

DIGITAL STORYTELLING
IN
SECOND LANGUAGE LEARNING

A qualitative study on students' reflections
on potentials for learning

Master's thesis in didactics for English and foreign languages

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*Digital storytelling is just like a Kinder Surprise; you get three in one.
You use your English,
you work on a topic,
and you learn from the steps in the process.*
(student Dina)

Abstract

This study focuses on the educational use of digital storytelling within second language learning from an emic perspective. Digital storytelling, which can be described as a combination of the old storytelling tradition and new technology, was originally used for other purposes than education and learning. This has however changed over the years. With the advent of new technology in schools, various forms of digital media production have become quite common as approaches to learning in several subjects. This was even further emphasized with the new curriculum from 2006, where digital skills were established as one of five basic skills. I have in my own teaching practice used digital storytelling as a learning activity since 2003.

This study's main objective has been to explore young learners' meta-reflections on potentials for learning when digital storytelling is used as a learner centered second language learning activity in lower secondary school. Data have been collected from questionnaires, semi-structured interviews and reflection logs and been analyzed thematically. Three overall themes were established, all with reference to the following main research question outlined for the study: *What are the potentials for learning when digital storytelling is used as a second language learning activity in lower secondary school, as perceived by the students and expressed through their reflections?*

I found that students understand digital storytelling as an all-embracing activity for learning in the sense that it can be used to obtain other goals, e.g. development of basic oral, written or digital skills, or be the goal in itself, e.g. to develop content understanding. The study also showed that increased motivation for academic work was generally related to variation in working method, more than to digital storytelling. A few differences between boys' and girls' reflections on the use of new technology were observed, but a majority of the students in this study related learning to being active in the learning process, e.g. by teaching others. In this respect, they pointed to digital storytelling as a relevant way of documenting and sharing knowledge. The study furthermore showed that scaffolding and contextualization were important premises for learning to take place and that students not only learn from their own digital storytelling productions, but also from those of their peers.

Preface and acknowledgements

Once upon a time, there was a teacher who was given the possibility of going the long way from Trondheim in Norway to Cardiff in Wales to attend an international conference on digital storytelling. Already during the first encounter, the teacher was immediately seduced, not only by the potential that lay in the merger between traditional and new literacies, but most of all by the power that lay in the stories themselves. This first encounter made such a great impact on the teacher that she wanted to bring the seducer back home to Trondheim, so that her colleagues and young students could also be seduced.

About myself:

I have been a teacher in lower secondary school for 25 years and have for many years been using digital storytelling as a learning activity in English as well as in other subjects I teach. When I decided to take a master's degree in didactics for English and foreign languages, I never doubted that my research should be related to the use of digital storytelling as a second language learning activity. Two years of combining teaching with master studies have now come to an end.

Acknowledgements:

This study could not have been carried out without the cooperation of my students. They have not only shared their reflections with me, but also been patient when I have been their busy, double working teacher. I am equally grateful for the support from my team colleagues who, from time to time, have had to cope with my absence. The administration at Charlottenlund lower secondary school have not only been supportive and encouraging, but also made this study possible with respect to practical matters. I would also like to take the opportunity to thank the administration of the municipality of Trondheim for supporting this study.

My supervisor has been Hildegunn Otnes. *You have given me constructive advice and inspiration. Thank you!*

Last, but not least I am also very grateful for my husband's patience, support and constructive critic during the work with this thesis.

... and now it's time for new stories to be told.

Trondheim, May 2011

Anita Normann

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1 INTRODUCTION

Digital stories do something with people – they make an impact.

My first encounter with digital storytelling, in 2003, made a strong impression on me. It was in Wales, during the 1st international digital storytelling conference that it all began. This was where and when I was introduced to the art of digital storytelling. I immediately saw that digital storytelling also had a potential for educational use. Since that first encounter, I have systematically been working to develop digital storytelling as a learning activity with my own students and colleagues. During the years that have passed, I have had the privilege of watching a great number of digital stories. There have been smiles, laughter, tears, and a various other expressions of pleasure.

This study is set out to explore whether and how digital storytelling can do more than make an impact. In the eyes of the learners, is it also suitable as a learning activity? The purpose of my study is hence to explore learners' meta-reflections on potentials for second language learning from digital storytelling activities. Two research questions as well as two hypotheses have been outlined and will be presented in section 1.2.1. To allow for a broadest possible understanding of the basis of my study, I will however first present a more detailed description of digital storytelling,

1.1 Digital StoryTelling

People have always told stories. It has been part of our tradition and heritage since the time we gathered around the fire to share our stories. Today people still tell stories, but now we have new media tools with which to share them. A digital story can hence be seen as a merger between the old storytelling tradition and the use of new technology.

1.1.1 Definition and characteristics

Put very simply, one could say that a digital story is basically any combination of a spoken narrative, a number of visuals, perhaps a soundtrack and new technologies to edit and share the story. But then there is *Digital StoryTelling*. The latter is understood as a *concept* where the focus is on producing and sharing a story based on a personal experience or memory. It is great to see that today's learners are allowed to present content understanding from various subjects by the use of new media

technology, but I would not refer to all such productions as Digital StoryTelling. Many of them are rather multimodal texts made digital, and have their own characteristics. The focus of this thesis is however within the original Digital StoryTelling tradition as this was developed in California. I will henceforward refer to this tradition, further explained below, when I talk about digital storytelling.

The concept digital storytelling was primarily developed at the Center for Digital Storytelling¹ in California, where Joe Lambert, co-director at the center, was a central person. Within this tradition, a digital story is a short story, only 2-3 minutes long, where the storyteller uses his own voice to tell his own story. The personal element is emphasized, and can be linked to other people, to a place, to an interest or to anything that will give the story a personal touch. Because of this personal touch, digital stories within this tradition often become quite emotional and make an impact on the audience. The latter is also related to the fact that digital technology offers powerful means of sharing the stories. The spoken narrative is based on a written script developed by the storyteller himself. As a help for the whole storytelling process, Lambert has identified seven elements of effective digital stories (Lambert, 2007), briefly summarized below.

During the writing, the storyteller should aim at using *first person narrative*. For a digital story to hold the attention of the audience, it is useful to add a *dramatic question*, which is resolved in the end. Additionally, the content should evoke *emotions* from the audience. *Economy* is the last element to think about during the writing. This is related to the length of the script and is perhaps the most difficult element for both beginners and the more experienced writers. Since meaning is communicated in many forms in a digital story and not only with the spoken word, a script should ideally be short, terse and to the point. 150 – 300 words is normally a good length.

The final three elements are related to the editing phase. *Pacing* is closely related to the art of storytelling, and is also important today, when stories are presented digitally. The most effective digital stories are told with rhythm, natural pacing and a varied flow. The spoken narrative is referred to as *the gift of your voice* in the list of the seven elements for digital storytelling. This is perhaps one of the most

¹ <http://www.storycenter.org/>

essential elements in a digital story. The final element is related to the use of a *soundtrack*, to support, contrast or emphasize the spoken narrative.

What I have described above is related to an ideal use of digital storytelling that can sometimes be difficult to achieve at school, and adaptations will hence have to be agreed with the students. I have nevertheless found that the seven elements play an important role as scaffolding or modelling of a good digital story. We need to have a goal, even though we might not always reach that goal.

1.1.2 Digital storytelling in the language classroom

In a didactical perspective, teachers often need to apply a broader approach to the process than what is described in the seven elements above, to make sure the digital storytelling activity aligns with the competence aims and can be expressed in the form of specific learning objectives. Although the advent of numerous technical advances has made digital storytelling possible and easily accessible in today's classrooms, the use of them as a tools for learning should always be grounded in the curriculum. That is of course also the case in the language classroom.

When used as a learning activity, it is my opinion that digital storytelling must embrace more than the production of the story itself. Jason Ohler, writer, teacher and researcher points e.g. to the importance of assessing the whole process, not just the finished story (Ohler, 2008). This is totally in line with my own experience. Students learn more during the whole digital storytelling process than what they express through the story itself. It is hence important that we allow them to document also that part. This could be done in many forms. My students often write a reflection log where such additional knowledge might be expressed. Alternatively, they sometimes address their audience with additional information and background study related to the story they will show. I could also arrange for an informal conversation around the working process and the choices the students have made. If the story is about a content matter, rather than something personal, there is also the possibility of testing the students formally on aspects related to overall content understanding.

With reference to my own experience, I will say that digital stories made in the language classroom can be of two kinds. The first it related to digital storytelling used to tell something personal, precisely in line with the tradition referred in the section above. For these stories, there is an emphasis on the use of new technology to work with traditional literacies, such as speaking and writing. Digital storytelling lends

itself perfectly to that use. My students have throughout the years made digital stories as part of their English lessons where personal topics around friends, family members, pets or keepsakes, just to mention a few, have been presented. In addition, they have made personal stories related to good books they have read. With all these topics, the focus has been on personal reflections as to why these people, animals or things are important to them. We have hence tried to avoid purely descriptive stories, but this is not always easy, especially with the beginners, and especially when students use their second language in the narration.

The other type of digital stories that are addressed within my second language classes are stories related to a content topic within the core subject English. These stories are mainly about historical content or about literature, but obviously narrated in English. Even stories of this type might be told in first person, e.g. when students take on the role of a character in a book, or of a historical avatar. This shows that even “academic”, school based stories, as opposed to personal stories, might have a personal element in the narration. The other option is to use third person narration. As I will discuss in section 5.3.4, contextualisation is very important with respect to this group of stories, where content understanding is one of the learning objectives.

When my students produce digital stories in English they always make a written narrative first. It does not necessarily have to be like that, but there are several advantages. One is that they can practice and develop their written skills. Another is that writing spurs reflection, which is so important to encourage in digital storytelling. A third advantage is that a written narrative might produce an artefact for assessment purposes, either for the teacher- or peer assessment.

Based on what is described about various story types above, I will summarize this part by saying that in a learning perspective, a student can either tell a story about self, about someone or about something. The story can be narrated in first or third person. Within a second language framing, digital storytelling is particularly interesting because it allows for an alternative and perhaps more motivating way to practise oral, written and digital skills. However, if digital storytelling is going to be more than a happening that allows for variation, and rather understood as a learning activity used to build language competence and content knowledge, a systematic instruction is necessary. Figure 1.1 visualizes how various subjects might take part in such an instruction, with a point of departure in various core subjects.

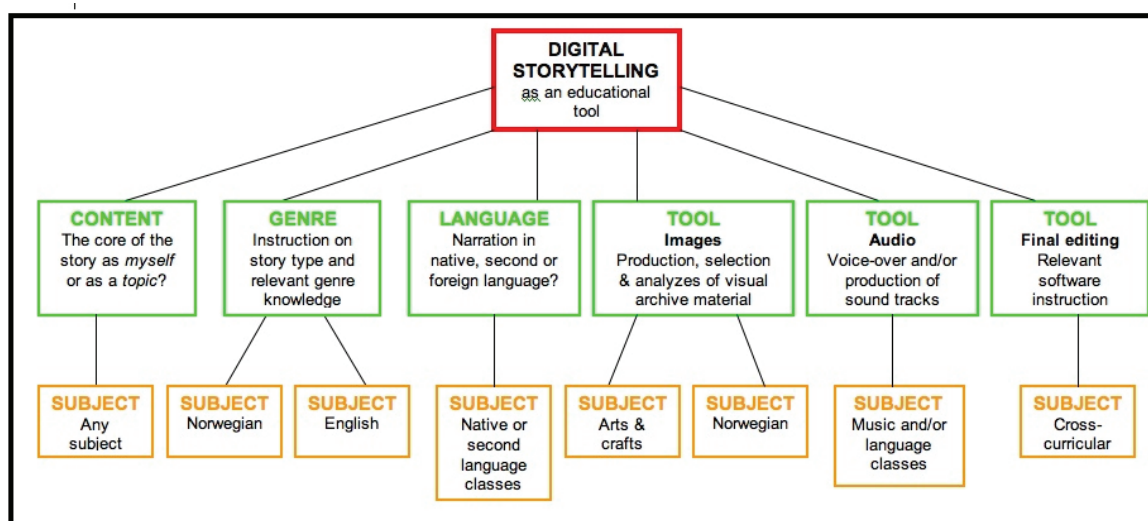


Figure 1.1: Digital storytelling instruction framework

I made this overview some years ago, to visualize how teachers from several subjects can agree on a joint responsibility for giving students the necessary instructions needed for a good mastering of digital storytelling. This overview is made with reference to the Norwegian national curriculum; henceforward referred to as the *Knowledge Promotion* (Utdanningsdirektoratet, 2006), and shows that several aspects useful to master for digital storytelling actually align with main areas of various subjects. Such an approach will also make it easier for the language teacher (or any other teacher) who wants to use digital storytelling in a learning activity, since the students might have learned some of the necessary tools in other subjects, prior to the storytelling activity.

Ohler refers to the role of the teacher in a digital storytelling activity as “the guide on the side rather than the technician magician” (Ohler, 2008, p. xi). It might sometimes be that our students are more skilled, technically, than we are. On the other hand, as teachers we have a literate education. Digital competence or digital literacies are commonly referred to as important in 21st century learning. Ola Erstad at the University of Oslo has defined various categories related to the practice of media literacy at school (Erstad, 2010, p. 62). I lean on a definition of digital competence made by the European Commission in their report “Key Competences for Lifelong Learning”. Digital competence is here seen as one of eight competencies and is understood as

“The confident and critical use of Information Society Technologies for work, leisure and communication. These competences are related to logical and

critical thinking, to high-level information management skills and to well-developed communication skills. At the most basic level, ICT² skills comprise the use of multi-media technology to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet' (EuropeanCommunities, 2007).

From a school-related digital storytelling perspective, I will point to the creative use of technology as the most interesting aspect. This is related to how students can use digital technology to produce and share content understanding, whether it takes place in the learner's mother tongue or in a second language. Since 2006, digital skills have been one of five basic skills in the Knowledge Promotion (Utdanningsdirektoratet, 2006). In that perspective it has been highly relevant to focus on how digital skills development could take place without ending up with a purely instrumental use of digital tools. My experience is that digital storytelling is one of several answers here, and this study will also explore whether my students share that opinion.

The concept of digital storytelling is closely linked to the use of new technology, but as a teacher I will argue that it is always the story and not the technology that should be focused. "The point of technology is not for it to tell the stories for us, but to allow us to craft stories that engage people on many levels" (David Thronburg in Ohler, 2008, p. viii). Along the same line is Ohler (2008), when he emphasizes that the only rule within digital storytelling is perhaps that "story without digital works, but digital without story doesn't" (ibid., p. xviii). Therefore, if our students are to obtain digital competence, I will argue that there is a need to merge the digital skills with the literate education. This is where teachers still have a role to play, even in the digital age.

1.2 Background, purpose and research questions

The description in the previous section was linked to my own experience as a language teacher, and is part of the background for this study. I have for many years been working with and interested in new approaches to learning and believe in giving learners access to various ways of developing and presenting their knowledge. I also see the usefulness of digital storytelling in this perspective. For someone who sees digital storytelling as an excellent activity for learning purposes, it was tempting to write a master thesis where I focused on my own view and understanding, and on what I personally see as the assets of the educational use of digital storytelling.

² ICT: Information, Communication and Technology

However, with respect to the study's quality, it was important for me to create a certain distance between the field of study and myself as a teacher. This study is hence related to students' meta-reflections on the use of digital storytelling as a learning activity. I want to explore how some members of the learning activity's target group define and reflect on the potentials for learning in digital storytelling.

From earlier experience, I know that many students like to work with computers. John Hattie, professor of education at the University of Auckland, has synthesized more than 800 meta-analyses related to achievement. According to him, "(...) computers can increase the probability of learning, but there is no necessary relation between having computers, using computers, and learning outcomes" (Hattie, 2009, p. 221). In the light of Hattie's findings, it will be interesting to learn more about how my students reflect on the use of digital storytelling precisely as a learning activity that allows for computers to be used.

To my knowledge, no *national* studies have been carried out where the focus is on the use of digital storytelling in second language learning. I have on the other hand found some studies from the US, from Australia and from Spain (cf. section 1.3). Even though many aspects related to learning are transferable from one country to another, I nevertheless believe that a study related to national circumstances should be highly relevant and appropriate.

A lot has been written on the educational use of digital storytelling *in general*, without relating it to specific subjects, but to my knowledge no studies where the focus is on the emic perspective, i.e. related to the learners' point of view. This is another reason to why I hope my study may contribute positively. Digital storytelling is often said to give a voice to people. As a parallel, I hope that my study can give a voice to learners who use digital storytelling, and also that teachers, like myself, can learn from their reflections.

1.2.1 Research questions and hypotheses

The overall purpose of the study is, as already mentioned, to learn about and describe learners' reflections around own learning potentials when they use digital storytelling as an approach to second language learning. The main research question is:

What are the potentials for learning when digital storytelling is used as a second language learning activity in lower secondary school, as perceived by the students and expressed through their reflections?

However, since I am also interested in exploring whether any differences between boys and girls, and between low-proficient and high-proficient students can be observed with respect to the study's main research question, an additional question has been outlined:

Are there any significant differences between genders or level of proficiency with regard to students' reflections on learning potentials from digital storytelling?

Students sometimes have quite strong opinions on which methods, tools or activities they prefer. Related to this, I am interested in finding out more about motivational factors in their academic work in general, and more specifically whether digital storytelling is understood as a motivating learning activity. The first hypothesis outlined is based on the assumption that there is a connection between motivation and learning, and that this is an aspect that might influence the students' reflections on digital storytelling as a learning activity. I am interested in finding out whether the students are able to reflect on potentials for learning from digital storytelling even though they may not see digital storytelling as a motivational activity. The following hypothesis has been outlined:

Many students point to a connection between motivation and learning outcome. Their motivation towards working with digital storytelling will therefore influence their reflections on potentials for second language learning from digital storytelling.

Finally, I am also interested in uncovering whether the students embrace all aspect with digital storytelling, or whether they look at this way of working as purely an instrumental use of digital tools. The second hypothesis was outlined related to precisely this aspect:

Many students look at learning through the use of digital storytelling basically as learning of technical skills.

These two research questions and hypotheses will guide me through this study, but I nevertheless find it necessary to point to a few limitations, to clarify even further.

1.2.2 Limitations

The purpose of this study is neither to measure the learning outcome of the specific storytelling project carried out (cf. section 1.2.4), nor to focus on digital storytelling as a phenomenon in itself. My focus is on the learning aspect of using digital storytelling as an approach to second language learning, as perceived by the learners. This means

that no student products will be presented in this study. Even though that could have been an interesting approach, the study is limited to looking at how students *reflect on potentials for learning* when digital storytelling is used as a second language learning activity. Whether they achieved good results in the relevant project or not is therefore not in focus. With respect to teaching and learning strategies, I do not, in accordance with Hattie (2009, p. 245), believe in one particular method, activity or tool that will make an overall difference with respect to academic achievement. I do, however, believe that students should be presented to a variety of approaches to use in their learning. They additionally need to reflect, both alone, with peers and with the teachers, on the usefulness of these various approaches, with respect to meeting the objectives set for each learning activity. This study can also be seen as a formalization of such meta-reflections among a group of lower secondary learners.

1.2.3 Overall research design

To meet the study's objectives outlined in the form of the presented research questions and hypotheses, I will carry out a qualitative study with an abductive approach. The latter is related to the fact that I will constantly alternate between theoretical perspectives and concepts on the one hand, and the empirical data on the other hand.

The emic perspective will be central since the study focuses on each student's subjective experience with or understanding of learning potentials from digital storytelling activities. The empirical data are related to the students' use of their everyday language to express their experience and reflections on the topics in question. Based on this, I will also refer to the study as a phenomenological study.

According to Tove Thagaard, at the University of Oslo, phenomenology precisely "takes as a point of departure the subjective experience and seeks to obtain an understanding of the deeper meaning in the individual's experiences" (Thagaard, 2009, p. 38), (my translation). Whether my findings will result in change of practice or not, is of course an interesting question. This is nevertheless not the ultimate aim of the study, and hence also the reason to why I do not refer to my study as action learning, despite the fact that I am a teacher using my own students in my research.

1.2.4 Information on data sample and storytelling project

One characteristic of qualitative research is that samples are generally quite small (Marshall, 1996). My research is carried out in a group of 21 9th grade students

following a course in *English in depth*, with me as their teacher. The students are 14-15 years old, and in their second year at a lower secondary school in a big city in Norway. All the data collection takes place at school and all involved parties, i.e. the students and their parents, are informed about the research to take place, and they have all given their consent prior to the data collection (cf. appendix 2, in Norwegian).

It needs to be emphasized that all students in the data sample have chosen to follow this optional course in English, where the focus is on developing the communicative skills of the students. This English course is hence an addition to the ordinary, mandatory English lessons all students have to follow. There is a slight majority of girls in the group, and all the students are either at or above an average level of English. It is nevertheless a telling difference between the students as far as their oral, productive skills is concerned, and some students are more reluctant than others to take actively part in e.g. literary discussions.

