do not agree with those discussed in the undertaken study, but they are described by Witting (2011, p.2-4). First, cooperative learning as students have different experiences when working with laptops; when needed, they can help each other by sharing their knowledge and experience. . Furthermore, Witting mentions the possibility of publishing texts, videos, audio files on the Internet, which significantly broadens the audience of language learners compared to a group of classmates and the teacher. This increases students' motivation. Another benefit described in his paper is the fact that students can easily work on their own level and pace which can easily individualize teaching. Finally, portability is a benefit as well as the students are able to change location when working with laptops. These issues have not been mentioned in the interviews analyzed in this study.

A number of present findings agree with results from other studies. Thus, a correlation between the research carried out by Lowther, Morrison and Ross (2003) and the present study is manifest in the fact that an easy access to research available in the Internet is acknowledged as the most beneficial aspect of the use of laptops. All teacher interviews, student interviews and classroom observations indicated that easy access to Internet through laptops is beneficial when it comes to an easy and fast way of finding authentic English learning and teaching material. Further on, Lowther et al. (2003)'s study of teacher interviews showed that disadvantages of one-to-one laptop programs were monitoring students' use of Internet and technical problems. The problem with monitoring students' use of Internet agrees with the present study's result regarding off-task browsing from the teacher interviews, student interviews and classrooms observations.

Another interesting correlation is that Lowther et al. (2003)'s study showed that students in the laptops group became better in writing and problem-solving. It is also noted in the undertaken study as the teacher interviews indicated that laptops helped students improve their writing and that problem-solving tasks were beneficial when working with laptops in the English language classroom. At the same time, in one of the teacher interviews it was indicated that students' spelling proficiency had decreased because of the use of chat and text message language, which is in common use in laptops and cell phones.

Chandrasekhar (2009) indicated that IT-support, teachers' IT-development and pedagogical vision from the schools' district are of primary importance for the success of one-to-one laptop programs. If the IT-support and pedagogical vision are workable, constructive and there are possibilities for a qualified development for language teachers, teachers will use laptops in their classroom activities. This is exactly what the teacher interviews in the present study indicated; IT-support is important for the interviewed teachers because then they can teach with laptops without any major interruptions and keep the students motivated and on-task. If teachers get this kind of support, they are motivated to use laptops. Even though the interviewed teachers' possibilities for IT-

development differed, teacher responses indicated that the teachers had the possibility to increase their IT-knowledge through colleagues, school or municipality. This result agrees with Chandrasekhar's (2009) suggestions for a successful one-to-one laptop program.

Cowie, Jones and Harlow (2011)'s study indicated that colleagues are a principal source of professional IT-development when using laptops in teaching. The interviewed teacher Anna described how she and four other colleagues had gone through an education at Apple and then shared their knowledge with other colleagues. Thus, findings of the present study, those of Cowie et al. (2011) and Chandrasekhar (2009) indicate that possibilities for IT-development for language teachers are crucial for them to be able to use laptops in efficient way when teaching. The undertaken study showed that IT-development could take different forms and could be initiated by the teacher, colleagues, school or municipality.

The Swedish compulsory school and high school curricula (see 2.1) stress that it is the headmaster's responsibility to provide the school with computers. The Swedish schools inspectorate (2011) report indicates that teachers lack access to computers; by contrast, the undertaken study has revealed that this is not a problem since the investigated schools use one-to-one laptop programs. However, broken laptops and the lack of reserve laptops were mentioned as a problem in the interviews with this study's informants. The interviews also made it clear that possibilities to use computers can look very different for students depending on what school they attend.

As for the use of laptops in English language teaching, the undertaken study confirms that the access to Internet through individual laptops opens up a huge opportunity to find easy, fast and authentic English material that can be used by teachers and students. The study also indicates that laptops are beneficial tools when teaching and working with students' writing proficiency with word-processing program, both offline and online. However, the results point to the fact that laptops could decrease students' spelling proficiency and that teachers must be aware of this. Another disadvantage revealed in this study is the student use of laptops to engage in activities on off-task websites. However, this study also indicates that including these websites in the classroom activities could be beneficial and motivating for students. Thus, according to the study's results, problem-solving tasks seem to be a most effective classroom activity to use laptops in. Another finding is that a functional online platform makes it possible to work with students' individual development plans in a more efficient way; it also enhances communication with both students and parents.