The digital storytelling project carried out in this group is called “From book to digital story”, and is based on a study on John Boyne’s novel “The Boy in the Striped Pyjamas”³. The first six weeks of the course were spent on various activities related to studying the novel, and both *effèrent* and *aesthetic* dimensions were touched upon in order to contextualize the book’s topics. These two terms are based on a definition from Louise Rosenblatt, who points to *effèrent questions* as questions where one is looking for information and factual data. *Aesthetic* questions, on the other hand, are related to what goes on inside the reader or on the feelings and emotions the reading conveys (Rosenblatt 1978 in Claire Kramsch, 1993, p. 124). The latter is hence more about what the reading does with the reader. I find this information to be essential with respect to the discussions on the importance of contextualization of a digital storytelling project (cf. section 5.3.4). For the final four weeks of the project, the students were asked to produce a digital story from the perspective of one of the characters of the novel. They were in other words asked to focus on presenting a story as this story would have been told by one of the characters.

During the data collection, students based their reflections on this specific project but also on their own former digital storytelling projects carried out as a second language learning activity. The material in my study consists of questionnaires from 20 respondents, 6 interviews and 21 reflection logs.

³ John Boyne: “The Boy in the Striped Pyjamas” (2006)

1.2.5 Definitions of terms

It is necessary to briefly define some of the terms that will be frequently used in the thesis, to avoid ambiguity and hence allow for a common understanding of the terms to take place.

Second language is in this study limited to the learning of English. This is in accordance with the *Knowledge Promotion*. Whereas many other countries refer to second language as any language other than the students' mother tongue, the Norwegian terminology distinguishes between a learner's second and third language. The latter is in the *Knowledge Promotion* referred to as *foreign language* (Utdanningsdirektoratet, 2006).

I will use various terms to refer to the students who take part in this study. As a point of departure, the term *respondent* is henceforward used to refer to the data sample from the questionnaires and from the reflection logs. When I quote from the respondents, I will use *Respondent + a number* (from 1 to 20). Students interviewed will be referred to as either *research participants* (Postholm, 2010) or *interviewees*. When I quote these students, I will use the pseudo names (cf. section 3.3.1). Finally, when I henceforward use the term *students*, this implies a generalization and embraces all learners in general, not only the ones who took part in this study.

1.3 Review of relevant literature

Most of the literature on digital storytelling for educational purposes deals with it as a technology-integrated tool in general, and not as a tool, a genre, a method or an activity specifically used to enhance second language learning. I have however found some literature that I find interesting and relevant as a background or as an entrance to my own study. These will be briefly commented on below.

Emily N. Skinner and Margaret C. Hagood from the College of Charleston in the US, elaborate in an article from 2008 on the use of digital storytelling to develop literate identities with English language learners (Skinner & Hagood, 2008). They point to digital storytelling as:

(...) a venue for helping English language learners to acquire more than just English as a second language, foundational literacies or informational technologies skills, per se, but also to use English to make sense of their lives as inclusive of intersecting cultural identities and literacies (ibid., p. 18).

I see this perspective in accordance with the modified TPACK model, which will be presented in section 2.2, where I argue that digital storytelling used in second language learning has the potential of offering more than learning the language itself.

Mark Evan Nelson from the University of California, Berkeley, has in his research been interested in the interactions among written and oral language, visual imagery, and other semiotic systems within multimodal texts. Nelson presents in an article (Nelson, 2006) his study among undergraduate L2⁴ writers where the students were engaged in multimedia writing precisely through the use of digital storytelling. Nelson suggests in his conclusion that students who are not yet fully capable of expressing themselves in L2 have a great possibility to improve the quality and volume of what he refers to as the *authorial voice* when using multimedia writing (ibid., p. 17). This is an interesting aspect that I recognize from my own use of digital storytelling in second language learning, and especially when it is used as a tool of adaptation in both second and third language learning for special needs students.

Kirsty McGeoch from Australia is an English language teacher and researcher particularly interested in process drama, digital storytelling and language learning. According to her blog⁵, she has since 2007 been working with students from around the world to develop digital stories in their second language English. She finds digital storytelling to be an engaging vehicle for students to work on their language skills, but also as a method enabling students to express their creativity and identity. McGeoch is currently working on her PhD thesis on digital storytelling in second language learning and teaching, at the University of Sydney, but no research results are currently available.

Carmen Gregori-Signes at the University of Valencia in Spain has been focusing on digital storytelling as a tool that integrates old and new literacies (Gregori-Signes, 2008). She has carried out research on the use of digital storytelling as a learning tool for EFL⁶ students, and points to the many advantages offered by digital storytelling to work with literacy development, as well as on genre conventions.

⁴ L2: second language (UNESCO: “a language acquired by a person in addition to his mother tongue” (Cook, 2008, p. 12)

⁵ <http://12digitalstorytelling.blogspot.com/>

⁶ EFL: English as a Foreign Language

However, to my knowledge, none of the studies above focus directly on the learner perspective, in the sense that the learners' own understandings are brought to the fore. I will argue that this further legitimates my study, where the focus precisely is on the learner perspective.

1.4 Chapter summary and organization of the text

This study focuses on students' meta-reflections on potentials for second language learning from digital storytelling. Two research questions and two hypotheses have been outlined to explore the topic. The study's overall theoretical framings will be presented in chapter 2. Chapter 3 focuses on the methods used to collect the data. A descriptive analyses of the material is presented in chapter 4, whereas the discussions and hence the theoretical analyses are presented in chapter 5. The study will be summarized in chapter 6, and this is also where I will revisit the research questions and hypotheses before I conclude my study and also look ahead to see what this study might add to my own future practice as well as suggest a few topics for further research.

2 Theoretical framing

To understand the complexity of this study, I lean on several theories as suitable framings. This chapter will present the overall theoretical framings for my study.

In the first place I base the study on a social constructivist view on how learning is understood to take place. As described in section 2.1.2, I draw in this respect on the activity theory (Engeström, 1999). Since I also want to obtain an understanding of my field of research in the light of more present views on constructivist learning, I will in section 2.1.3 look at how the constructivist paradigm can be expanded to embrace new ways of learning. Secondly I have also found it relevant use the Technological, Pedagogical, Content Knowledge model (Mishra & Koehler, 2006) as an important theoretical framework. As further explained in section 2.2, I have also modified this model to better suit the purpose of this study. Finally, this chapter also presents relevant theoretical framings for motivation and second language learning.

2.1 A constructivist approach to learning

According to Roger Säljö (2001), socio-cultural perspective on learning highlights the importance of an active participation in a “social community” in order to build understanding and meaning. The emphasis is on the learning activity and on the learning process. A social community could precisely be a class, and this is why I find socio-constructivism to be a relevant perspective for understanding the use of digital storytelling as an educational tool and hence the reason to why I have found socio-cultural theory to be relevant for my study. In this section I will present how the traditional socio-cultural theory as well as emerging constructivist theories related to 21st century learning can contribute to an understanding of my study.

2.1.1 Traditional socio-cultural theory and the activity system

Constructivism emerged in the latter part of the 20th century as a reaction to the behaviouristic approach to learning (Säljö, 2001). The Russian psychologist Lev Vygotsky’s name is closely linked to constructivism. Within the constructivist paradigm, learners are seen as autonomous, active agents where learner interaction and dialogues are central to the learning processes (Vygotsky, 1978). Socio-constructivism focuses on the construction of meaning as based on prior knowledge and on the social environments in which the learning takes place. Within constructivism, the learners actively try to create meaning and knowledge, hence the

use of the metaphor “knowledge production” to describe how learning takes place.

According to Peter Doolittle from Virginia Technical University, there is no single constructivist position within the field of education (Doolittle & Camp, 1999). Several constructivist learning theories have been developed. From this follows that constructivism should rather be understood as a continuum instead of as a static position. Doolittle points to three broad categories within the constructivist continuum: Cognitive constructivism, social constructivism and radical constructivism (ibid.). It is the social constructivism, or the socio-cultural approach, that I find particularly relevant as the *traditional* constructivist theoretical approach to the use of digital storytelling as a learning activity.

The socio-cultural approach to learning, developed by Vygotsky in Russia in the 1920s and 1930s and made known to the Western public in the 1960s, emphasizes the interdependence of both the individual *and* the social processes in the construction of knowledge. I find this explanation of socio-cultural constructivism to be particularly relevant related to digital storytelling processes. The interrelation between the individual student and his production on the one hand, and the setting in which the learning takes place on the other hand, comes to the fore when students e.g. ask for and receive feedback from their peers and the teacher during the different phases of the storytelling production. The link between the student and the target group for whom he produces his digital stories is another element related to the social process in a storytelling production. High-performing students, in particular, have quite a conscious view on the target group of their productions.

Vygotsky’s approach is based on the concept that human activities take place in cultural contexts, and that these human activities are mediated by language or other symbol systems (Vygotsky, 1978). According to Säljö (2001), Vygotsky used the concept *tools* both with reference to something material and to something more abstract, related to notions, signs and symbols (as e.g. language). This wide sense of the word *tool* is also my interpretation of the term, and today this term also embraces digital tools. *Artefacts* is used as a common denominator for Vygotsky’s various interpretations of tools (Säljö, 2001). The relation between the learner and the objective of the learning takes place through the use of artefacts playing the role of mediation tools. By using various mediating artefacts, e.g. physical artefacts such as digital tools, and linguistic artefacts such as different modes, learners discuss,

interpret and together build new meaning and understanding within their community (Säljö, 2001).

Yrjö Engeström at the Center for Activity Theory and Development research at the University of Helsinki has developed the activity theory (Engeström, 1999). Engeström's model of the activity system draws precisely on Vygotsky's concept of mediation (ibid.). The *subject – object* relation in Engeström's model corresponds, in my study, to the relation between a student and the learning outcome of a digital storytelling activity. The tools used by the student in his learning activity links the learner (the *subject*) and what is being learned (the *object*). In Vygotsky's terminology, the tools are *artefacts* used to mediate the students' learning process. Figure 2.1 shows Engeström's model applied to a digital storytelling activity. This model might help me understand my respondents' and research participants' meta-reflections on learning potentials, since it gives a good overview of different levels that could be interesting to explore.

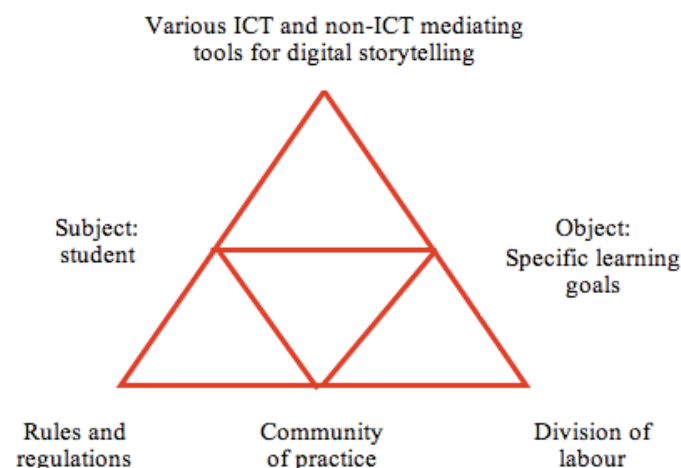


Figure 2.1: Engeström's activity system applied to a digital storytelling activity

The bottom line in the system points to the premises for the activities to take place. In my study *rules and regulations* refer to the national curriculum and the competence aims (Utdanningsdirektoratet, 2006). The *community of practice* represents all the students sharing the same goals, i.e. use digital storytelling as a learning tool for a specific learning purpose. In my opinion, the teacher in charge of the learning activity also belongs to the community of practice, but has obviously a different role. Both the peers and the teacher play an important role when it comes to giving support and

advice. In this respect, the terms *scaffolding* and *the zone of proximal development* are central. They will both be presented below.

Scaffolding is understood as “the process of supportive dialogue which (...) prompts them (i.e. the learners) through successive steps of a problem” (Wood et al. in Mitchell & Myles, 2004, p. 145). The zone of proximal development is a metaphor that describes the difference between what a person can achieve alone, without any support or guidance, and what the same person can accomplish with support from someone else (Lantolf, 2000).

The last factor of the bottom line; *division of labour*, implies that the work or the actions are distributed among the members of the community of practice. Various roles are given to various members. In my study this could e.g. be that the teacher or an able student is responsible for parts of the learning activity, as e.g. to give an outline of the contextual background related to the overall topic of the activity. Division of labour can also be applied to the linguistic side of the storytelling production, where the teacher e.g. supplies students with relevant target language concepts and notions that students later try to use in their script or narration. The three factors in the bottom line constitute in this way the context of the activity itself, as shown in the activity triangle.

The upper triangle in the activity system is the activity triangle. Applied to my study, this triangle shows the interrelation between the *subject*, which in my study is the individual student working on the digital story, and the *object*, in my study represented by the specific learning objectives of the activity. These learning objectives could be related to either content understanding and/or also to linguistic development. If the latter is the case, digital storytelling is used as a tool to obtain another goal, e.g. to develop oral skills. The students reach these goals precisely by using various mediating artefacts. In a digital storytelling production the mediating artefacts could be various digital tools (in Figure 2.1 referred to as *ICT tools*⁷) and also the language itself. The *objects* can materialize in various ways through the progression of the activity, and can also appear different to the teacher than to the students. This is also the reason to why learning as the result of a digital storytelling activity embraces more than the finished story itself.

⁷ See Figure 1.1 for a specification of tools for digital storytelling

As mentioned, mediating tools can be both ICT and non-ICT tools. The use of ICT tools is precisely what has led to a development towards an expansion of the constructivist paradigm.

2.1.2 Towards an expansion of the constructivist paradigm

We have today a society where the focus has been switched from the teacher's teaching to the student's learning, where information is unlimited and ubiquitous, and where digital technology has made our students digital natives, to use a popularized term from Marc Prensky, the author of *Digital Game-Based Learning* (Prensky & Berry, 2001). This should imply that having a constructivist perspective on learning *today* implies more than what was traditionally related to constructivism as a learning theory, as this one emerged in the latter part of last century. Engeström argues that all standard learning theories, including constructivism, advocate a presupposition that "the knowledge or skill to be acquired is itself stable and reasonably well defined. There is a competent teacher who knows what is to be learned" (Engeström, 2001, p. 137). I agree with Engeström that this view no longer fully represents today's situation.

Along the same line are thoughts on learning from Marcy P. Driscoll at Florida State University. Driscoll (1994) points to learning, historically, as information that could be transferred from an active master to a passive learner. As long as the society in which the learning took place was as a society characterized by poor access to information, the pure communicative or lecturing role of teachers was dominant and also established as a fully accepted teaching method. Since the learners today are given more responsibility of their own learning, the teacher's role is as a result changing from being only a presenter of knowledge to also becoming a facilitator and a resource person (Driscoll, 1994). This development opens up for variation and modification in the approach to learning.

Catherine McLoughlin from Australian Catholic University and & Mark J.W. Lee from Charles Stuart University also emphasize that knowledge no longer can be looked at as something stable, but on the contrary is open for interpretation, modification and recreation by anyone and anywhere (McLoughlin & Lee, 2008). They argue that this development opens the way to an expansion of the constructivist paradigm. Students will still actively participate in building their own knowledge,

which is one of the key elements in constructivism, but the new constructivist approach to learning takes in addition into consideration that we today:

Have an environment in which digital technology and information is paramount and in which “learning to learn” (know-how) is far more important than memorizing explicit knowledge and facts (know-what) (ibid., p. 643).

2.1.3 New terms, pedagogies and emerging constructivist theories

Throughout history, educational institutions have always prepared students of today for life and work of tomorrow. What society, in general, hopes students will know and be able to perform has however dramatically changed during the last 20 years. When reading literature on 21st century learning, one comes across a variation of terms used to describe learning in our new century, such as *21st century literacy*, *digital age literacies* or *21st century skills*.

Bernard Robin at the University of Houston describes the skills necessary to master for today’s students as a combination of digital literacy, global literacy, technology literacy, visual literacy and information literacy (Robin, 2008). Along the same line is a description from the *Apple Classroom of Tomorrow – Today* project (ACOT2, 2008), where 21st century learning is seen as being at the confluence of three major influences; how people learn, globalization and technology innovation (ibid.). The emerging learning theories that I will point to as being expansions of the constructivist paradigm are all linked to the above-mentioned skills or literacies necessary to master in 21st century learning.

When Robin points to *information literacy* as a skill for 21st century learning, he defines this as “the ability to find, evaluate and synthesize information”(Robin, 2008). Closely related to this is the new learning theory called *navigationism*. Its originator, Tom Brown at the University of Pretoria, focuses on the ability of being able to navigate in the “ocean of available knowledge” (T. H. Brown, 2006). Navigationism is defined as a broader and more inclusive term than constructivism (McLoughlin & Lee, 2008), but it includes knowledge creation, which is the key aspect of constructivism.

When we use digital storytelling as a learning activity in language classes, working with language development is obviously a priority. It is nevertheless also expected, as e.g. stated in the *Knowledge Promotion* (Utdanningsdirektoratet, 2006), that students are able to show knowledge of specific content areas related to culture,

society and literature (ibid., p. 98). I see this in line with Andreas Lund, from the University of Oslo, who points to having a good command of English as more than knowing the English language (Lund, 2009). In this respect, I am interested in looking at whether the students are able to do what is pointed to as crucial in navigationism, i.e. *to find and evaluate information* so that the stories they produce even in second language classes show some degree of independent and critical use of sources. To which degree do they reflect on the necessity of *rephrasing the information* they have been working with and present it as a coherent story? These are relevant questions to why I find that ideas from navigationism are useful also for my study on students' reflections on learning potentials from digital storytelling.

Brown points to *navigationism* as a new learning centered education paradigm, as opposed to the former focus on the teacher's transfer of knowledge. In digital storytelling, students need competencies that will enable them to distinguish important from less important information during the script-working phase. In their work with various sources, are the students able to synthesize and compare information? Will their learning reflections embrace such aspects?

McLoughlin & Lee (2008) point to learner-driven content and collaborative knowledge building as typical traits of 21st century learning, and in this connection they refer to *communal constructivism* as an expanded definition of social constructivism.

Communal constructivism was developed at the Centre for Research in IT in Education at Trinity College in Dublin. According to B. Holmes, B. Tangney, A. Fitz Gibbon, T. Savage and S. Mehan (2001), the main idea of this learning model is that students not only construct their own knowledge. Neither do they construct knowledge only as a result of interaction with their environment or community. In a communal constructivist perspective on learning, students are also actively engaged in the process of constructing knowledge *for* their learning community (Holmes et al., 2001). This represents another continuum of the constructivist paradigm; from learners constructing their own knowledge (constructivism), to learning as the result of active participation in a learning community (social constructivism) to learning as constructing knowledge for others (communal constructivism). I find this to be an interesting theoretical perspective also for digital storytelling productions.

As early as in 1996, The New London Group (Cazden et al., 1996) emphasized the need to broaden the use of the term *literacy* to include more than the ability to read

and write. They argued that new literacy pedagogy should account for a “variety of text formats associated with information and multimedia technologies” (ibid., p. 61). The term *multiliteracies*, introduced by The New London Group, is related to Robin’s reference to *visual literacy* (cf. p. 20), and has commonly been acknowledged as a characteristic of learning and mediation in the new century. Digital storytelling is precisely a genre where students use several modes of representation to express feelings and attitudes, or to present content knowledge.

The perhaps most typical trait of 21st century learning is that today’s students have ubiquitous access to technology, as emphasized by e.g. Robin and the ACOT project (cf. p. 20). Access to technology is a decisive factor related to which learning activities we can engage our students in. According to Glynda Hull at the University of California and Kathrine Schultz at the University of Pennsylvania (2002) there is a gap between the use of technology in out-of-school practices, as compared to the implementation of technology in teaching and especially in learning. As part of my study, I want to find out if there is any correlation between students’ private use of computers and their use of digital storytelling as a learning activity at school.

Sometimes teachers, who traditionally are experts on their content field, might be afraid to lose sight of “their subject” when integrating technology into their curriculum. In my opinion, this fright is based on a view on technology as being separated from content and pedagogy. This leads me on to a model that I have found to be very clarifying for the integration of digital storytelling as an efficient technological learning tool in various subjects; the Technological, Pedagogical, Content Knowledge model.

2.2 Technology, Pedagogy and Content Knowledge

In addition to socio-constructivism, the Technological, Pedagogical, Content Knowledge model, henceforward known as and referred to as the TPACK model (*Technology, Pedagogy and Content Knowledge*), constitutes the other main theoretical anchor of this study. The TPACK model, developed by Punya Mishra and Matthew J. Koehler at Michigan State University, is a framework aimed at describing the necessary qualities of knowledge required by teachers for technology integration in their teaching (Mishra & Koehler, 2006). The model draws on a formulation by L.S. Schulman on “pedagogical content knowledge” (ibid.). As shown in Figure 2.2, the model emphasizes the connections, interactions and interplay between and among

three bodies of knowledge; *content*, *pedagogy* and *technology*. Mishra & Koehler emphasize that the model argues against the teaching of technology in isolation. They point to this model as arguing for learning activities allowing teachers and students to explore technologies related to subjects in authentic context (ibid.). The intersection between all three bodies of knowledge; *the technology, pedagogy and content knowledge*, goes beyond all three individual components of the model (Mishra & Koehler, 2006).

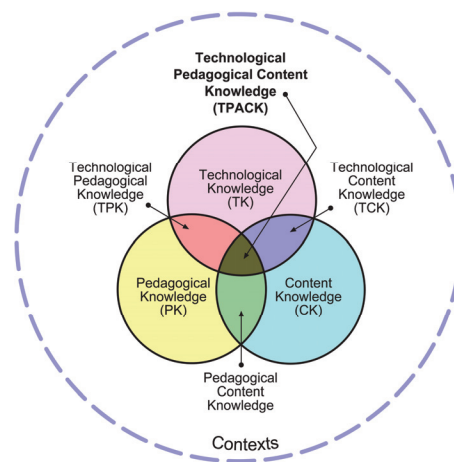


Figure 2.2: The TPACK model (from <http://tpack.org/>)

I want to explore if this model can be used in a slightly modified version as a relevant theoretical frame of reference for *students* reflecting on their own learning in digital storytelling productions. More specifically, I want to use the adapted model below as criteria for the analyses to be carried out in the study. The three overall bodies of knowledge in my modified model are related to *content*, *pedagogy* and *skills*.

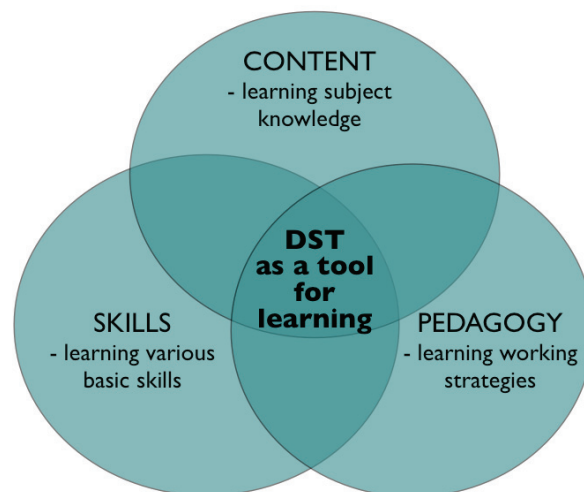


Figure 2.3: A modified TPACK model to embrace students' reflections on learning in digital storytelling productions

In my model in Figure 2.3, *content* refers to the students' use of digital storytelling to work with and present second language content knowledge. I will argue that digital storytelling in school is often used precisely as a method to present what has been learned from working with a topic. This way of using digital storytelling is linked to developing the students' understanding of the content knowledge in question. I am interested in uncovering whether students actually point to *learning* in digital storytelling productions as construction of knowledge and possibly how they define this knowledge.

The next body of knowledge in the model is *pedagogy*. I want to relate this to the working process, and hence also define digital storytelling as a learning strategy. This embraces aspects such as the students' work with various sources in order to write a script and how digital storytelling functions as a strategy for connecting and constructing knowledge from the sources they work with.

The last circle in the model is *skills*. From my own experience as a teacher and instructor in digital storytelling, I see that there is sometimes a risk of reducing digital storytelling to a way of simply working with developing digital skills. In accordance with the second hypothesis, I am therefore interested in unveiling whether students point to digital storytelling merely as learning of technological skills and use of digital artefacts, or whether they also define learning potentials from digital storytelling as development of other basic skills, such as speaking and writing.

Benjamin Bloom identified three domains of educational activities (Anderson, Bloom, & Sosniak, 1994). His taxonomy of the cognitive domain will be used when I discuss students' own reflections on learning, as analyzed according to the modified TPACK model. I want to see if, and possibly how, learning from digital storytelling can be defined and understood within this taxonomy.

2.3 Theory related to motivation and learner differences

One of the hypotheses outlined for this study focuses on how a possible relation between motivation and learning might influence students' reflections on learning from digital storytelling. Marc Lepper, Jennifer Corpus and Sheena Iyengar carried out a study in the United States related to motivation and the impact it has on learning (Lepper, Corpus, & Iyengar, 2005). I want to discuss findings related to motivation in my study in the light of their research. I will also lean on a recent Norwegian study on motivation in school carried out by Einar and Sissel Skaalvik (2011) from The Norwegian University of Science and Technology (NTNU). The final theoretical framing related to motivation is found with Sven Kost at the faculty of Arts and Humanities at the University of Paderborn in Germany. Kost has written an article on motivation and foreign language teaching (Kost, 2003) where he defines motivation as "an inner state of need or desire that activates an individual to do something that will satisfy that need or desire" (Kost, 2003). He also points to differences between intrinsically and extrinsically motivated students. He explains intrinsic motivation as motivation originating from the individual. Extrinsic motivation is on the other hand related to something external, like a desired goal, or a specific way of approaching a task (ibid.). I will use Kost's definitions of motivation in my discussions.

To discuss aspects related to gender and learner differences, I will lean on Andrea Barton from the University of Manchester and her article on *Learning styles and gender effects* (Barton, 2002). Barton has been carrying out research on the effects of gender on pupils' learning styles and presents in her article various traits related to boys' preferred learning styles with reference to foreign language learning.

2.4 Theoretical framings related to second language learning

This study sees digital storytelling as a catalyst for language learning. Socio-cultural theory constitutes the overall theoretical framing also with respect to the specific language learning parts of a digital storytelling project. Socio-cultural theorists assume that the same general learning mechanisms will apply to language, as to other

forms of knowledge and skills (Mitchell & Myles, 2004). The latter implies that what I have already presented as important elements in socio-cultural theory in section 2.1.1, also applies for second language learning.

The second language learning focus in this study is on communicative competence and on language in use, and it involves both language input and language output. I lean on a definition of communicative competence from Dell Hymes, who points to communicative competence as “what a speaker needs to know in order to be communicatively competent in a speech community” (Richards & Rodgers, 2001).

Students working with digital storytelling productions are exposed to various forms of second language input, e.g. through studying literature related to the content of their story, or through listening to the teacher or to their peers, or even to their own recordings. Language output is related to the written and spoken narratives. In addition, language output can also take place informally, when students negotiate meaning or collaborate by using the target language.

In line with this, and with respect to how language development often takes place in a second language digital storytelling production, I also find elements from the communicative teaching- / learning approach interesting for this study. According to Vivian Cook (2008), the ultimate goal within communicative language learning is to use the language adequately for communicative purposes. The language is at the same time the target itself and the means for acquiring the target. Active use of the language is the key word (2008). In second language digital storytelling processes, I will argue that students might develop their communicative competence precisely by negotiating meaning. The focus is on active use of the target language and embraces both the goal (the finished product) and the working process.

Closely related to communicative language learning is task-based learning, which shares many of the same principles as communicative language learning (Cook, 2008, p. 257). The main point with both styles is that students learn the target language by using it. The difference, according to Cook, is that in communicative language learning the tasks and activities are organized around a language point, whereas in task-based learning the language must come from the learners themselves, not from the teachers (2008). The latter is exactly how language development in a digital storytelling production is expected to take place. The emphasis is precisely on conveying meaning by telling the story, i.e. conveying information from one person to a target group.

2.5 Chapter summary

I have in this chapter addressed relevant learning theories for my study. The main theoretical approaches chosen are based within a socio-cultural framing and within the TPACK model. Theoretical framings around motivation and models related to second language learning were also briefly presented. I hope that conducting my study in the light of several theories and models will contribute to a broadest possible understanding of my research questions and shed useful light on the study's overall topic.

3 Methods

Methodology is about collecting, analysing and interpreting data (Johannessen, Tufte, & Kristoffersen, 2006). This chapter focuses on methods for data collection. Prior to presenting the three methods used for gathering data, I will in the first section below discuss aspects related to the fact that I am a teacher who carries out research among my own students. For each of the data collection methods presented, I will also discuss some dilemmas I was facing or reflecting on during the data collection.

3.1 Teachers as researchers in own classes

The General Teacher Education Plan from 2003 outlines five areas of competence that should be part of a teacher's profession. One of these is that teachers should have a change- and development competence that can help them develop as teachers (Undervisnings-og-Forskningsdepartementet, 2003). May Britt Postholm at NTNU points to competence in research and development work as an essential part of this, since such work can contribute to the development of the actual learning that takes place in the classroom (Postholm, 2009). I will argue that being in a state of development involves both looking back and reflecting critically at own teaching practice, as well as bringing these reflections along when looking ahead and further developing own practice.

Others have also emphasized teachers' research- and development competence. The British educational thinker Lawrence Stenhouse referred to teachers who have a critical and developmental orientation to their work as extended professionals (Postholm, 2009, p. 522).

Jack Sanger, who has done research within qualitative methodology, maintains that "teachers should have a professional capacity to critically assess and analyse what they should develop" (Sanger 1996 in Postholm, 2009, p. 522). With reference to what is quoted above, I will therefore argue that there is academic support both nationally and internationally for teachers to be researchers in their own classes.

3.1.1 Distance and reflections

My focus in this thesis is not on my own teaching or on my role as a teacher, but on the respondents' and research participants' meta-reflections on learning potentials

when using digital storytelling in second language learning. I can see that these aspects might be related, but I will nevertheless argue that the specific focus questions I have chosen for my research help to create some distance between myself, as the teacher, and the field of research. However, as a teacher I will always be an insider, whereas researchers approach the field of study with an outsider's perspective. When the teacher *is* the researcher, as in my case, it is even more important to focus on the aspect of creating some kind of distance to the material. The use of theory can help me create a necessary distance and become a useful tool for me to reflect on practice (Dale 2001 in Postholm, 2009), as this practice is understood by the respondents and research participants.

In addition, since my two roles might interpret observations and data differently, the use of the language also plays an important role as a tool for reflection. With reference to Engeström's activity system, as shown in Figure 2.1, I will argue that the use of theory as well as the use of the language can be seen as mediating artefacts between the subject, which is the field of study (i.e. my own students' reflections) and the object, which is the outcome of the study (i.e. my interpretations of the students' reflections).

My reflections start when I am in class, together with my students. This is what happens regularly with all teachers. However, due to my dual role in this study, I will argue that I conduct a more focused *post reflection* than is the case if I had only been a teacher and not a *teacher researcher* (Postholm, 2007). The use of theory and the use of the language will help me in the reflection processes I need to go through. At this point I also want to refer to Vygotsky, who said that "thought is not merely expressed in words; it comes into existence through them" (Vygotsky, 1986/2000). Vygotsky pointed to reflections as conducted by the use of the language. This means that the use of the language, whether it is used written or orally, will contribute to create distance as well as open up for reflections. This is something that many teachers experience e.g. when taking on a commitment as an adviser for pre-service teachers from the university or the university college. Talking about our own teaching practice to others actually lays the path open for own meta-reflections.

One advantage that teachers who conduct research in own classrooms have is that they are the ones who really know the history and background of their students, and also know the total scope of the classroom activities carried out. This knowledge nevertheless demands of the teacher researcher what I will refer to as an *extended*

ethical awareness since one and the same person will have a dual role towards the same focus group; that of being a teacher and also a researcher. Such an extended ethical awareness applies both with regard to selection of research participants, data collection and analysis of the gathered data, as well as to the discussion and presentation of the analysis. The methods used as well as the interpretations made are in the risk of being influenced by the teacher researcher's *tacit knowledge* (Polanyi, 1967) about his students. It is hence a fine line between the close relation teachers have to their students, and the distance that free and objective research should have to what is the focus of the study. This was also something I needed to address. In the next three sections I will present and reflect upon important aspects related precisely to quality in a study where the teacher is the researcher.

3.1.2 Validity

Validity is related to the interpretations made, and also to the methods that have been used to gather data (Postholm, 2010). Since I have conducted my research among my own students, it has been important for me to use multiple methods to gather data. This allows for data triangulation to take place, an element that I will argue strengthens the validity of my study. According to Thagaard (2009), triangulation refers to using a combination of quantitative and qualitative methods (*ibid.*, p. 190). Postholm says that if data collected from various methods correspond, this is an aspect that will strengthen the validity of the study (Postholm, 2010, p. 132). This is related to the fact that strengths of one method can compensate for the weaknesses of another method used.

Other researchers also refer to triangulation as a method to increase validity. In an article from 2000, on ethical dilemmas related to teacher research, classroom researcher Torlaug Løkensgard Hoel at NTNU presents various ways to conduct triangulation (Hoel, 2000). However, she also points to triangulation as raising a few problems, especially if the researcher invites external interpreters to examine the collected material. According to Hoel, it is reasonable to believe that “different persons will give different answers and interpretations” (*ibid.*, pp. 167-168), (my translation). This view is related to socio-constructivism, where every single individual constructs his or her view on reality, within own social context. In my research I decided not to ask others to interpret the collected data. What I did, on the other hand, was to have a continued focus on allowing for transparency with

regarding to data collection and analyses. To add citations from the interviews was also one way to show transparency.

3.1.3 Reliability

For the research to be reliable, Thagaard (2009) points to the importance of the researcher to be open about the relations to the informants, as well as give an account of the importance this has for the collected data. I have in chapter 1 presented my own relation to both the field of study and the relation to my informants, and will thus argue that I have contributed precisely to the reliability of my study. What I bring along as my preunderstanding has hence been made visible.

As teachers we are regularly influenced by impressions from the classroom. In addition, we also make reflections on how the lessons were conducted, on how the learning activities were approached by the students and on what was good and what was less good about the lessons. What takes place in the classroom is something we often bring along and discuss with colleagues, and some of these informal discussions and reflections might later lead to change of practice. In our daily practice, when we interpret experiences from the classroom, these are often based on spontaneous impressions. This will reduce both the validity and the reliability of the “data”, and can as such never be more than subjective reflections, even though they still might lead to change of practice. Since change- and development competence is to be part of every teacher’s practice, Postholm therefore emphasizes that the teacher who aims at conducting *research* among his own students collects data in a systematic way and makes use of acknowledged research methods (Postholm, 2009). This is also an element that will contribute to the reliability of the material and hence help the teacher researcher to argue and reason for the findings in the study (ibid.).

3.1.4 Quality and objectivity

Postholm argues that *objectivity* is not a useful indication on quality in qualitative research (Postholm, 2010, p. 128). Hildegunn Otnes at NTNU suggests in her doctoral thesis from 2007 that *reflection* and *transparency* might be two useful terms (in addition to validity and reliability) that can be linked to quality in qualitative research (Otnes, 2007, p. 44). I find this to be an interesting perspective also related to my role as a teacher researcher.

Reflection has been a central issue in all stages of my research process, and started already from the very beginning, when choosing a focus and research

questions for my study. I have in addition been reflecting around the choice of methods for data collection, precisely since I am a teacher doing research with my own students. Otnes also points to reflection in the writing process as being central (ibid.). I recognise this aspect, where I am actually taking on a third role; the one as the writer. It is hence very relevant to reflect on what happens in the relation between my role as a teacher, as a researcher and as a writer where I present my interpretations. This is precisely where transparency becomes important.

I cannot change the fact that I am my students' teacher at the same time as I am doing research with my own students. Throughout history there has always been an asymmetrical relation between those two roles. An outsider researcher would to a greater extent be able to focus solely on the research to be carried out in class. As a teacher researcher and hence an insider, I will on the other hand always have to put first priority to my role as a teacher, and towards the needs of the students and the learning activities to be conducted. The important aspect here is to be aware of the preunderstanding I bring along and make this one visible both for myself and for others, as I have already mentioned above. I will hence argue that the fact that I make the whole process of my data collection transparent and open for the readers to follow is precisely an important quality criterion in my study.

3.2 Data collection from questionnaire

There are several reasons to why I decided to use a questionnaire as one of the methods for data collection. I needed a basis for developing the interview guide, and saw that by using a questionnaire distributed to all students in the group I could actually hear all voices. In addition, the questionnaire was answered anonymously. This is particularly important when there is a close relationship between the researcher and the respondents, as in my study. Since questionnaires are versatile, they allow for subjective as well as objective data to be collected, which is another advantage.

The questionnaire was first tested on a few students to see whether the various questions were comprehensible. I made a few changes based on this pre-test, but only related to minor details. In addition, I changed the order of some of the questions, to obtain what I believed to be a more coherent questionnaire. Despite the fact that I had done a pre-test and made some changes, it still turned out to be difficult, for a handful of students, to relate easily to all questions. I elaborate more

on this in section 3.2.2. First I want to present more details on the format and the design of the questionnaire.

3.2.1 Format and question design

I used a semi-structured, paper-based questionnaire containing 10 questions (cf. appendix 3). Semi-structured questionnaires have both closed and open questions. A majority of my questions were closed questions that procured me with data that I could easily compare to look for patterns and trends. In addition, there was one open question, as well as one question where the respondents were asked to justify a chosen answer alternative. My own experience is that when respondents can use their own words when answering, it more easily allows for meta-reflections.

Johannessen et al. point to four various categories of questions for questionnaires (Johannessen et al. 2005). These are related to what people know (*knowledge*), what they believe and think (*perceived understanding*), what they do (*actions*) and finally questions related to people's reflections (*how they see themselves and their situation*) (ibid., p. 223). Based on these distinctions, I will define my questions primarily as a mixture between my students' perceived understanding of and experience with digital storytelling on the one hand, and their reflections related to the use of digital storytelling and to learning in general on the other hand.

3.2.2 Reflections and dilemmas

My own lesson learned, in retrospect, is that question phrasing and design considerations are challenging aspects related to using questionnaires as a method for data collection. It is a field where one definitely needs a lot of practice, and already today I have more experience about questionnaire design than when I outlined the questionnaire for this study.

I consider my questions to be neutral in tone, and that I managed to use a language adapted for the age group. Some respondents nevertheless expressed frustration. Considering their age (14-15 years old), I now see that I should have spent even more time trying to come up with more succinct and precise question phrasings, in order to avoiding ambiguity.

I can also be accused of trying to address too many issues at a time. I estimated that it would take the students around 15-20 minutes to answer the questions, but a handful of them actually spent twice as long, which also resulted in

some frustration. In the process of analysis, I therefore have to ask myself whether all students kept their concentration and answered honestly, or whether random check-offs were made due to students getting tired during the process of completing the questionnaire. Finally, there is always the risk of misinterpreting the questions.

One of the weaknesses of using a questionnaire is precisely related to the risk of misinterpreting the questions. Some of the respondents actually asked for my clarifications while they were working on the questionnaires and additional explanations were given, but only on an individual basis. This is something that might be seen as a dilemma with reference to the data collection.

The last point I will mention as a possible dilemma has to do with the students' motivation for completing the questionnaire. Did they complete my questionnaire only to be polite? Did they fear that they would make themselves unpopular in the eyes of the teacher if they did not participate? Did any of them try to put a better light on themselves? In the introduction of the questionnaire, respondents are encouraged to answer honestly. However, since the questionnaires were paper-based, did the students fear that I would recognize their handwriting? I do not know the answers of these questions, but I nevertheless regard it as important to ask them and hence lay open what *could* be looked upon as possible dilemmas related to my data collection.

3.3 Data collection from interviews

Interviews are, according to Johannessen et al. the most common way of collecting data in qualitative research (Johannessen et al. 2005). Carrying out interviews allowed me to investigate more in depth students' own reflections. It also gave me the possibility to follow up data collected from the questionnaires, but due to anonymity I could not relate the information directly from the questionnaires to a specific interview. Since I carried out semi-structured interviews, this also gave me the flexibility to adapt the questions based on the respondents' answers, or to go more deeply into the matters by asking supplementary questions. As a result, I obtained richer and more informative data than what had been collected from the questionnaires.

Another reason for using interviews as my main data collection method is related to the fact that my respondents are still quite young, only 14-15 years old. From my experience as a teacher, I know that the younger the students are, the more

complicated they find it to present their reflections in a written form, as e.g. in the form of a questionnaire with open questions, as compared to having the possibility to express themselves orally. I was interested in my respondents' reflections in the form of their experience of digital storytelling as a learning activity in English, as well as their perceptions on potentials for second language learning. It was and is my opinion that these matters are best uncovered when using interviews as the principal method for data collection. In addition, interviews also allowed for the respondents to take part in deciding what would be discussed during the interview. The respondents, i.e. some of the 21 students in the English group, hence became my *research participants* (Postholm, 2010).

3.3.1 Choosing the research participants

I used a purposive sample for the interviews. In purposive samples, participants are selected because of certain specific characteristics, and in my case the criteria for the selection were related to the following characteristics:

1. Students of both genders.
2. Students of mixed levels of proficiency in English. Level of proficiency was measured only with respect their formal grades
3. Students who, from previous experience and based on answers from the questionnaires, like to work with digital storytelling as well as students who do not favour using digital storytelling when working with a topic.