To be able to use laptops in your teaching, you have to develop your IT-knowledge and pedagogical skills with laptops. The present project has showed that the teachers under study had different possibilities for IT-development, and it seems that if individual teachers can invest their time and energy, schools and counties can provide IT-development through courses, workshops and visits at IT-fairs and other schools working with one-to-one laptop program.

This study has investigated the use of laptops in English language teaching. Future studies could investigate the use of smartphones, portable reading devices or specific software programs for teaching instead of laptops. It would also be of interest to interview headmasters and IT-personals at different schools and counties in the Stockholm area to investigate their point of view on the use of laptops.

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# Appendix 1 - Letter of consent

## Missivbrev

Anhållan om tillstånd för att ert barn kan delta i en undersökning inom ramen för ett examensarbete vid lärarutbildningen vid Stockholms universitet.

Hej!

Jag skriver ett examensarbete vars syfte är att undersöka hur lärare arbetar med laptops i engelska undervisningen. Jag kommer att observera engelska lektioner, intervjua lärare och elever för att kunna svara på min frågeställning. Jag vill med detta brev be om tillåtelse att ert barn deltar under denna lektion. Jag kommer att slumpmässigt välja ut några elever som om de vill får ställa upp på en intervju. Alla deltagande elever kommer att garanteras anonymitet i det skrivna arbetet och skolorna som deltar kommer inte att nämnas vid namn. I enlighet med Vetenskapsrådets etiska regler är deltagandet helt frivilligt. Ert barn har rätten att fram till att arbetet avslutas välja att avbryta sitt deltagande. Materialet kommer att behandlas konfidentiellt och kommer inte att finnas tillgängligt för annan forskning. Jag behöver vårdnadshavarens underskrift och hjälp att få tillbaka intyget efter påskrift. Sätt ett kryss i den ruta som gäller er.

Som vårdnadshavare ger jag tillstånd att mitt barn deltar i studien

Som vårdnadshavare ger jag inte tillstånd till att mitt barn deltar i studien

Datum \_\_\_\_\_

\_\_\_\_\_  
Vårdnadshavarens underskrift

\_\_\_\_\_  
Elevens namn

Har ni frågor får ni gärna kontakta mig på telefon eller via mejl.

Med vänliga hälsningar

Simon Alvring 0737 43 87 08

[052simalv@student.su.se](mailto:052simalv@student.su.se)

Handledare för undersökningen är Larisa O. Gustavsson

[Larisa.gustafsson.oldireva@gu.se](mailto:Larisa.gustafsson.oldireva@gu.se)

# Appendix 2 – Observation scheme

Observer: Simon Alvring  
 Subject: English  
 Grade: 7th  
 Lesson:(min) 60

Placement in the classroom: Sitting still

Date: 2012-04-12

## OBSERVATION SCHEME

TIME	ACTIVITIES	USE OF LAPTOPS						TEACHER/STUDENTS	PROBLEMS & SOLUTIONS	EXTRA
		Search	Write	Create	Video	Radio	On task			

# Appendix 3 – Interview questions to teachers

Interview questions Teachers

(Record, Discontinue at any time, Confidential)

1. Hur länge har du varit engelska lärare?
2. Vad tankar du om dina egna erfarenheter när det gäller användande av laptops i Engelska undervisning?
3. Hur frekvent använder du laptops i din engelska undervisning?
4. Vad är fördelarna med att använda laptops?
5. Vilka klassrums aktiviteter tycker du är mest lämpligt för användande av laptops? Varför?
6. Vad är nackdelarna med att använda laptops?
7. Vad tycker du om it-supporten på din skola?
8. Vad tycker du om dina it-kunskaper idag?
9. Vad finns det för möjligheter för dig att utveckla dina it-egenskaper?
10. Vad tycker eleverna om att använda laptops när de lär sig engelska?

# Appendix 4 – Interview questions to students

## Questions for students

1. Använder du din laptop under engelska lektionerna och i så fall på vilket sätt?
2. Använder du din laptop utanför klassrummet och i så fall på vilket sätt?
3. Vad tycker du om dina datorkunskaper?
4. Vad tycker du om din lärares datorkunskaper?
5. Har du hjälp av din laptop när du lär dig engelska och i så fall på vilket sätt?

Stockholm University  
SE-106 91 Stockholm  
Telephone: +46(0)8 – 16 20 00  
[www.su.se](http://www.su.se)



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