The study had an overall focus on in-depth understanding, as seen by the participants. I was, however, also interested in finding out whether there were any differences related to the specific criteria referred above. One of the advantages of being a teacher conducting research among own students is that I had substantial knowledge of the students' level of English prior to the data collection, and could hence easily choose participants for the interview with this knowledge in mind.

Based on the criteria mentioned above I ended up choosing six research participants for the individual interviews. Participant 1, henceforward referred to as Iris, was a high proficient female student who did not in general like to use digital storytelling. Participant 2, referred to as Isak, was a high proficient male student who looked at using digital storytelling as being an ok way of working. Participant 3, given the name Thomas, was a male student at an average level of proficiency, who favoured using digital storytelling. Participant 4, who is called Lukas in my

presentation, was a male student at an average level of proficiency, who did not particularly favour using digital storytelling, but referred to it as any other learning activity used in English. Participant 5, given the name Sara, was an average student who did not have any strong opinions about using digital storytelling. Finally, Participant 6, referred to as Dina in my presentation, was a high-proficient girl who, for a long time, had been expressing her enthusiasm for working with digital storytelling.

3.3.2 Designing the interview guide

According to Steinar Kvale (1997), an interview guide gives an overview of the various topics to talk about, and also of the order of the questions. For a semi-structured interview, as in my case, the guide only gives a rough suggestion of possible questions. I nevertheless considered that having a pre-prepared interview guide would help me focus on relevant topics during the interviews. This is especially important since conducting research interviews is not an activity I am used to carrying out.

The interview guide (cf. appendix 4) was developed around three main themes, as presented below. I consider these themes to embrace and support the two research questions and the two hypotheses outlined for the study (cf. section 1.2.1) and they will also be used for the analyses.

Table 3.1: Themes for interviews and analyses

Main theme	Description of main theme
Motivation	Various aspects respondents and interviewees point to as motivating in their own learning.
Learning	What respondents and interviewees understand with learning, both with respect to the learning process and learning outcome.
Digital storytelling as a second language learning activity	What kind of learning potentials respondents and interviewees define from DST used as a learning activity in second language learning

Related to what Kvale says about the aims of an interview (Kvale, 1997, p. 55), I will in the first place define my interview as *hypotheses testing*, since I had developed two hypotheses for this study. However, I will also argue that my interview is *exploratory* (ibid). I wanted to approach the various themes in the interview with an open attitude, so that I could follow up at any time in the interview what the research participants said.

In addition to using open questions where I simply asked the interviewees to *tell about*, or *share your reflections around*, the majority of my questions were *what* and *how* questions. This is in accordance with Kvale, who actually points to *why* questions as unsuited in an interview, since they may lead to an intellectualisation (Kvale, 1997, p. 78). Even though *why* questions could be interesting, Kvale argues that it is mainly the researcher's job to find out *why* something has happened. I can follow his arguments here, and to a certain degree I also agree. Having said that, I nevertheless find that in my study it was in fact necessary to ask a few *why* questions, and these were e.g. related to finding out why the students had made certain choices at the cost of others in both the scriptwriting phase, the photo finding phase, and the final editing phase of the digital storytelling process. Other types of questions that were used were follow-up questions, direct questions, indirect questions and also interpretive questions.

However, according to Kvale (1997), question design is not enough to ensure quality in an interview. It is also important to look at how the interview is carried out. The next section will present a few details precisely on that topic.

3.3.3 Carrying out the interview

Kvale (1997) has developed 10 quality criteria that might lead to good interviews, but at the same time he emphasizes that there are no absolute qualification requirements for carrying out an interview (ibid., p. 93). He refers to the interviewer as being the research tool in his or her capacity, and maintains “one learns to be a good interviewer by interviewing” (ibid., p. 92). This demonstrates the responsibility that lies on the shoulders of the interviewer when it comes to carrying out the interview and ending up with a good result.

I leaned on advice from Kvale (1997), Thagaard (2009), Postholm (2010) and Johannessen et al. (2006) about carrying out interviews, and will in the following comment on a few of the aspects they mention, to allow for transparency to take place.

All six interviews took place in a familiar meeting room at school, which created a relaxed atmosphere. I made it clear that what the respondents answered would in no way affect any of their formal or informal assessments. Before approaching the four main categories, I gave some background information about the purpose of the interview, as well as reminded the participants of the consequences of

participating and the fact that participation was voluntary. Then a few questions related to the respondent's digital storytelling background followed. Thagaard (2009) talks about the dramaturgy of an interview guide, and in that respect such introductory briefing questions (Kvale, 1997, p. 75) are important in order to create an atmosphere of openness and trust. After the interview, I also debriefed the participants (Kvale, 1997), especially with regard to confidentiality and anonymity in the finished presentation.

The relation between the interviewer and the research participants is also an important element (*ibid.*). I will characterize our relation as a good one, and all the six research participants who were asked to take part in the interviews immediately accepted. The interviews were recorded, as agreed with all participants in advance.

Johannessen et al. (2005, p. 144) emphasize the importance of the interviewer to listen carefully, even though the conversation is being recorded. I did not make notes during the interviews, but tried to stay focused on the interviewees and what they said. I did, however, have a notebook where I made notes of immediate impressions right after the interviews. I also made a few notes of how the participants had been reacting to the questions, their body language and other observations that might be relevant. Based on what Johannessen et al. discuss with regard to what is to be considered and processed as *empirical data* (*ibid.*), I will not look at these informal notes as part of my data. They were only used for my private purposes, to see if there was anything I needed to change for the following interviews to be conducted.

All six interviews were carried out in Norwegian. This was necessary since I wanted to make sure that the language would not become an obstacle for the participants. I carried out all the transcriptions during the first days following the interviews. In the next section I will make a few reflections precisely on the transcription work.

3.3.4 From interview to written text

In order to make the six interviews accessible for analyses, they needed to be transcribed.

When Kvale discusses reliability and validity with reference to carrying out transcriptions, he concludes by saying that there are no rules for correct transcriptions (Kvale, 1997, p. 105). He nevertheless suggests as a useful approach

that the researcher reflects on what a useful transcription for the current study is (ibid.). In my case, a useful transcription was to transcribe precisely what was said, but without indicating pauses, intonation or non-verbal actions, as e.g. body language, in the transcriptions. This is related to the fact that I was not going to carry out a linguistic analysis, but an analysis of the meaning, with a focus on what was said, not on *how* it was said.

Kvale furthermore says that if the intention is to look at the meaning and the participants' reflections, one can actually choose to reformulate and summarize the utterances made during the interview (ibid.). However, since I am not an experienced interviewer, I chose to make a direct transcription of the interviews knowing that reformulations as well as summaries imply interpretations and selections.

3.3.5 Reflections and dilemmas

The question of bias applied to various phases of the interview, the first being related to the sample. One reason for having a strict set of criteria to follow when selecting the sample was related to the fact that I am a teacher using my own students as research participants. In such circumstances I could easily be accused of selecting research participants that could favour myself. When relating the selection of participants to set criteria, the risk of choosing a biased selection was reduced. Reliability in qualitative research deviates, according to e.g. Postholm (2010), from the normal logic of the term, related to whether the results can be repeated and reproduced. I will nevertheless argue that relating the selection of participants to set criteria is an aspect contributes to an increased reliability of the study.

When presenting the interview design I mentioned that I sometimes during the interviews used interpretive questions, like the following, to make sure I had understood the interviewee correctly:

Interviewer: *“So, if I understand you correctly here, what you say is that the technical aspects of a digital story should also be assessed, since they make part of the whole story?”*

Research participant 6: *“Yes”.*

Could it be that students who were a bit uncertain accepted the interviewer's interpretative question as a fact, no matter what? Should I instead have asked the students to clarify? Such questions need to be asked and focused on when reflecting on the methodological aspects of carrying out an interview. On the other hand, and

precisely because there was a fairly close relationship between the participants and the interviewer in my study, could it not be expected that the students would be open about any misunderstanding related to what had been said or interpreted?

I was also faced with a few dilemmas when I was carrying out the interview transcriptions. Should the transcriptions be done in dialect, or in the standard written language? Since there is no single correct answer to this question, I decided to do what I found to be best suited for myself, which was to transcribe in the standard written language. This implies, on the other hand, a certain risk of not being precise enough when transcribing. However, I considered this risk to be minimal. Since I work in school and is surrounded by lower secondary students every day, I consider myself to be quite accustomed to the expressions and jargon used by the teenagers, and thereby qualified to make correct shifts from oral to written language.

3.4 Data collection from reflection logs

Towards the end of the storytelling project “From book to digital story”, all the respondents were asked to write a reflection log (see appendix 5) . The logs were used as part of the data collection primarily because I was interested in finding out whether data from the logs could shed new light on my research question or perhaps address new issues. Secondly, I wanted to check whether data from the logs confirmed findings from the interviews. Bringing the logs in as part of the data was hence a way to triangulate data from the whole group with data from the interview sample.

The students were encouraged to share their reflections on the digital storytelling activity that had been carried out. All the log questions were open, predefined questions apart from the final one where they were simply asked to share any remaining reflections. Our students are quite used to writing reflection logs at the end of a long activity so doing that also this time did not come as a surprise to them. Since I wanted to triangulate the logs with the interviews, the logs were answered with full names, but again, this is in line with the ordinary practice.

3.4.1 Reflections and dilemmas

In retrospect, I see that the logs should have been answered at the beginning of a lesson instead of towards the end. As we were approaching the break, it was easy to see that the respondents wanted to finish and head out of the room. This might have created an atmosphere of uncertainty for those who were still working on their logs. I

also want to point to the fact that the logs were not answered anonymously as something that might influence the quality of the data. Finally, since the logs were written before we had carried out the final phase of the digital storytelling activity (the presentations) it might be that we missed out on useful reflections related to e.g. peer assessment of the digital stories. However, due to practical matters, we had to do the logs before the presentations.

3.5 Chapter summary

In this chapter I have presented and discussed relevant aspects related to being a teacher researcher in own class. I have additionally presented the three methods for data collection used in this study. The questionnaire was used primarily to collect background information for designing the interview guide. 6 in depth interviews based on a purposive sample were carried out. In addition, reflection log was used as a method for data collection. Reflections on some possible ethical and methodological dilemmas related to each of the methods for data collection were also presented.

4 Analyses and presentation

Analyzing data is not a linear process that starts only when all data have been collected. On the contrary, analysis in qualitative research is an ongoing process starting from the moment the very first data collection is carried out (Postholm, 2010). It is nevertheless a distinction between an informal, ongoing analysis done by the researcher during the process of the data collection, and the more formal analysis carried out when all the data have been gathered and structured. This chapter will first focus on the methods used for the analyses. I will then give a descriptive, thematic presentation of my material. The latter should be looked at as the outcome of the triangulation carried out with the material gathered from the three data collection methods described in chapter 3.

Postholm (2010) uses the terms descriptive and theoretical analyses. She emphasizes that in the theoretical analyses the researcher makes use of theory to analyse and interpret the material (ibid., p. 86). Since this chapter is purely a descriptive presentation of the analyses, all discussions and links to theory will take place in the next chapter. The choice of making a distinction between pure descriptive analyses on the one hand and theoretical discussions on the other hand has been made to avoid repetition.

4.1 Methods of analysis

Analysis of a data is to a large extent about organizing the text material, searching for patterns and looking for the meaning behind the words (Kvale, 1997). A theme based analysis has been used to structure most of the data in this study, i.e. the open question from the questionnaires, the interviews and the reflection logs. Section 4.1.2 presents how this analysis was carried out, with the purpose of establishing categories. I will however first briefly comment on analysis of the closed questions in the questionnaire.

4.1.1 Quantitative analysis

The 8 closed questions in the questionnaires from the 20 respondents were analysed quantitatively. The data were structured in an Excel spreadsheet to allow me to get an overview and a first impression of the material. I then carried out very simple

statistic univariate⁸ analyses, where I looked at average scores, as well as minimum and maximum scores. I next compared the answers given, constantly looking for what could be interesting aspects to include in the interview guide. Based on this, I made a few tables, simply for the sake of giving myself an even better overview of the material. A few bivariate⁹ analyses were also carried out. These were mainly related to looking for differences between genders, as one of the variables, compared to various other variables.

4.1.2 Qualitative analysis

Six in-depth interviews constitute the primary source of data in this study. The focus was on the meaning and the content, not on how the research participants expressed the meaning.

Kvale (1997) distinguishes between five approaches to analyses of meaning of data from an interview and I have used meaning categorization. According to Thagaard (2009), meaning categorization involves in principle either to look at common themes in all interviews, or to establish categories within each of the single interviews. When I started working on the first level of the coding process, i.e. to identify categories, I read through the transcriptions several times. Postholm points to such an intensive re-reading of the material as important in the process of analysing the data (Postholm, 2009). I will hence argue that I have approached my material hermeneutically, keeping a focus on data relevant for the research questions as well as the two hypotheses outlined at the outset of the study. The hermeneutic approach to the material implies that I have considered the empirical data as a whole, at the same time as I have been trying to understand each individual part of the data. When carrying out the analyses and later the interpretations of these, I have constantly moved between the whole body of data and its individual parts, as well as I have moved between the data and the context and also between the data and my own interpretation of the data. This is in accordance with the hermeneutic circle (e.g. Johannessen et al. 2005, p. 315), and is based on Martin Heidegger's concept, and further developed by his student Hans-Georg Gadamer (Kjørup, 2008, p. 63).

The empirical material was analyzed and categorized according to the established themes (cf. Table 3.1). In the continuation of this section I will therefore

⁸ Analysis carried out with the description of a single variable (Johannessen A, 2005)

⁹ Analysis of two variables simultaneously (Johannessen A, 2005)

also structure the presentation of the method of analysis around the same themes. According to Kvale (1997), categories can emerge either from the empirical data itself, from theory or from the researcher's own vocabulary, which in my case was related to my background and experience as a teacher. All categories were established after the interviews had been conducted, and they were established on the basis of the students' original comments as these appeared in the transcripts.

4.1.2.1 Motivation

Motivation was addressed mainly in the interviews but partly also as a result of data gathered from the questionnaires and from the logs. Based on respondents' answers in the questionnaires, I saw that motivation was a theme that precisely needed to be further explored. Skaalvik and Skaalvik (2011) point to motivation as something that cannot be observed directly, but is linked to a feeling or an experience towards specific tasks and situations (ibid., p. 11). Seven categories were established related to my respondents' and interviewees' associations with the theme motivation. As shown in Table 4.1, the categories cover both how they approach and carry out their work, who they work with and reflections on the outcome of the work.

Table 4.1: Categories for the theme "motivation"

Category	Description
Self-efficacy	Motivation related to the learner's belief in his or her own capacity to accomplish a task (Bandura, 1997)
Working with DST	Motivation positively related to the use of DST as a learning activity
Variety in working methods	Motivation positively related to the use of various approaches to learning
Inspiration	Motivation related to an inner feeling towards a planned activity
Receiving good grades	Motivation related specifically to an external outcome in the form of good grades
Something constructed by and with peers	Motivation related to the importance of peers, and as something that can be enhanced with peers
Educational achievement	Motivation related to skills improvement and increased content understanding (without any specific reference to grades)

Most of the categories related to motivation emerged from the material itself, such as *working with DST* and *receiving good grades*, to mention a few examples. In addition, theory was also used to establish a few of the categories. *Self-efficacy* and *something constructed by and with peers* are examples of the latter. Socio-constructivism, which in chapter 2 was described as one of this study's main

theoretical framings turned out to relevant also with respect to establishing categories.

To allow for transparency with respect to how the meaning categorization was carried out, I present in Table 4.2 an extract of the relation between some units of meaning and the categorization. I emphasize however that this is not the complete table. Due to the scope of the thesis, I have chosen to present only an extract, but nevertheless related all the seven categories.

Table 4.2: Meaning categorization for the theme “motivation” (extract)

Statements from interviewees	Category
<i>Motivation is linked to the feeling of success, when you feel that you are capable of mastering something.</i>	Self-efficacy
<i>It helps my motivation a lot when we can work with DST.</i>	Working with DST
<i>DST in itself does not inspire me, but it inspires me to be allowed to work with different methods, not do everything the same way.</i>	Variety in working methods
<i>For me, motivation is the same as inspiration to do something.</i>	Inspiration
<i>If the work is important for the final grade, I am motivated to do an extra effort.</i>	Receiving good grades
<i>If my friends in class are motivated about doing a task, I get motivated too. I am inspired by my peers' motivation.</i>	Something constructed by and with peers
<i>What motivates me is that I would like to become better, try to be as good as possible in speaking English. Be more comfortable when I speak to people in English.</i>	Educational achievement

4.1.2.2 Learning

The analysis of this theme is based on data from the questionnaires and the interviews. The respondents and the participants were asked to define learning, as well as to explain how they understood learning to take place. 7 categories were established and as shown in Table 4.3, they are all defined as various acts. The categories related to learning emerged from the empirical data itself, as e.g. *learning something new*. In addition, my own teaching practice helped me establish a few categories, such as *being able to teach others*. Finally, socio-cultural learning theory was also important for the establishment of some of these categories, e.g. *building knowledge*.

Table 4.3: Categories for the theme “learning”

Category	Description
Learning something new	To learn something is related to learning something new, either with respect to content or to skills
Memorizing facts	To learn something is related to the ability to remember factual knowledge
Receiving knowledge	To learn something is related to teacher centered learning and transformation of knowledge
Building knowledge	To learn something is related to student centered learning and being active in own learning process
Developing further something you know	To learn something is related to taking as a point of departure something familiar and reinforce the existing knowledge by adding new information
Being able to teach others	To learn something is related to being able to present to someone what has been learned
Working with motivating topics or activities	To learn something is linked to motivation

The next figure shows extracts of the meaning categorization related to this theme. As with Table 4.2, this table is not a full presentation of all units of meaning. It is simply meant as a visualization of the process.

Table 4.4: Meaning categorization for the theme “learning” (extract)

Statements from respondents and interviewees	Category
<i>For me, to learn something means to learn something new that I didn't know.</i>	Learning something new
<i>I learn only when I remember information for later use.</i>	Memorizing facts
<i>Learning is to learn something with the help of a teacher.</i>	Receiving knowledge
<i>I learn when I need to find out things by myself. If I am only listening to a teacher, I do not learn as much as if I am active.</i>	Building knowledge
<i>To learn means that you understand something that you develop further. To learn something is also to learn more about something I already know. When I learn I try to create a mental picture of what I learn, and to look for some connections and logic.</i>	Developing further something you know
<i>To learn something means to be able to present that knowledge to someone else. If you learn something well enough you should be able to explain it to someone else.</i>	Being able to teach others
<i>My learning increases if I am interested in the subject or the topic in question.</i>	Working with motivating topics or activities

As can be seen from Table 4.1 and Table 4.3, no sub categories were established for the themes motivation and learning. This is primarily related to the fact that the material did not necessitate such a sub categorization for all the categories. Even though a few of the categories could have been established with sub categories, this was nevertheless an exception. In order to make a coherent table and presentation I therefore decided to use only main categories for these two themes. The second

reason was that this study's primary focus is not related to motivation and learning in itself, but to reflections around learning potentials from digital storytelling used in second language. This is why the final theme, presented below, is more detailed with respect to subcategories.

4.1.2.3 Digital storytelling as a second language learning activity

To establish categories for this theme, I basically leaned on the interviews, but triangulated these data with data from the reflection logs and the questionnaires, where this was relevant. Questions were related to how and what we can learn when using digital storytelling as a learning activity in second language learning. As with the two first themes, the categories were established only after the collection of the data. This means that respondents and interviewees could reflect freely on the theme.

Table 4.5: Categories for the theme "digital storytelling as a second language learning activity"

Category	Sub category	Description
Basic skills	Oral skills	DST as a tool to practice and document oral skills
	Written skills	DST as a tool to practice written skills
	Digital skills	DST as a tool to practice and document digital skills at the same time as developing English linguistic competence
Content understanding	Core knowledge	DST as a tool to develop and personalize basic, factual content knowledge on specific topics
	Personal reflections	DST as a tool to present personal reflections related to the content of the digital story
Learning strategies	Find and evaluate information	DST as a strategy used to look for and evaluate relevant information related to the content of the story
	Manipulate and rephrase information	DST as a strategy used to re-use the relevant information in a personal way
	Present and share information with and for peers	DST as a tool to present content understanding, content knowledge and basic skills in English

The categories for this theme were established as a mix between deductive and inductive analyses. The three main categories were deductive in the sense that they were established in the light of the modified TPACK model (cf. Figure 2.3). This was also the case for the three subcategories within *basic skills*, which were based on what Engeström refers to as *rules and regulations* in his model of the Activity system (cf. Figure 2.1), i.e. they were established with reference to the Knowledge Promotion (2006). Sub categories for *content understanding* were based on an

inductive approach, since they emerged from the empirical data itself. Finally, the sub categories related to *learning strategies* were established as a mix between my own background and experience as a teacher and the empirical data itself.

Examples of the meaning categorization for this theme are done with respect to one research participant only. I considered that to give a best possible understanding.

Table 4.6: Meaning categorization for the theme “digital storytelling as a second language learning activity” (extract)

Statements from interviewee Dina.	Category: <i>Basic skills</i>	Sub category
<i>The most important learning outcome from using digital storytelling is related to the oral aspect. You practice how to use your voice to set the mood in the story. You practice intonation and because I can listen to myself I am also able to hear my own pronunciation mistakes. I can adjust this for the second narration, or I can ask someone else for help if I don't know how to improve the pronunciation myself.</i>		Oral skills
<i>I practice my digital skills when I edit my story. DST is a very good way to develop digital skills. Through the choice of photos I can document creativity and also document how I have been planning my whole story.</i>		Digital skills
<i>For a digital story, it is important to only stick to the most important and plan how to express this and which words to use. If there is no limit with regard to number of words, like in other genres, the result is often that you use unnecessary words that are not important for the overall meaning. The fact that digital stories should be short stories, around 200-300 words, is normally not a problem for me. Very often it is like, if you continue writing without thinking, your text doesn't get better, quite the contrary, maybe. You have to think quality instead of quantity when you write a script for a digital story.</i>		Written skills
Statements from interviewee Dina.	Category: <i>Content understanding</i>	Sub category
<i>I do think that my own reflections are visible in a digital story, because I can show them through the words I use, through the tone of my narration and also through the photos I use to accompany the voice-over.</i>		Personal reflection
<i>I already knew something about WWII before this project, but you always learn more when you have to put yourself in the situation, the way you have to when you are going to make a digital story.</i>		Core knowledge
Statements from interviewee Dina.	Category: <i>Learning strategies</i>	Sub category
<i>When you are going to make a digital story you have to find relevant sources and try to compare the information and find out what is the most important information for your story.</i>		Find and evaluate information

The final level of the analysis was to re-read all the interviews once again, one by one, to check for misunderstandings or wrong interpretations, and to see if the established categories were exhaustive and covered all relevant aspects from all the six interviewees. Such a final re-reading is, according to e.g. Thagaard (2009), important since theme-based analysis can sometimes be accused of missing out on the overall understanding precisely due to the researcher's theme focus when going through the interviews.

With the three above-mentioned theme-centered analyses and established categories as points of departure, I will next make a descriptive analysis of the structured material.

4.2 Descriptive presentation

The structure of the rest of this chapter will be to present the material thematically, in accordance with the previously established themes. In section 4.2.2 I will hence present respondents' and participants' reflections around the theme *motivation*. Section 4.2.3 will focus on the theme *learning*. Finally, findings related to *digital storytelling as a second language learning activity* will be presented in section 4.2.4. I will however start by sharing some empirical data related to my respondents' knowledge and understanding of digital storytelling as a learning activity. I find this to be relevant in order to get a best possible understanding of the presentations.

According to Johannessen et al. (2005, p. 238), a percentage distribution is not an adequate way of presenting data if the sample consists of few respondents, i.e. up to around 20. My sample sizes vary according to the different methods of data collection, but the total sample size is 21. Apart from a few exceptions, where direct comparison between genders is better presented with a percentage distribution, I will refer to the specific numbers or the specific pseudo names in order to create an accurate picture and hence to open up for transparency and avoid ambiguity. Due to the same reasons I also aim at avoiding using adjectives such as "many", "several", "few" etc.

Since I have a lot of data, I have chosen to present some of it in the form of tables. This is at the same time a good visual summary as well as it is less space demanding than if I were to describe all findings with words. Citations from the students are used throughout the presentation. The latter are not only added as illustrations, but also as a way of showing transparency in the presentation. Finally, to allow for an easiest possible reading of the presentation, all references to themes and categories are written in italics. The latter also applies for the citations from respondents and participants.

4.2.1 Respondents' background knowledge on digital storytelling

From the quantitative analysis of the questionnaires I saw that the majority of the respondents were quite used to using digital storytelling as a learning tool. Data

showed that all 20 respondents had received formal instruction in digital storytelling, and they had all used digital storytelling in their second language learning prior to the new storytelling project we carried out. They had additionally used digital storytelling in one or more subjects other than English. I was nevertheless interested in finding out how the students would *define* digital storytelling. 18 of the 20 respondents chose the alternative below as their preferred alternative out of four choices:

To work with digital storytelling means to create a digital story based on a self-written script which is later recorded, in addition to using images and perhaps music to further emphasize the story's plot.

This was interesting, since it shows that they do relate working with digital storytelling to more than simply working with the software tools, which was one of the other alternatives¹⁰. This information was also valuable with regard to the second hypothesis (cf. section 1.2.1), and will hence be commented on later.

Based on this data and other data from the questionnaires, I considered that the respondents had sufficient basic knowledge and understanding of the concept *digital storytelling* for reflections on potentials for learning to be made.

4.2.2 Findings related to the theme *motivation*

One of the hypotheses outlined in my study, (section 1.2.1), was to see if there was any relation between respondents' and participants' meta-reflections on *motivation* and *learning* on the one hand, and their perceived potential learning outcome from digital storytelling activities on the other hand. Related to this, I was interested in finding out what they associate with *motivation* and what they point to as motivational aspects in their own work at school. Analyses from interviews and partly also from questionnaires and reflection logs form the basis of the triangulations carried out. Table 4.7, below, presents a comparison between the six research participants, with regard to the theme *motivation*.

¹⁰ All four answer alternatives can be studied in the questionnaire, in appendix 3

Table 4.7: Comparison of interviewees' reflections on the theme "motivation"

"Motivation" as associated with category	Research participants					
	IRIS	ISAK	THOMAS	LUKAS	SARA	DINA
Self-efficacy	x	x				
Working with DST			x			x
Variety in working methods	x	x	x	x	x	
Inspiration				x	x	
Receiving good grades	x			x		x
Something constructed by and with peers			x		x	
Educational achievement	x	x				x

Iris is a hard-working and busy student. She is keen on doing well at school, and explains her understanding of motivation in this way:

It is what stimulates you in your work, and what decides whether you would really like to work with something or not. Motivation is also the feeling you get when you have success and you feel that you would like to put even more effort into your work because you think what you are doing is actually funny (Iris).

For Iris, motivation is associated with *educational achievement* in general, but also more specifically with *receiving good grades*, a point she makes somewhere else in the interview. Iris and Isak, another high proficient student, are the only students who talk about motivation in a way that I interpret as being about *self-efficacy*. Student Dina, who also does well in English at school, is primarily concerned with the importance of motivation as a decisive factor with regard to whether *good grades* and or *educational achievement* are obtained. In addition, she links motivation to *working method*. In fact, all six students talk about motivation as being associated with, and hence related to *working method*. Whereas the girls seem to have a wider approach to the sub category *variation in working method*, more boys specifically relate this to a working method involving the use of computers. As Lukas says: *It is always motivating to work with computers, because it allows me to work more independently, and to use other ways of showing what I can do.*

Only 2 of the 6 students interviewed see motivation as being linked to *working with digital storytelling*. Iris and Dina, who are high proficient students of English, disagree about what role digital storytelling has as a motivating factor in their learning. Whereas Iris is not motivated by working with digital storytelling, it has a positive effect on her peer Dina's motivation when students are asked to produce a digital story as part of their work with a topic in English. At the same time, Dina emphasizes that she does not like to use this method too often: *If we are asked to*

produce digital stories too often I get tired of doing it, and therefore lose interest (Dina). The four other students place themselves on a continuum between Iris and Dina, i.e. between not being motivated by working with digital storytelling in English and experiencing a high degree of motivation when teachers open up for digital storytelling activities in English.

The findings above, from the interviews, are however not in full accordance with the findings from the questionnaires. In one of the questions, the respondents were asked to range how important 17 different statements were when deciding whether to choose digital storytelling or another way of working with a topic in English, if there was a choice. I used a Likert scale¹¹ with the following answer alternatives: “Very much importance”, “quite a lot of importance”, “some importance”, and “no importance”. Analysis of the questionnaires showed that 13 of the 20 respondents said that the following statement had either “very much importance” or “quite a lot of importance” for them if they were to choose digital storytelling as a preferred learning activity in English: “Digital storytelling is a learning tool I can use to develop several of my basic skills in English”. I will argue that this can be linked to motivational aspects in the students’ learning. I also saw that there was a majority of boys who had ranged the following statement as having “very much importance” or “quite a lot of importance” for choosing digital storytelling: “I am not fond of writing long texts in English, and with digital storytelling I can tell a story or present content knowledge on a topic in English in other ways than just writing”. This did not come as a surprise, and actually confirms my own impressions and experience from many years of teaching.

I have also looked at the categories for *motivation* in the light of intrinsic and extrinsic motivation (cf. section 2.3). The intrinsically motivated interviewees in my material are concerned with *educational achievement* in general and have a strong belief in their own possibilities to succeed with an academic task, (categorized in the analysis as *self-efficacy*). The extrinsically motivated interviewees mention specifically the importance of *receiving good grades* or the importance of *working method* for their motivation. Dina’s comment is an example of an intrinsically motivated student:

¹¹ A scale where respondents specify their level of agreement to a statement (Johannessen et al., 2006)

What motivates me is that I would like to become better, try to be as good as possible at speaking English. Be more comfortable when I speak to people in English. (Dina)

According to students Thomas and Sara, two students at an average level of English, motivation can also be related to how peers react to a specific working method suggested by the teacher. As Sara says: *If your friends are keen on working with a certain topic or in a specific way, you become motivated yourself.* The most interesting part with regard to motivation is nevertheless that 5 of the 6 interviewees reflect on the importance of variation in working method. Whether they work with digital storytelling or other methods seems for most of them to be of less importance as long as they are offered various ways to approach a topic. That is actually how they find motivation in their work at school.

4.2.3 Findings related to the theme learning

Since reflections on learning are central keywords in my main research question, I was interested in finding out how students would define *learning* and how they would look at second language learning outcome from digital storytelling as compared to other ways of working in English. Analyses from all three bodies of data (questionnaires, interviews and reflection logs) form the basis of the triangulations carried out for this theme and show that my respondents and research participants conceive of learning in different ways.

Table 4.8: Comparison of interviewees' reflections on the theme "learning"

Learning, in general, associated with category	Research participants					
	IRIS	ISAK	THOMAS	LUKAS	SARA	DINA
Learning something new			x	x		
Memorizing facts		x				
Receiving knowledge					x	x
Building knowledge	x				x	
Developing further something you know			x			
Being able to teach others		x		x		x
Working with motivating topics or activities			x	x		x

Dina first defines learning as *receiving knowledge*, but when she is challenged to explain how she knows that she has learned something, she expresses her views on learning by pointing to a relation between learning and presenting to and for others:

If you are to present your knowledge to others, you really have to know the topic and understand it yourself. In a way, you learn it unconsciously by

preparing for the presentation to take place, and because you are going to present to others what you have learned, you need to go deeper into the topic. So, I think that when you are asked to present your learning outcome or teach it to others, you also learn it better yourself(Dina).

Other research participants also point to *learning* as related to the degree to which they are able to use actively what they have learned. 4 of the 6 interviewees relate learning to being active in one way or the other. This activity could e.g. be to build their own knowledge by finding and rephrasing information or to teach others. This way of defining *learning* was totally in line with the data from the questionnaires. When triangulating the empirical data I actually discovered a dichotomy between those who define learning as something transmitted, as opposed to those who relate learning to being active in his or her own learning process. One of the respondents from the questionnaires makes interesting reflections precisely around this distinction:

To learn something means to be taught by a teacher. On the other hand, if I'm only taught, I don't learn as much as when I'm active myself. Good ways for me to learn something new is to make a PowerPoint, a DST¹² or to write something myself. I also feel that I learn best if I'm interested in the subject or the topic in question (Respondent 19).

Working with digital storytelling is basically a way of working that demands active participation from the students, as opposed to more traditional *teaching* where knowledge is understood as transmitted and students are often seen as passive receivers of knowledge. One could hence expect that students who favour being taught, in the traditional way, would be reluctant to define digital storytelling as a good way to enhance learning. Students were therefore also asked (in the questionnaire) to consider their own learning outcome when working with digital storytelling as compared to other ways of working with a topic in English. Learning outcome is here defined as “the specification of what a student should learn as the result of a period of specified and supported study¹³”. Four answer alternatives were given for this question, and students were additionally asked to justify their choice of answer. No such correlation as suggested above was however found.

¹² Students at my school talk about “making a DST” when they work with digital storytelling

¹³ Harvey, L., 2004–9, *Analytic Quality Glossary*, Quality Research International, at <http://www.qualityresearchinternational.com/glossary/>

Table 4.9: Respondents' reflections on learning outcome and examples of justifications

Answer alternative	Number of respondents	Reasons given by students
Greater learning outcome from digital storytelling activities as compared to other learning activities	3	- <i>I need to express the content in a personal way to make it into something interesting. That is useful for my own learning.</i> (Respondent 1) - <i>I need to create a script, and for that I need to work with various sources and personalize my material. In addition I need to work well with finding suitable images to go with my script.</i> (Respondent 3)
Equal learning outcome from digital storytelling activities as compared to other learning activities	8	- <i>Making a digital story in English is the same as practicing my oral English by talking to someone or by reading aloud.</i> (Respondent 4) - <i>My experience is that it's the same as doing other things.</i> (Respondent 14)
Lesser learning outcome from digital storytelling activities as compared to other learning activities	1	- <i>The only thing I have learned from digital storytelling is to use Moviemaker. I learn best from writing longer texts.</i> (Respondent 8)
Different kind of learning as compared to other learning activities	8	- <i>I don't learn more, as compared to writing a text, but it's more exciting and I also learn from using the computer and working with images.</i> (Respondent 2) - <i>I don't learn more, but I learn it differently.</i> (Respondent 10) - <i>In one and the same activity you can practice your oral skills and work with images and text writing. That makes the learning funnier and more motivating.</i> (Respondent 12)

Table 4.9 shows the distribution of number of respondents for each answer alternative. I have additionally added a few representative examples of reasons given by some students, to justify their answer. These justifications are based on an open question, which means that the respondents were not restricted to predefined categories.

The table above, from the questionnaires, shows that 8 of the 20 respondents do not see any difference in learning outcome between using digital storytelling and other ways of working with a topic in English. At the same time, there are also 8 students who point to digital storytelling as giving them a *different learning outcome* as compared to other learning activities. What I find most interesting is however to look at the reasons stated. Respondent 10 from the questionnaires points to digital storytelling as opening up for a different way to learn, even though increased learning is not a result. Some of the respondents who reflected on digital storytelling as a different kind of learning, justified this by relating it to increased motivation for

carrying out the learning activity. A link between motivation and learning was hence established, but not in the sense that students conceive of digital storytelling as leading to a *greater learning outcome*, but rather to a *different* one, and more precisely a learning activity that embraces several areas of the subject. This was an interesting finding from the questionnaires. Since I also interviewed six students, I was able to go more in depth on this finding and explore more specifically how various learning potentials from digital storytelling were understood. The latter will be presented in section 4.2.4.

The main objective of this study is to learn more about students' reflections on potentials for second language learning through digital storytelling. Linked to this, and based on the presented analyses related to *learning*, it is interesting to look at whether students would actually choose digital storytelling as a tool for second language learning or not, if there was a choice. What are the decisive factors that would either speak in favour or in disfavour of choosing digital storytelling, as perceived by the respondents?

The questionnaires showed no correlation between students' private use of computers and their inclination to choose digital storytelling as a preferred learning tool at school. On the contrary, a surprising number of students actually referred to the importance of variation and enjoyment and saw digital storytelling as a learning tool in this perspective. If we do not account for gender, a majority of the sample from the questionnaires (i.e. 6 of 8 boys and as many as almost 12 of 13 girls), pointed to "Digital storytelling is an enjoyable working method" as the most decisive factor for choosing digital storytelling, if there was a choice. Reasons stated for not choosing digital storytelling were also checked. 13 of 20 students pointed to "Digital storytelling involves too many challenges not related to the learning aspect, such as software crash, no computer available, no separate room for recording the audio" as having "very much importance" here. This is closely linked to the statement saying that "Digital storytelling is too time consuming", but in fact only 7 students ranged this statement as having "very much" or "quite a lot of importance" for deciding not to choose digital storytelling if there was a choice. Finally, around half the group (i.e. 9 respondents from the questionnaires) also pointed to the embarrassment of listening to their own voice as having "very much" or "quite a lot of importance" in the decision-making. The latter is a commonly known obstacle for everyone who creates digital stories, not only for young learners. Very few people

actually like to listen to their own voice. I will discuss the latter aspect in the next chapter, where I will also look at this as a contrast to another finding pointing to developing *oral, basic skills* as one of the most important second language learning potentials in digital storytelling.

4.2.4 Findings related to the theme digital storytelling as a second language learning activity

As presented in section 4.1.2.3, three categories and also several sub categories were established for this theme, but not until after the interviews had been carried out. The presentation that follows will be done according to each of the categories, as summarized in the table below.

Table 4.10: Comparison of interviewees' reflections on the theme "digital storytelling as a second language learning activity"

Category	Sub category	Research participants					
		IRIS	ISAK	THOMAS	LUKAS	SARA	DINA
Basic skills	Oral skills	x	x	x	x	x	x
	Written skills			x		x	x
	Digital skills	x	x	x	x	x	x
Content understanding	Core knowledge		x	x	x	x	x
	Personal reflections		x				x
Learning strategies	Find and evaluate information			x		x	x
	Manipulate and rephrase information	x		x		x	
	Present and share information with and for peers	x					x

Together, the categories embrace what the respondents and research participants pointed to when reflecting on their learning potentials from working with digital storytelling in second language classes. It is interesting to note that analyses of interviews (6 students) and reflection logs (all 21 students) support each other to a very high degree for this theme. Table 4.11, below, presents a comparison of log respondents' reflections. Because they were encouraged to define any type of learning from the storytelling project they had carried out, the total number of respondents within the *sub categories* exceeds the total number of students within each main category. This means e.g. that among the 21 students who pointed to learning from digital storytelling as learning of basic skills, several of them also

made reflections with regard to several of the sub categories within that main category *basic skills*.

Table 4.11: Comparison of log respondents' reflections on the theme "digital storytelling as a second language learning activity"

Categories	Number of respondents within each category	Sub categories	Number of respondents within each sub category
1. Basic skills	21 of 21 students	Oral skills	21 of 21 students
		Digital skills	9 of 21 students
		Written skills	7 of 21 students
2. Content understanding	15 of 21 students	Core knowledge	13 of 15 students
		Personal reflections	7 of 15 students
3. Learning strategies	5 of 21 students	Find and evaluate information	4 of 5 students
		Manipulate and rephrase information	2 of 5 students
		Present and share information with and for peers	1 of 5 students

Before I look more in detail at the various categories, I want to point to one more general aspect. There is no significant difference between genders related to reflections on learning potentials from working with digital storytelling. Both boys and girls are represented within each of the main categories. The biggest difference with respect to genders is that all three girls from the interviews related working with digital storytelling to *learning strategies* whereas Thomas was the only boy who did so.

4.2.4.1 Basic skills

A very distinct finding from this study shows that all 21 students in the total sample reflect on digital storytelling as a good tool to practise and develop various *basic skills*. This category is furthermore split into three sub-categories; *oral*, *written* and *digital skills*. They will be treated separately below.

"I think the most important learning outcome from DST is the oral training" (Dina)

All 21 respondents speak or write about digital storytelling as a working method that allows them to practise and improve their *oral skills*. According to one of the students

Digital storytelling works best as a tool to document and present oral proficiency. This is because it allows you to show whether you can add emotions to your voice or not. In addition you can hear your own voice and

pronunciation, which better allows you to realize what you need to work on (Respondent 8).

Lukas is another student who speaks about the importance of digital storytelling as an efficient tool for working with oral skills. Lukas additionally argues that for him, recording his own voice as part of a digital storytelling project is something that allows him to improve his own pronunciation even without receiving feedback from peers or the teacher. *You are able to improve you pronunciation on your own when you hear your voice recorded. You discover how you actually pronounce the words* (Lukas). He is not the only interviewee who points to the advantages of being able to listen to one's own English. Even though listening to own voice is a frustrating part of a digital storytelling activity for many of the students, this is not the case for everyone. Listening to her own voice does not bother Dina. *I'm actually quite pleased with the way I speak English, and I wasn't aware of this before we started working with digital storytelling* (Dina).

When asked to specify areas of oral skills practice, a majority pointed to pronunciation and intonation as the types of oral skills they might develop in a storytelling project. According to student Thomas, it is even more important to stress pronunciation when doing a narration than when speaking to someone: *When you are going to record your script, you just have to practice more to learn the pronunciation* (Thomas). The difference between speaking and doing a voice-over is related to what the *Common European Framework of Reference for Languages* (the CEFR) refers to as a difference between oral interaction and oral production (CouncilofEurope, 2007). I will discuss this difference more detailed in the discussion chapter, and also point to which role digital storytelling might have in that matter.

Some of the interviewees also mentioned a slightly different aspect with digital storytelling and oral skills development. They said that in cases where a student is reluctant to speak English aloud in class because he or she is shy or feel embarrassed, digital storytelling works well as an alternative way of both practicing and documenting oral language skills. This is also in line with my own experience as a language teacher.

“Because DST involves writing it also allows me to develop that skill” (Dina)

Whereas all six research participants reflect on the *oral* aspect as an important learning outcome, not all of them see learning potentials related to *written skills* development in digital storytelling activities in English. Those who do mention the written part as an important learning outcome, point to various aspects related to writing a script. Lukas mentions working on vocabulary, whereas Thomas points to practising spelling.

For some of them, the fact that digital stories are short, terse stories where the writer is told to restrict his or her text to around 150 – 300 words is actually a good thing, especially for those students who are not fond of writing longer texts. Isak belongs to the latter group. He hence finds script writing for digital stories to be a good way of practising and documenting his *written skills*. This is also why he believes that teachers should assess all parts of a storytelling production, not only the oral part.

Iris, on the other hand, is of the opposite opinion when it comes to the written part of a storytelling production. One of many reasons to why she does not like digital storytelling is that she feels that the limitations with regard to length restrict her, and prevent her from showing her best English: *I feel that I am not allowed to show what I can do in English when I have to write as short as this* (Iris).

With reference to what Iris says here, I find it interesting to compare the reflections made by the two high proficient students Dina and Iris. Whereas Iris does not find digital storytelling to be a good way of developing her written skills, Dina points to an interesting aspect when she says that:

For a digital story, it is important to only stick to the most important and plan how to express this and which words to use. If there is no limit with regard to number of words, like in other genres, the result is often that you use unnecessary words that are not important for the overall meaning. The fact that digital stories should be short stories, around 200-300 words, is normally not a problem for me. Very often it is like, if you continue writing without thinking, your text doesn't get better, quite the contrary, maybe. You have to think quality instead of quantity when you write a script for a digital story (Dina).

What Dina talks about here, is however not something she manages to do without a great deal of effort. During the interview, she explained how she was working with the script for her digital story in the project “From book to digital story”. She always

prefers to start by writing a short intro, to make it easier for the viewers to connect to or follow her story:

I had a short introduction in the digital story, because I think it is ok for the viewers to receive some information first. This will actually make it easier to understand which story I am going to tell; which was to tell the story seen through the eyes of Bruno¹⁴'s mum (Dina).

When she continues working on her script, she always writes everything she wants to tell first, based on her work with the sources. *I always write everything I believe to fit well into the story first* (Dina). Then only in the second phase, after having read and reread her script, and as she says *after having spoken to myself about the script I have written* does Dina take away what she finds to be unnecessary and unimportant information.

The point that Dina makes about quality vs quantity, and the way she thinks about the target group of her story already when working on the script are interesting aspects that will be discussed later.

“Digital storytelling is indeed a good way to develop your digital skills” (Dina)

Everyone in the data samples, both from the logs and from the interviews, made reflections around the use of digital storytelling as an activity to develop and practice their *digital skills*. Iris does not however see this as being related to her skills development in English. She believes that how good you are at using digital tools has got nothing to do with your oral or written skills in English. *The talking and the writing are the only two things that demonstrate how well you understand a topic or how well you master the language* (Iris). Nevertheless, Iris is a student who works thoroughly with finding pictures for her digital stories. She makes a folder with pictures she believes to suit her already written script. Then she reads through the script several times, and adds to her Word document those pictures she finds most suitable.

Sometimes I use abstract pictures, because they convey a deeper meaning and allow better for feelings to come to the fore. Usually I find too many pictures, and hence have to try out various solutions before I am pleased. Finding the correct pictures is actually a demanding phase in the storytelling projects we do at school, and in the end I know my script by heart because I have reread it so many times when working with the pictures (Iris).

¹⁴ Bruno is the main character of the novel “The Boy in the Striped Pyjamas”

Iris' comment shows that she is as a typical representative of 21st century learning, (cf. section 2.1.3), where focus on visual literacy and the use of many modalities is important and related to the fact that meaning is expressed in many forms, not only in the written.

Dina feels that she has developed since 8th grade, with regard to editing her digital stories. During the interview she talks about how important it is to think of the use of effects as a kind of literary means in a digital story:

I think it gets very messy and incoherent if you use effects all the time. I'm personally in favour of keeping it simple and only use effects if there's anything you want to contrast or underline, as a kind of literary means. If you have been talking about something very sad in your story, then you might want to use fading as a good transition. It hence becomes a literary means, the way I see it (Dina).

Dina is also a student who has developed an advanced way of using photos in her digital stories. She additionally believes that this has relevance for her skills in English. *When I search pictures from the Internet I use English search words, and I also might describe the pictures in English*, Dina says. She also thinks that digital storytelling is a way of working that allows her to use and show her creativity, for example when working with the visuals. She explains this in the following way: *For example, you may choose a picture to fit exactly what you say, or you may use another picture where you have to go more deeply into the meaning* (Dina). What Dina actually talks about here, is the difference between using pictures that elaborate the meaning and pictures that extend the meaning presented by the narration or the text displayed.

Isak, a male high proficient student of English, considers the visuals and the personal voice to be the most important aspects of a digital story. *The written script doesn't have to be very elaborated, if you have been working very hard on finding the best possible pictures to accompany the narration*, Isak tells me during the interview. I understand this to be linked to the fact that digital stories convey meaning in many forms, not only in the written form. A poorly developed written script will be compensated by the use of good visuals.

4.2.4.2 Content understanding

I found that 15 of the 21 respondents from the logs and 5 of the 6 research participants interviewed made reflections around digital storytelling not only as an

activity for *basic skills* development, but also as an activity related to *content understanding*. As shown in Table 4.5, two sub-categories were established here. The respondents and the research participants either reflected on digital storytelling as a tool to develop and personalize their *core knowledge* on a topic, or as a tool to present *personal reflections* related to the topic of the story. This tells me that even as young students as mine (14-15 years old) are conscious of the fact that learning their second language English at school actually embraces more than simply learning and practising linguistic skills.

“I already knew something about WWII before this project, but you always learn more when you have to put yourself in the situation, the way you have to when you are going to make a digital story” (Dina).

Dina shares many reflections during the interview, and in the quotation above she touches upon digital storytelling as a tool to develop and document *core knowledge*. She later also describes the importance of having worked well with the novel prior to starting the digital storytelling production. She actually mentions this preparatory phase as a reason to why the digital storytelling activity contributed to developing her own content understanding.

It meant a lot for me that we worked so intensely in class with the novel before starting developing the scripts for the digital stories. If we hadn't discussed the book we wouldn't have known how our fellow students reflected on the content of the book, and if we had not discussed important parts of the book together, we might have thought that those parts were not that important. (Dina).

Lukas is of the same opinion. He says that for him, it was important that we were discussing various aspects of the novel before we started working on developing the digital stories. *It could be that I had misunderstood something when reading the book, but because we discussed each chapter in class, these misunderstandings could be adjusted when I listened to my mates (Lukas).*

Sara also liked the joint discussions about the book, even though she did not take very actively part in these discussions. *Even so, she says: I still learned a lot from listening to these discussions, and this helped me to better understand the overall topic for the digital story I was going to produce (Sara).*

However, not all students agree that digital storytelling is also a good way to work with content understanding in their second language English. One of the respondents actually describes digital storytelling as being *a lot of work and a bad*

result. According to this respondent, presenting content understanding in the form of a digital story only leads to *a superficial result because the script has to be so short* (respondent 8).

“How I have chosen to express the mother’s feelings is one way of showing how I think about her and which reflections I have about her situation” (Dina)

Not many students commented on the use of digital storytelling as a tool to express *personal reflections*. Dina is an exception. She mentions the script as an obvious way of showing personal reflection. It is perhaps even more interesting that she also points to the use of her own voice as a way of presenting personal reflections, and more specifically the way she uses the tone of her own voice to express mother Else¹⁵’s thoughts and feelings when the latter no longer is capable of closing her eyes to what really goes on around her. This is closely interrelated with the sub category *basic digital skills*. It is in that respect yet another example of how learners of this century make use of a variety of literacy skills to express meaning and demonstrate their understanding and reflections.

Fellow student Isak is the other student who also speaks about personal reflections as one type of learning in digital storytelling productions. Isak actually says that he can show personal reflections by the way he uses the various modes in his digital story, whether these are the verbal, the visual or the aural modes: *You can write, you have the pictures and you have the music to express your own reflections* (Isak). Another student, a male respondent, made the following reflections in his log, related to reflections:

When I had to make a digital story based on the book we read in class, I also had to reflect more about the book’s content. Due to that I actually learned and understood more about the book itself(respondent 12).

I will argue that this student actually approaches both sub categories related to the main category *content understanding*. He sees increased *core knowledge* of the topic as a result of his *personal reflections*.

Another interesting comment came from the same respondent’s reflection log:

A digital story with lots of info will be boring to watch, but a story where one shows critical aspects and personal reflections will also be more interesting for the audience (respondent 12).

¹⁵ One of the characters from the novel “The Boy in the Striped Pyjamas” by John Boyne

What we actually see here is that the student has the target group in mind during the production of a story. This is an interesting finding also within the perspective of socio-cultural learning theory, as commented in chapter 2.

4.2.4.3 Learning strategies

Whereas 4 of the 6 research participants made reflections on the use of digital storytelling as a *learning strategy*, this was the case only for 5 of the 21 respondents. Since both groups were rather brief in their comments and reflections on aspects that I placed within the category *learning strategies*, this section is relatively shorter than the two previous sections, related to *basic skills* and to *content understanding*.

“I need to find good sources so that I don’t write just anything in my script”
(Thomas)

The importance of working well with the sources in order to *find and evaluate* good and useful information for their script was emphasized by several of those interviewed, as well as commented on in the logs. In our project “From book to digital story”, the novel itself was an obvious source for everyone to use, but also the film based on the novel and various background information on World War II was used as sources of information for the students in their work with developing a script.

As seen from the quote above, Thomas makes it clear that he needs to do his work with the sources thoroughly. When I encouraged him to tell me how he used the sources he had found, he said that he did not copy directly but always tried to manipulate and rephrase the information, so that it ended up close to his own way of expressing himself. *Why*, I asked? *I learn more if I say things my own way*, he replied. This was a point also made by others.

“I always want to rephrase. It doesn’t become my own information if I just copy directly from the sources I use” (Sara)

Sara always finds it hard to *rephrase* and *manipulate* the information she finds in various sources and hence make it more personal. As shown in the quote above, she nevertheless emphasizes the importance of doing this job.

Dina also reflects on the necessary steps to take when she goes from searching for and evaluating relevant information, to making the information more personal. She says that she always tries to reduce the amount of information by sorting out the most important, and then use what is left as a point of departure for reusing that information in a personal way.

Iris introduces a slightly different perspective. She actually points to rephrasing as related to developing her vocabulary in English. She gives an example:

Since the script in a digital story is supposed to be short, I always look at ways to use one good word instead of three not so good words to express more or less the same information. As an example, if I replace if not with otherwise, then I have managed to use only one word instead of two (Iris).

Iris continues by explaining how it is possible, *after all*, as she puts it, to obtain learning when working with digital storytelling, also for someone like her, who sees progress in English primarily as a result of writing long, comprehensive texts of 6-8 pages:

For me, a key to learning from digital storytelling activities in English is precisely to replace the words I first use, with new words. First I write the script without thinking about the length, and then I start the process of rephrasing my script in order to reduce the total amount of words used (Iris).

The way I see it, this is clearly a learning strategy, but instead of only rephrasing the sources, Iris takes the process of rephrasing one step further when she also rephrases her own first edition of the script simply. This is linked to rephrasing information, and is an aspect that can be discussed in the light of navigationism (cf. section 2.1.3).

“The advantage with digital storytelling is that you can hand in the oral product in advance. Then you don’t become that nervous before the presentation” (Dina)

In the questionnaires, the respondents were asked to define their understanding of digital storytelling. The answer alternative “working with digital storytelling means to present knowledge by sharing stories” was ranked as their second choice. This tells me that the respondents not only define digital storytelling as a tool to practice their basic skills or as a tool to develop content understanding. They also see digital storytelling in the perspective of *sharing and presenting*. Based on this, I therefore find it somewhat surprising that not more than 2 of the 6 interviewees made reflections along this line. The explanation could of course be that in the questionnaire, a closed question with answer alternatives was given. In the interview, on the other hand, everything was open and I did not try to lead the research participants towards any predetermined definition or explanation. I was interested in their own meta-reflections, not whether they would agree with what I might suggest. That could be the reason to why fewer research participants reflected on digital

storytelling as a tool for sharing and presenting. The two high-proficient girls Iris and Dina are the exceptions.

What Dina talks about in the quote above, is actually a comparison between various ways of presenting and sharing knowledge with peers. Here, she compares digital storytelling as a presentation tool to giving a standard oral presentation. According to Dina, doing everything in advance, as the situation is when digital storytelling is used as a presentation tool, has both advantages and disadvantages. She emphasizes e.g. the advantage of preparing it all in advance for students who are not very self-confident with respect to presenting in English in front of their peers:

I know that many of those who don't like to speak English in front of the class, prefer to use digital storytelling as their presentation tool instead of e.g. a Power Point presentation where the talking must take place on-the-spot (Dina).

Iris agrees, and says that this is a good way to become more confident about using English as a presentation language. *To do a formal presentation in English in front of the class is something totally different than speaking informally with your classmates around the table (Iris).*

4.3 Chapter summary

A theme-based analysis has been used in this study. All categories were established after the data collection. Descriptions of the categories and examples of the process of meaning categorization have been presented. A descriptive, thematic analysis of the triangulated material from the 20 questionnaires, the 6 interviews and the 21 reflection logs has been presented. The presentation was structured around the three themes *motivation, learning and digital storytelling as a second language learning activity*.

5 Theoretical discussions

As teachers we can never predetermine what our students will and will not learn in a given activity. This depends among many other aspects on the learners' motivation for wanting to (or not wanting to) learn, and on how the learning takes place. The discussions in this chapter will embrace these and other aspects, since I will now bring some of the main points from the previous chapters together in a theoretical discussion. It is obvious that the study's *findings* need to be incorporated in the theoretical discussion. What I have additionally chosen to do sometimes during the discussion is to reflect on what I did *not* find in my study, compared to what one might expect, based on other, relevant studies. I have also contributed with my own experiences a few places, to shed light on the discussed findings.

The three topics for discussion in this chapter are closely linked to the research questions and the hypotheses. In section 5.2 the discussion will focus on digital storytelling and learner motivation. The second topic, in section 5.3, will embrace digital storytelling in the light of learning and learner differences. I will finally discuss digital storytelling as an all-embracing activity for second language learning, in section 5.4. These three approaches embrace the study's research questions and hypotheses, as well as the overall findings that will be briefly summarized in the first section below. However, it is only in chapter 6 that I will specifically revisit the research questions and hypotheses, and hence conclude my whole study.

5.1 Overall findings

This thesis did not aim at coming up with results that could be generalized and transferable to larger groups of second language learners. On the contrary, the objective was rather to reach a naturalistic generalisation (Stake and Trumbull, 1982 in Postholm, 2010), where the aim is to allow for the readers to recognize and identify with the descriptions made, and hence relate what they read to their own situation (*ibid.*). In the previous chapter I presented fairly thick descriptive analyses. Thick descriptions will, according to Postholm, also enable naturalistic generalisations, and hence be related to the usefulness of the findings. In this section, however, the findings are only presented in a summarized version and without any reference to order of importance.

When I analysed, triangulated and interpreted the respondents' and the research participants' reflections on the three themes *motivation*, *learning* and *digital storytelling as a second language learning activity*, I found that:

- There is no direct correlation between the use of digital storytelling as a second language learning tool and increased motivation.
- Increased motivation for academic work is primarily related to variation in working method.
- Learning is related to being active in the learning process, e.g. by teaching others, and digital storytelling is conceived of as one relevant way of sharing and presenting knowledge with and for others.
- Digital storytelling is understood either as a means to obtain other goals, e.g. development of oral skills or as the goal in itself, e.g. related to content understanding.
- Digital storytelling is considered to be an efficient language learning tool in the sense that it embraces many aspects of English as a second language, and hence aligns with several learning objectives in the subject.
- The perception of digital storytelling as a well-suited tool to practice and develop oral skills is not in accordance with the respondents' reluctance to listen to own recordings in a digital storytelling production phase.
- An important factor when looking at the relation between respondents' reflections on digital storytelling on the one hand, and their reflections on motivation and learning on the other hand, seems to be related to scaffolding, modelling and contextual framing of the digital storytelling activity.
- There is a high degree of consciousness on the fact that practicing and documenting basic skills, content understanding or personal reflections on a topic may take many forms and that digital storytelling is a tool that precisely allows for various modes to be used in such processes.
- There are some differences between the genders on how they reflect on motivation, learning and digital storytelling as a language learning activity. These are primarily related to the use of new technology, and to how boys and girls define the role access to technology has for their motivation and learning at school.

- More boys than girls relate motivation to the access to new technology, and more boys than girls see learning as a direct result of access to new technology.
- More girls than boys are concerned with how new technology can be used to support their learning and hence meet the learning objectives.

These findings will be commented on in the discussions that follow and in chapter 6 I will also present my personal comments with respect to the findings of the study.

5.2 Digital storytelling and learner motivation

The point of departure for the discussion that follows in this section is primarily related to one of the hypothesis outlined for the study (cf. section 1.2.1), which focused on the relation between motivation and learning, as perceived by the learners themselves. I lean on Kost (2003, p. 15), who points to motivation in second language acquisition as playing “a special role for the students’ learning effect” (ibid., p. 22). Kost explains this by referring to the fact that since students already speak a language, i.e. their mother tongue, they need some kind of extra motivation to learn a new language. Finally, many teachers and parents also support the assumption that there is a relation between motivation and learning. The latter is also recognized by the Norwegian minister of education, Kristin Halvorsen, who recently said in a radio interview: “Increased motivation leads to increased learning and increased interest for learning” (Halvorsen in NRK, 2011), (my translation).

5.2.1 Many ways to motivation

Student Iris is in line with the minister’s comment above and points to a relation between motivation and learning: *You need motivation in order to experience progress in a subject, because I think there is a relation between doing well and feeling motivated* (Iris). Iris here precisely emphasizes that for her, academic progress and learning are related to how motivated she is for working with her tasks at school. This was the case also for several of her fellow students who were interviewed, but there are many ways to motivation.

In their study on intrinsic and extrinsic (cf. section 2.3) motivational orientation among primary and middle school children Lepper et al. (2005) found that the older the children are, the less intrinsically motivated they are. This does not change until they are adults. One of their conclusions is that “children seem to be losing their

enjoyment of the learning process itself” (ibid., p. 193). A recent Norwegian study confirms this finding. According to Skaalvik & Skaalvik (2011), the tendency also in Norway is that learners’ motivation decreases with the age, whether this is measured as intrinsic motivation or as what the Skaalvik & Skaalvik refer to as *motivated behaviour* (my translation), such as the students’ effort and the degree to which they are active by asking for help in their learning processes (ibid., p. 53).

Lepper et al. (2005), measured the learners’ motivation by using a scale developed by Susan Harter in 1981, where the motivational component comprises three subscales. The first scale was related to students’ preference for challenging schoolwork versus their preference for tasks that can be accomplished without putting too much effort into it. The second scale measured the extent to which students’ behaviour is motivated by curiosity or interest, or whether their behaviour is simply a result of wanting to please the teacher and hence obtain good grades. Finally, the third scale measured whether students preferred to master their task or assignment independently or whether they relied heavily on the teacher (ibid., p. 184). How does all this relate to my study and my findings?

I found that only two of the six students interviewed were intrinsically motivated and hence have an “inner desire to fulfil a positive learning outcome” (Kost, 2003, p. 4). Motivation for the others, the extrinsically motivated students, must hence be found somewhere else. In an article on motivation in foreign language teaching, Kost (ibid.) suggests various motivation strategies for extrinsically motivated students, who of course coexist with the intrinsically motivated students in our classrooms. One of the suggested strategies is precisely related to variation in the approach to learning, which is in full accordance with one of my findings. In the light of this, I will argue that digital storytelling has a role to play with respect to motivation, simply as representing a different approach to learning.

I have been reflecting on why relatively few of my respondents found motivation in digital storytelling itself, since other studies precisely point to increased motivation through digital storytelling, (e.g. Barrett, 2005; Ohler, 2008; Robin, 2008; Sadik, 2008). There might be several reasons here, and I will point some of them below.

First, data from the questionnaires show that they point to digital storytelling as time consuming due to all the stages they have to go through in the process. The other main reason for not choosing digital storytelling if there was a choice was

related to the technical problems that may occur, which again may contribute to more time being spent on the process. In that respect the two first mentioned aspects are interrelated.

However, I will also point to something totally different, related to our school's pedagogical platform. The learners at our school are quite used to different working methods, whether these are analogue or digital. We systematically train our students in various ways of documenting and expressing their knowledge and understanding, and give them access to various tools to use in their learning processes. Could this actually be one reason to why some of them perceive of digital storytelling as “just like any other method we use”, to refer to what Lukas said in the interview?

Based on my respondents' reflections, it seems that digital storytelling is either related to motivation in its own capacity, or because it represents an alternative approach, and hence variation in working method. This finding is irrespective of whether students are intrinsically or extrinsically motivated. However, when looking exclusively at the six interviewees, I saw that they all point to both intrinsic and extrinsic motivational factors in their work. This is also totally in line with Lepper et al. (2005). Intrinsically motivated students like Iris and Dina, are also extrinsically motivated by the external goal in the form of good grades. Since receiving good grades is related to extrinsic motivation, the latter precisely shows that one sort of motivation does not rule out other types of motivation. In addition, since variation in working method also must be looked at as an extrinsic motivation, I will argue that this distinct finding in my study is supported by what Lepper et al. point to.

5.2.2 Characteristics of students who are motivated by digital storytelling

When I looked at the students who referred to themselves as being motivated by digital storytelling, and compared this finding to the various subscales used by Lepper et al. (2005) in their study on motivation, as cited above, I discovered a dichotomy in my material. On the one hand, we find those students who favour challenging, open tasks where they are allowed to work independently with their material, and where they are additionally allowed to use their personal creativity in the accomplishment of the storytelling task. These students not only see a link between using digital storytelling and motivation, but also a link between digital storytelling as a learning

activity and their own academic achievement in English. The other group of students find motivation mainly in the opportunities offered by the technical aspects of digital storytelling. Having access to a computer is something that for the latter group nearly automatically increases their motivation at school. On the other hand, they do not that easily see a link between the activity and the learning objectives related to competence aims in English. I found that there are more boys than girls in the latter group, an aspect I will also approach later.

5.3 Digital storytelling, learning and learner differences

Kost (2003) leans on research from Howard Gardner when he argues that language learning is a synthesis of various kinds of motivation (*ibid.*, p. 9). How can learning then be enhanced for students who are extrinsically motivated to use digital storytelling in their second language learning? This is a question I hope to answer in the current section of the chapter. What I will approach in this discussion will be framed within a socio-cultural view on how learning takes place. With reference to what was presented as this study's overall learning theory in section 2.1.1, it is the traditional socio-constructivism that I lean on here.

5.3.1 Scaffolding and the role of the teacher

The role of the teacher seems to be especially important for extrinsically motivated learners. With reference to Lepper et al. (2005) it is clear that learning from digital storytelling for these students depend heavily on the teacher's support. Skaalvik & Skaalvik (2011, p. 15) also discuss the importance of a supportive teacher. The same is pointed out by Kost (2003). A supportive teacher is important with reference to having a good structure on the learning activity to be carried out, and to give precise and good instructions during the process of the activity. The importance of modelling how to use digital storytelling in order to enhance learning is another important role for the teacher, especially for extrinsically motivated students. According to Kost (2003), extrinsically motivated students typically rely even more on the teacher's precise instructions, support and modelling than intrinsically motivated students.

At school, we always have to balance on the one hand the challenges offered in the tasks we assign to our students with, on the other hand, the students' potentials of succeeding with their tasks and hence their possibility to experience academic achievement. It might in that respect be a good point of departure if students feel at ease with the method or the approach used to reach the learning objectives. On the

other hand, it is not enough to like, or to feel at ease with a specific approach or tool. For learning to take place, it is essential that students have received proper instruction on how to use the tool in question in a best possible way related to achieving specific learning objectives. In a digital storytelling framing this means e.g. that students who insist they know the software we will use for editing the stories, nevertheless need to participate in a formal instruction, since knowledge on the software program in itself is far from enough if learning objectives in English are to be met. To use Skaalvik & Skaalvik's terminology (2011), I will say that students who master the software might be within the zone of mastery of digital storytelling, but their potential future zone of development is ahead of them. To reach that zone they need support or guidance, either from a teacher or from other peers. This is related to scaffolding and the zone of proximal development, two terms that were introduced in section 2.1.1.

When students have access to computers every day at school, scaffolding related to how to use the new technology efficiently in order to enhance academic achievement is important. Lukas makes an interesting remark related precisely to the importance of receiving good instructions on the tools to use. He says that for him, *digital storytelling is an ok tool to use, but nothing special, actually* (Lukas). However, during the interview he does point to digital storytelling as becoming increasingly interesting to use as an efficient learning tool, related to his own increased knowledge on how to use it. In other words, the more Lucas has learned about how to use digital storytelling effectively in his learning, the more motivating he finds this working method to be, and the greater impact it has on his own learning, according to himself.

5.3.2 Learning with and from others

Scaffolding and the metaphore of the zone of proximal development are associated with a socio-constructivist view on how learning takes place, and on learning as a result of interaction with the social and physical context in which the learning takes place. We see this when e.g. several students in my study have the target group of their stories in mind during the production phase of the stories. Their learning takes place in and is even influenced by the social environment they are part of. Respondent 12, from the reflection logs, does not want his viewers to be bored while they watch his digital story. By adding personal reflections to his story, he hopes to avoid this (cf. section 4.2.4.2). The same is the case for Dina, who always makes a short

introduction in the beginning of her script, to help her viewers understand her story: *I had a short introduction in the digital story, because I think it is ok for the viewers to receive some information first* (Dina). It seems that because the stories are going to be shared, this is something that either imposes or encourages a certain degree of self-censorship on the students. I will argue that this aspect is precisely related to learning with others.

Another example related to the zone of proximal development is found with Thomas and Sara. They actually link their own motivation to how their peers approach a specific working method. If their peers are positive towards working with digital storytelling, then this is something that will also influence their own efforts. Their motivation and learning are hence linked to that of their peers.

Thomas also confirms that he not only learns from working with his own task and sources and by that constructs his own knowledge. In addition, he also learns *when watching other students' final products* (Thomas). In other words, he points to learning from others as an important element in his own knowledge production. This is in line with what I presented about the socio-constructivist view on learning in section 2.1.1. In traditional socio-constructivism there is precisely a focus on the setting in which the learning takes place, and on the interaction between the various parts of the activity system.

With reference to the activity system, and Figure 2.1 in the theory chapter, Thomas can be seen as a member of a community system (in our case the English class), on which he leans for scaffolding and advice. The teacher is also part of this community of practice, and will, together with more able peers, give him the necessary support so that he can achieve more. The latter is related to the zone of proximal development. Thomas' learning is additionally mediated with the help of various ICT and non-ICT tools, while he tries to reach the specific learning goals, referred to as the object in the activity system. Because he will share his final product with his peers, he also contributes to their knowledge building.

5.3.3 Learning as *teaching others*

As referred in the summary of the study's findings, in section 5.1, many of the respondents relate learning to *teaching others*. They talk or write about sharing or presenting their learning outcome for peers or for the teacher, an aspect that can be interpreted in the light of communal constructivism (cf. section 2.1.3), which will be

discussed further in section 5.4.3. It can also, however, be related to Bloom's taxonomy of learning. As introduced in the theory chapter, Bloom referred to many types of learning. In line with this, I found that my respondents also conceive of learning in different ways, (cf. section 4.2.3). I will below look at how Dina's learning, as perceived by her, relates to Bloom's taxonomy of the cognitive domain (cf. section 2.3).

When Dina refers to learning as *receiving knowledge* (cf. section 4.1.2.2), I will argue that in Bloom's taxonomy this would be related to recalling data or information, and hence belong to the lowest level of the taxonomy; i.e. *knowledge*. Dina however admits that she also sees learning as related to *comprehension and understanding*, which would be the second level in the taxonomy. Additionally, she has an understanding of what it takes to know that something is learned. This is where she, and others, point to presenting to others, or teaching others. In other words, Dina learns from actively applying her knowledge in a creative way, with a specific target group. She has reached the level of *application*, which is a higher degree of learning than the two previously mentioned levels in the taxonomy.

Several of the respondents and research participants in this study refer to *teaching others* as a way of enhancing their own learning, and hence see the use of digital storytelling in this perspective. This is closely related to the school's pedagogical platform where the metaphor of "The students at the top of the learning pyramid" is commonly known among the students. At my school, we believe that students learn best when they are expected to present their learning or knowledge to others, and hence are at the top of the learning pyramid. This view is also mirrored in how we work with the students.

5.3.4 Situated learning and the importance of contextualization

From my analyses, it seems that the success of using digital storytelling as a learning tool in English relies on and is related to which overall topics we work with in class and how we contextualize and work with that topic prior to starting on the digital storytelling production.

Situated learning is a central term in a socio-constructivist view on learning. This implies to look at a learning activity in close relation to the situation or the setting in which the learning takes place. Situated learning is also closely linked to the term contextualized learning. Both these terms define learning as taking place within

a specific setting, and perhaps also as a result of a specific setting. Based on this, I will argue that both Dina and Sara reflect on precisely this aspect with their learning when they point to the importance of working well together with the novel prior to carrying out the storytelling activity. As Dina said: *If we had not discussed those parts of the book together, we might have thought that those parts were not important* (Dina).

Along the same line are other results from this study, related to reflections on learning potentials from a digital storytelling project. Few respondents in the study point to greater learning outcome simply as the result of a digital storytelling activity. However, several of them reflect on the relation between a good framing and contextualization of the storytelling activity on the one hand, and receiving a good result and hence an increased learning outcome on the other hand. The importance of contextualizing a digital storytelling activity is twofold. First, students need to establish an overall understanding of the topic in question. Secondly, the contextualization also functions as a basis or a platform for the students' own text production. The latter is e.g. related to trying out ideas and receiving feedback from peers and is hence in line with a socio cultural perspective on learning.

It is my experience that contextualization and situated learning is particularly important when new technology is used in the learning activity. Otherwise, if the learners' use of new technology is purely instrumental, it can be argued that there is a risk of obtaining a fragmented and decontextualized learning. I will in fact point to Dina's increased content understanding as related to the way the digital storytelling activity, and hence the use of new technology, was contextualized in the project she was working on. One might even say that Dina's learning was partly constructed in a social setting. When we, i.e. the teacher and the students, carry out a number of focused literary discussions and activities related to what we have read, this is an example of how students use that social setting to negotiate their own understanding of various parts of the book. In a situation like this, the learners use their language as a mediating artefact. This aspect is also in line with a socio-constructivist view on learning.

Dina is always active in situations where the learners discuss their understanding of a topic. That is not the case with Sara, who is a rather shy student. However, she still profits from the contextualization: *I still learned a lot from listening to these discussions* (Sara). In other words, Sara and Dina are very different learners,

also with respect to motivation. I will next look more at learner differences, and discuss how this was observed in my findings.

5.3.5 Learning, digital storytelling and gender differences

My interest in looking for differences between genders with regard to the study's overall research question and hypotheses is reflected in the data sample for the interviews. In addition, the logs were answered with full names and respondents were asked to tick off for gender in the questionnaires.

Some variations between boys' and girls' answers are found, such as e.g. in their argumentation for choosing digital storytelling if there was a choice of learning activity. More boys than girls point to the relatively short length of the script of a digital story. Additionally, more boys than girls justify their choice of digital storytelling as a preferred learning tool by referring to access to technology. A majority of the girls, on the other hand, point to *Using digital storytelling in English allows me to practice and document basic language skills as well as present content knowledge* as the most important reason for choosing digital storytelling, if there was a choice. In addition, it seems from my data that more boys than girls would choose digital storytelling as a way of working because they feel that they master the skills needed.

Based on the size of the samples in my study and also based on my own experience as a teacher who has been using digital storytelling for many years, I will however not pay too much attention on this last finding. In classes where I have been working with digital storytelling, I have never seen anything that can confirm *as a tendency* that boys in general master all aspects of digital storytelling better than girls. What they could, on the other hand, master better, is the technical side of the software program we use, but the editing is only part of the whole digital storytelling learning process, as visualized in Figure 1.1.

According to Barton (2002), "Boys' general negative attitude to writing, and the difficulty they experience in writing, is now well documented" (ibid., p. 278). This supports and might explain also my findings related to gender. Because a fairly short script is required for a digital story, as compared to other genres, boys cope with the writing, even though writing is not a favoured activity for them.

Barton also found (ibid., p. 279) that combining writing with visuals seems to be a more effective means of boosting both boys' and girls' motivation. Finally, her

research uncovered that boys, in language classes, more often select activities where they can use computers, or activities they regard as practical and allowing for physical activity (ibid.). I will argue that both the last two mentioned findings from Barton might account for why more boys than girls, in my study, would choose digital storytelling as a second language learning activity. Digital storytelling involves the use of computers, and the use of a computer is in itself a practical, hands-on activity.

Barton also points to the need of variety as a trait related to boys' learning styles. I will argue that digital storytelling definitely allows for variety, since producing a digital story is a compound learning activity. In accordance with Barton's findings, I saw from my own study that boys and girls had a slightly different view on the role of technology in their learning. Whereas all respondents and interviewees were motivated by *variation in working method*, more boys than girls related *variation in working method* to access to technology. In addition, more boys than girls reflected on technology in itself as a decisive factor for their learning outcome, whereas girls reflected more on the actual use of the technology to enhance or support their second language learning.

I will be very cautious to describe the findings presented above as representing a typical pattern, neither in my study nor in classes in general. As teachers we should not highlight differences between the sexes in our classes. Along the same line I do not want to stereotype one group of respondents in my study. Boys and girls are obviously not homogenous groups, and many other factors than gender might also influence how they learn. I nevertheless believe that some of my findings described above might be recognizable also for other teachers.

One of the other aspects that influence students' learning styles is related to achievement, or level of proficiency. I will in the next section precisely look at if and how differences between students' level of proficiency were important with reference to findings in my study.

5.3.6 Learning, digital storytelling and level of proficiency

I will discuss two findings linked to academic achievements and thereby to level of proficiency. Level of proficiency was in my study only related to the six research participants in the interviews, and only related to their formal grades in English 3.3.1. This obviously limits these findings, since academic achievement could also be understood as embracing more than formal grades.

My first finding related to level of proficiency was linked to the theme *motivation*, and how the interviewees defined and reflected on their own motivation. I found that the three interviewees who I defined to be intrinsically motivated (related to the categories *self-efficacy* and *educational achievement* in Table 4.7) were more high-proficient than those who were extrinsically motivated. This did not come as a surprise, and with reference to Lepper et al. (2005, p. 185), several studies have shown positive correlations between intrinsic motivation and academic achievement,

The second finding is related to students' reflections on *digital storytelling as a learning tool*. Three categories were outlined for the analyses, each of which was also defined with three sub categories. In the process of triangulation, I compared students' level of proficiency to all of these sub categories. I saw that the only two students who reflected on digital storytelling as a *learning strategy* that could be used to *present and share information* (cf. Table 4.10) were both high-proficient students. This was the same case also for those two students who looked at digital storytelling also as a tool to *express personal reflection*. When triangulating these results to check how the same students; i.e. Iris, Isak and Dina defined *learning*, I saw that they understood *learning*, in general, to be related to *being able to teach others*. This tells me that these students might see potential benefits of digital storytelling also in this light. In other words, when they conceive of *learning* as something that happens when they are able to present their learning outcome to someone, or to demonstrate their understanding by teaching their peers, digital storytelling might be seen as one tool to use precisely for this purpose. I also find it useful to look at the above in the light of Bloom's taxonomy of the cognitive domain, as described earlier (cf. section 2.2)

Reflection can be a challenging matter. In general, reflection involves thinking abstractly and thinking in terms of consequences and connections. When students reflect on a subject matter they need to look back but also ahead, and draw on the experience they have been through. In a digital storytelling project, whether it is carried out in English or in another subject, students are normally also asked to show reflection. In the specific storytelling project "From book to digital story", one way to demonstrate personal reflection was through the character portrayed in the story. Students could let their character reflect verbally on what he or she had been through. The other option was that students demonstrated their own reflections on the character's story. This could be done in several ways, attached to one or more of the modes used in the digital story. A third option was obviously a combination of the

two. The degree to which students succeeded in demonstrating reflection in their digital stories varied a lot. However, high-proficient students were clearly better at verbalising their perceptions around reflections and also better at showing reflection in their digital stories than the more low-proficient students. Based on this I saw, in line with Bloom's taxonomy of the cognitive domain, that the ability to reflect on a subject matter demonstrates a higher level of learning than showing knowledge on a topic matter.

Apart from the findings referred here, nothing else in my study points to differences related to level of proficiency with respect to how the interviewees look at learning potentials in a digital storytelling project carried out in English. I am nevertheless aware of, and from my own practice also recognize, findings from others, (e.g. Bull & Kajder, 2004, p.47 in Miller, 2009; Robin, 2006) stating that digital storytelling is especially beneficial for struggling readers and writers. When I did not find anything in line with these studies, I will accord that to the fact that the students in my total sample were all part of an optional English course (cf. section 1.2.4). There were no struggling readers or writers among the students who chose this English course. If there had been, it would not surprise me if I had found something similar, since this is what I see in other classes, with a more normal variation among students' level of proficiency. However, since my impressions from other classes do not make part of my study I will not develop any further on that topic.

5.4 Digital storytelling as an all-embracing activity for second language learning

My study shows that the respondents and interviewees conceive of digital storytelling as an efficient second language learning activity in the sense that it embraces many aspects of the subject. They pointed to the various learning potentials in digital storytelling activities as related to the development of basic, literacy skills as well as to the development and documentation of content understanding. The latter was seen and understood either as *core* knowledge or as personal reflections. As such, digital storytelling aligns with several learning objectives, not only for English as a second language, but also objectives from the Core Curriculum of the Knowledge Promotion.

The above means that students sometimes understand digital storytelling as the means to obtain another goal, e.g. language training, whereas other times digital storytelling is in itself the goal of a second language learning activity, e.g. to learn

about a specific topic, in English. The discussions in this section will focus on these perspectives related to digital storytelling as an all-embracing tool for learning. The overarching framing for this section lies within communicative language learning and task-based learning (cf. section 2.4) on the one hand, whereas the other framing is placed within multiliteracies and the use of several modes to express meaning (cf. section 2.1.3). Finally, I still lean on a socio-constructivist view on how learning takes place, but in this section I will additionally relate the discussions to some of the new constructivist theories (cf. section 2.1.3) to shed light on my findings.

5.4.1 Basic skills development

In this section I will discuss my findings related to oral and written basic skills. Aspects related to digital skills will be discussed in the next section, where I will focus on the potentials for meaning making in digital storytelling.

5.4.1.1 Oral skills

All my respondents and interviewees agreed on digital storytelling as a second language learning tool with the potential of enhancing oral skills. Oral skills can be related e.g. to the specific presentation skills that students need to practice when presenting a topic in the form of a digital story. Such oral presentation skills can be pronunciation, intonation, stress, rhythm and pacing. With reference to my background as a teacher, I agree digital storytelling lends itself easily to practising such oral skills. Along the same line it can be argued that digital storytelling represents a new way of practising oral skills, something that might even suit some learners better.

The agreement on digital storytelling as a good tool to practice oral skills is however not in accordance with the reluctance some of the respondents and interviewees show towards listening to their own recordings. I found that for some of them, this becomes such an obstacle that they would rather not use digital storytelling as a second language learning activity. This happens in spite of the fact that the same learners do see the potentials of oral skills development with digital storytelling.

In section 5.3.1, I discussed the role of the teacher and the importance of scaffolding. I will argue that for digital storytelling purposes such scaffolding should embrace the oral aspects that students consider to be obstacles for them, related to listening to their own voice. My own experience is that this to a large extent is related to the overall learning environment in the group, as well as to the attitudes the students show towards each other during the presentation of the finished stories.

Students who fear listening to their own voice find themselves in a vulnerable situation when their recordings are being presented. They must be met with empathy both from the teacher and from the peers. In addition, it might for some students even be worse to listen to their own voice when the recording is done in the student's second language. At the same time, the teacher also plays an important role related to the student's zone of proximal development. Perhaps it is precisely with the help of a supportive teacher (Skaalvik & Skaalvik, 2011) or even with the help of peers, that these students will overcome their reluctance to listen to their own voice, and hence their reluctance to use digital storytelling as a learning tool. With reference to the zone of proximal development, I will suggest that support and what I will refer to as *an encouraging pressure* must take place side by side in the scaffolding of the student who is not comfortable with listening to his own recordings.

Another aspect related to oral skills development has to do with the difference between *oral interaction* and *oral production*. These two terms are, as described in section 4.2.4.1, used by the *Common European Framework of Reference for Languages* (the CEFR). Whereas the former is related to the spontaneous use of the language, such as taking part in discussions and conversations, the latter takes place when students have prepared in advance what they will say, with the aim of addressing an audience. The CEFR furthermore defines the quality of the language production in terms of a range of linguistic, socio-linguistic and pragmatic competences (Council of Europe, 2007). Related to this, I find it interesting when student Thomas reveals that he needs to work more on some of his linguistic competences, such as e.g. pronunciation, when doing a recording as compared to the more everyday, informal speaking. When digital storytelling is used as the means to reach another goal, e.g. oral language production, it precisely gives Thomas and other learners access to new tools to better carry out this task.

In situations like these, the focus is on communicative competence and use of authentic language. As such, and in accordance with communicative language learning and task-based learning, the teachers cannot, in second language digital storytelling productions, know exactly what oral language the students will use, with respect to accuracy and fluency. What matters is nevertheless that the learners use the language to communicate, to express meaning, and hence to achieve an end that matters not only to themselves, but which additionally communicates a message also to the audience. As referred earlier e.g. in section 4.2.4.2, several of my respondents

actually made comments about the target group of their stories. Having a target group in mind seems to be strengthening the communicative aspect of digital storytelling and by that also puts an extra challenge on the shoulders of the storytellers. It can hence be said that the learners do not only use digital storytelling to improve their own oral skills. They additionally need to make sure that their story communicates a message also for others.

The activity system, introduced in Figure 2.1, can be used to understand the processes going on here. There is an interrelation between the story producer (the learner), the use of the language as a mediating artefact to express meaning, and the importance the target group has for the learning outcome. The latter is a typical trait of 21st century learning, where it is not only enough to create content. Sharing has also become paramount. Because his story will be shared, Thomas wants to rehearse his pronunciation even more. As such, this represents a situation where both parties take advantage. Thomas practices his oral English even more, and the target group will get an even better message; i.e. a story, communicated to them.

Digital storytelling is normally an activity that is chosen because it is an engaging activity, not because it addresses a particular language point. This is also in line with the requirements of a “task” in task-based learning, where the learners are supposed to “use language, with emphasis on meaning, to attain a goal” (Cook, 2008, p. 257). When the students carry out the task, it is essential that the language derives from the learners themselves, and not from the teacher. The focus is hence on expressing meaning. I will however argue that contextualization is a basic premise also with respect to the language production, and not only related to the overall understanding of the topic in question. The latter is also fully in line with communicative language learning (Richards & Rodgers, 2001). In a task-based approach to language learning, the learner is “conveying information appropriate to that particular task to another person” (Cook, 2008, p. 257). I will therefore argue that digital storytelling used as a tool to obtain another goal can be understood also in this light.

5.4.1.2 Written skills

Digital storytelling is a language learning activity that embraces all traditional literacies, hereby also writing. Writing a script for a digital story differs however from other written genres. This is partly due to the fact that students (at least in my classes)

are told to write a script of 150-300 words, which for some of them is a rather limited length (cf. e.g. Iris' comments in section 4.2.4.1). As presented in the analyses, this requirement is the reason to why Iris does not find digital storytelling interesting as a learning tool, neither as a tool to develop her written skills nor with respect to enhance her content understanding of the topic in question. For struggling writers on the other hand, this aspect seems to be beneficial (e.g. Bull & Kajder, 2004).

However, and in line with Dina's reflections, the written part of a digital storytelling production is not necessarily an "easy solution" for those who do not like to write longer texts, as some of the respondents commented on in the questionnaires. Since quality means more than quantity, to refer to Dina's words from the interview, I will argue that this might require even more of the writer. Economy is a crucial word, and applies both to vocabulary and to sentence construction. A script for a digital story is ideally short, terse and to the point, and requires that the storyteller reflects on every single choice of word. This is a demanding task, and for young second language learners, like mine, this is normally only something that high-proficient students would master successfully. I will therefore argue that even though the written text in a digital story is shorter than in other genres, it nevertheless requires quite a lot from the storyteller. This means that there are challenges to be found in digital storytelling also for high-proficient students. As Ohler (2008) says: "The shorter time frame forces storytellers to weed out what isn't truly important and prioritize what is" (ibid., p. 33).

From my own teaching experience, I see that struggling writers who find script writing for a digital story to be a good way to practice their written skills, seem at first glance to relate this to the limited length. However, I also see that the digital aspect, related to the use of several modes, is appealing to them. This tells me that digital storytelling used as a second language learning activity can alleviate many issues regarded as challenges in writing, whether this is related to lack of motivation, or to lack of proficiency. In addition, since digital stories normally use a spoken narrative based on the students' self-written script, this means that the students can listen to their recordings as many times as they wish. This actually also allows for a unique understanding of how his or her writing sounds. I have several times experienced that students point to own mistakes in writing simply because they discover them better when listening to their spoken narrative than when re-reading their script. As such, digital storytelling is a good activity for improving not only oral pronunciation skills, as argued earlier, but also with respect to developing and

improving the learner's written skills. Ohler (2008) states that due to the "the interplay between writing, speaking, and listening, digital storytelling has great potential to help students learn language" (p. 51).

The most interesting aspect is perhaps nevertheless that when the writing task is a digital storytelling task, there are many ways of conveying information, not just the written and the oral. This is linked to the development of digital skills, and will be my next focus.

5.4.2 Meaning-making

The academic use of digital storytelling is, perhaps above all, about allowing a learner to experience the power of personal expression with the use of several modes. With reference to what is already said about written skills development in the previous section, I will additionally argue that giving students access to a learning activity where several modes can be used to express meaning, understanding and content knowledge will display students' abilities in a new light. Along with many others, (e.g. J. Brown, Bryan, & Brown, 2005; Ohler, 2008; Robin, 2008) I will argue that digital storytelling can be seen as a use of technology precisely with the purpose of enhancing literacy. Digital storytelling is in that respect often referred to as a bridge or a merger between old and new literacies (Robin, 2006). This is related to the simple fact that digital storytelling usually "integrates a number of traditional and emerging literacies" (Ohler, 2008, p. 54), and that meaning can be expressed in many ways.

I found that my respondents and interviewees have a high degree of consciousness around the fact that digital storytelling is a tool where several modes can be used to document their content understanding, to express meaning and to show reflection. Dina told that she would let her own reflections come to the fore in her story through the way she used carefully chosen transitions. Isak said that there was no need to write a very detailed script, because meaning could also be expressed by the use of visuals and of music. Iris spoke about how intensely she worked in the photo-finding phase of her storytelling production. She was concerned with using visuals both denotatively and connotatively; i.e. as a metaphor. When students express meaning by the use of visuals they might use photos that extend the voice-over as well as photos that elaborate what is expressed verbally in the story. This was the case

also for Iris. In that respect she is very conscious of the possibilities for meaning expression related to multimodality and the way a picture can represent something.

It is typically within art and semiotics that the notion of *representation* is used. It refers to something that stands in for, or takes the place as something else (Lentricchia & McLaughlin, 1995). Gunter Kress, member of the New London Group, and professor of semiotics and education at the university of London, explains *multimodality* as the use of several modes or resources for meaning making (Kress, 2003). With respect to digital storytelling productions, such modes could be e.g. linguistic modes such as speaking and writing, visual modes such as the use of images, videos and graphics, or audial modes such as music and sound effects. Each of these modes have their specific limitations and possibilities, also referred to as modal affordances (ibid.2003).

A 13-16 year-old student producing a digital story as part of a learning activity in his second language is not a media expert in terms of having received specific media technology training. I nevertheless see that young people today have quite an elaborated experience with how to use the media grammar (Ohler, 2008) efficiently, in order to support their own learning. As teachers, we can see this with respect to the kind of visuals and music some students choose with the purpose of expressing meaning in a digital story.

Dagrun K. Sjøhelle at Sør-Trøndelag University College (HIST) followed some 14-year-old students in their work with digital storytelling at school and found that a lot of preparatory work was carried out prior to the final editing of the story. This was amongst other aspects related to working with the visuals (Sjøhelle, 2009). Though not all students are at Iris' level with respect to choosing pictures, many of her peers nevertheless clearly demonstrate that they are media competent. I will argue that this is related to the time young people spend on media in general, in their spare time, not only as media consumers, but also as media creators or media producers.

Informal learning; here understood as learning that takes place at out-of-school other arenas, can even be brought to school and be bridged with classroom practice, as described e.g. by Hull & Schultz (2002) from the universities of respectively California and Pennsylvania. It is my impression that informal learning is closely related to knowledge about and the use of new literacies. These new literacies, often also referred to as digital literacies or new media literacies, emerged in association with new technology. The common denominator for new literacies is hence

communication that is made possible with new technology (J. Brown et al., 2005). Based on this, I will argue that digital storytelling is precisely an educational activity where the students' everyday practices or "out-of-school" practices play an important role, as gapping the bridge between formal and informal learning.

I have often experienced that students already know the software we use for digital storytelling productions, because they have been using it at home, for their "out-of-school" practices. Allowing students to bring these competencies to school can be an asset both for motivation and as far as peer instruction is concerned. It is commonly acknowledged that institutionalized learning, as e.g. learning taking place in schools, no longer has an exclusive role as far as education and learning is concerned.

In my study I did not find any correlation between my respondents' private use of computers and their inclination to choose digital storytelling as a learning tool at school. Nothing in my study suggested that the more the students use computers at home, the more often they would choose digital storytelling at school, if they had a choice. It must, however be emphasized here that digital storytelling is just one of several activities involving the use of digital tools that students can use to work on their knowledge construction and knowledge documentation. At my school, students have access to a range of both digital and analogue tools to use in their knowledge building and also with respect to presenting their learning. This means that they are quite used to variation in working method.

Informal learning has been mentioned as an important trait of 21st century learning. The use of several modes of representation in meaning making, as e.g. seen in students' digital stories, is precisely a very typical trait of what is commonly referred to as 21st century learning. This means, as exemplified above, that students have several ways of documenting their understanding or knowledge, not just the traditional oral or written way. The understanding of digital storytelling as a learning tool that lends itself easily to various forms of meaning-making is not restricted to whether this way of working is used as a means to obtain another goal, e.g. oral or written training in English, or whether digital storytelling is the goal in itself, which will be the next focus.

5.4.3 Appropriation of factual knowledge

Whereas speaking and writing English are defined as two of five *basic skills* in the Knowledge Promotion, the various topics we learn about while speaking or writing can be defined as *core knowledge* or *factual knowledge*. On the one hand, it could be argued that as long as communication and practical use of the language are focused, the topics that the learners communicate about are of minor importance and could be related to anything, as long as they are meaningful for the learners and enhance second language learning. However, one of the main areas for English in the Knowledge Promotion; *culture, society and literature*; specifies, at least on a general level, what topics that should be addressed within English as a second language. Reading literature is one of the topics mentioned, as well as learning about social issues (Utdanningsdirektoratet, 2006, p. 94). I see this as related to digital storytelling as a bridge between existing knowledge and new material (Ausbel, 1978 in Robin, 2006).

When Elin Nesje Vestli at Høgskolen in Østfold, suggests in an article on the role of literature in foreign language learning “an activity focused teaching of literature” (Vestli, 2008) (my translation), I will argue that this is precisely in line with our work in class with the novel “The Boy in the Striped Pyjamas”. We read and studied various aspects of the book together, before the students produced digital stories related to one of the novel’s characters. Hæge Hestnes at NTNU emphasizes the idea that digital storytelling can be seen precisely in this light, and has tried out this approach to literature also with her own teacher students (Hestnes, 2010). In my study, it was interesting to notice that students reflected on the importance of the contextualization, i.e. how we worked with the novel prior to carrying out the digital storytelling activity itself.

My respondents and interviewees relate second language learning; i.e. their school subject English, to more than knowledge about the structures of the language. The language learning also has to be contextualized; i.e. it has to be related to a specific topic. In the early days of new technologies, the academic use of them was restricted to teaching old literacies, often related to behaviouristic teaching methods (J. Brown et al., 2005). The change from the late 20th century and even more so now, in the 21st century, is that a constructivist view on how learning takes place dominates the pedagogical use of new technology. In accordance with this, we today see that the learners have changed from being purely content consumers to also becoming content

creators, precisely with the help of new technology. They have hence become media “prosumers”, to use a popularized expression. This is also in line with the findings of my study. I will hence argue that when several of my respondents made reference to the importance of their target group, this can be understood as linked to their perception of themselves as producers of knowledge.

Through the years that I have been using digital storytelling as an educational activity in various subjects at school, I have often heard comments from students stating that they have learned a lot from watching storytelling productions from peers. The focus on constructing knowledge not only *for* self and *with* others, but also *for* others, through e.g. peer tutoring and project-based learning, such as e.g. digital storytelling projects, is therefore an interesting theoretical basis for my study. In *communal constructivism* (cf. section 2.1.3), students are precisely seen as active in constructing not only their own knowledge, but also as active in the construction of knowledge for their learning community. When students in my study have a special focus on their target group, I will argue that this can precisely be linked to communal constructivism. In a communal constructivist approach, learning is seen as facilitated rather than directly taught by the teacher (Holmes et al., 2001, p. 2), and the use of ICT to construct knowledge for others is especially important. All this is in line with how digital storytelling can be used as a learning activity to work on a factual topic. Within a second language framing, the learners can hence, when they use digital storytelling, address both content and communicative aspects simultaneously. This aligns well also with communicative language learning, where the learning of the language is precisely seen as learning to communicate, and where contextualization is paramount (Richards & Rodgers, 2001, p. 67). Communicative competence is the desired goal; i.e. the ability to use the linguistic system effectively and appropriately (ibid.).

From my perspective, the focus in communal constructivism, about students being involved in creating knowledge that could benefit others, is an aspect that could be focused even more. This is even so at my school where the pedagogy already focuses on the role of the learners as presenters of knowledge. I will nevertheless argue that if we developed even further the perspective of allowing students to contribute to the creation of knowledge also for others, this could benefit all members of our learning community. Dons et al. suggest that “when the students are allowed to develop further what they master, this is a good point of departure for presenting their

knowledge to others” (Dons et al., 2003, p. 66), (my translation). I have several times experienced that digital storytelling is an activity that lends itself easily to both knowledge creation and knowledge presentation. When students have a real target group for the digital stories they create at school, I believe that this can have a positive effect both on their motivation, on the learning outcome and not to forget, on the overall quality of the product itself.

Some years ago, a few of my previous students of English made a factual story about the Jewish girl Anne Frank. When I recently showed that story to my present students, as a teaser for the same topic, I will argue that this had numerous advantages. My present students learned factual information related to the topic in question; i.e. the situation for the Jews during the war. Watching the digital story spurred their interest towards exploring the topic further. It additionally gave them linguistic training, since they now had to listen to an English narration from someone unfamiliar to them. Finally, the digital story also worked as a model with respect to how factual content could be personalized, produced and shared in the form of a digital story.

Personalizing a story with factual content is related to how students work with the various sources. Several of the respondents in my study pointed to aspects that I categorized as belonging to the sub category *learning strategies* in the analyses. I find it interesting to look at this in the light of the new constructivist learning theory *navigationism*, as this was presented in 2.1.3. When information is ubiquitous, the ability to know where to find relevant information and how to cope with it is paramount for today’s learners.

My experience, as a teacher, is that when students use digital storytelling as a way of working with and presenting content knowledge, they do have to “navigate in an ocean of available knowledge”, to use Brown’s expression (T. H. Brown, 2006) and be able to select relevant sources for their script. My role as a teacher in these processes is not the one of knowledge transmitter, but rather as the coach, the mentor or the consultant for the students in their learning processes. To learn to distinguish relevant from irrelevant information related to the task is also an important aspect in navigationism. I see this in my classes each time we work with digital storytelling or other project based learning activities. In addition to sense-making and chaos management as essential skills to acquire in navigationism, I find it particularly relevant that Brown also points to the importance of being able to reconfigure, re-

present and communicate information (ibid, p. 10). In line with what I found, Sadik (2008) points to digital storytelling as a tool that encourages students to “organize and express their ideas and knowledge in an individual and meaningful way” (ibid. , p. 490).

5.5 Chapter summary

The findings of this study have been discussed from three perspectives, all of them related to the research questions and the hypotheses. The discussions have been linked to theory that was introduced in chapter 2. I have additionally contributed to the discussions with my own experience, when this was seen as relevant related to students’ own reflections.

6 Conclusion and final remarks

As outlined in the first chapter of the thesis, digital storytelling comes in many forms, and is used in many ways. This study was set out to explore students' reflections on learning potentials when digital storytelling is used as a second language learning activity. Related to the research questions and the two hypotheses outlined, I have also looked at students' reflections on motivation and learning. In this chapter, I will briefly bring it all together and conclude my study. In addition, I also want to look ahead. The point of departure for carrying out this study was related to my own practice. I then set out to explore students' reflections. To close the circle, I therefore want to come back to my own practice again in this chapter. This will be done by briefly reflecting on how some of the findings in this study can improve my own future use of digital storytelling as a learning activity for my second language learners.

6.1 Research question and hypotheses revisited

The study's main research question was the following:

What are the potentials for learning when digital storytelling is used as a second language learning activity in lower secondary school, as perceived by the students and expressed through their reflections?

I found that my respondents and research participants seem to understand digital storytelling as a learning tool that embraces many of the main areas in the subject (i.e. English as a second language), in one and the same activity. In that respect, they see digital storytelling either as an activity to reach other goals, or as the goal in itself, but not in any situation, and not if used too often. In addition, they express concern related to the amount of time digital storytelling processes may take at school, mainly due to various technical problems that might occur, as well as not having access to the equipment they need, when they want it. Finally, it seems that if digital storytelling is to be perceived as more than a happening that contributes to variation, a structured scaffolding and contextualization must be approached. This applies to the content topic as well as to relevant linguistic matters. The latter means that even though digital storytelling is a very learner centered activity, the teacher must still be "the guide on the side" (Ohler, 2008). Along the same line, this study shows that students embraced the socio-constructivist perspective in their reflections, where knowledge is

built together in a learning community and where both the teacher and the peers play an important role, as supportive members of this learning community.

Related to the main research question above, I was also interested in finding out whether there were any differences between boys' and girls' reflections on learning potentials from digital storytelling, or whether I could point to any differences related to the students' level of proficiency. An additional research question was hence also outlined:

Are there any significant differences between genders or level of proficiency with regard to students' reflections on learning potentials from digital storytelling?

As presented in chapter 4, I only found a few differences with respect to the above. These were mainly related to the link between access to technology and motivation for academic work. More boys than girls found motivation simply in having access to computers, whereas the girls in my material reflected more on the actual use of the computers. In addition, more boys than girls were positive to using digital storytelling as a tool for developing their basic, written skills.

Relevant differences with respect to level of proficiency were mainly related to students' motivation. Not surprisingly, and also in line with national and international research referred in chapter 5, the only students in my material who were characterised as being intrinsically motivated were high proficient students. However, level of proficiency did not seem to matter with respect to how the respondents reflected on specific learning potentials from digital storytelling.

My principal interest with this study was, as mentioned, to explore students' own reflections on learning potentials from digital storytelling as an educational activity. I nevertheless saw this as being related to two more general themes; motivation and learning. This is why the first hypothesis was outlined:

Many students point to a connection between motivation and learning outcome. Their motivation towards working with digital storytelling will therefore influence their reflections on potentials for second language learning from digital storytelling.

Related to the first part of this hypothesis; *many students point to a connection between motivation and learning outcome*, my data show that this is in full accordance with what several of the respondents confirmed. All the respondents in my material related motivation to variation in working method, and some of them also

pointed to a link between digital storytelling and motivation. Despite the fact that not all of them found motivation in working with digital storytelling, this did not however influence their reflections on potential learning outcomes. Based on this, I have to conclude that my first hypothesis on the whole was not confirmed. The students were indeed reflecting on the kinds of learning taking place in digital storytelling activities in English, even though not all of them found this way of working to be very motivating.

At the outset of this study I asked myself whether many students would point to learning through the use of digital storytelling basically as learning of technical skills. Would the students define their learning outcome from digital storytelling as primarily related to learning digital technical skills, or would they also be able to point to and define other types of learning? Based on these questions a second hypothesis was outlined:

Many students look at learning through the use of digital storytelling basically as learning of digital technical skills.

As discussed in chapter 5, there was quite a high level of consciousness among the respondents on how various aspects related to new technology; e.g. the use of various modes for meaning making, could be used to express meaning in their stories. However, none of the research participants limited their reflections around learning outcome to the learning of technical skills. On the contrary, they all pointed to and reflected on several types of learning potentials, as presented in chapter 4. The second hypothesis was hence not confirmed. This might be an indication to teachers that there is no reason to fear that the use of digital storytelling as a language learning activity takes place at the cost of the subjects' overall learning objectives.

6.2 “So what?”

The majority of the findings in this study were as expected, and hence confirmed my own experience from the classroom. It pleased me to see that the respondents and the participants embraced all aspects of digital storytelling, in the sense that they saw learning potentials related to much more than developing their digital skills. Additionally, it was a useful reminder for me to see how much emphasis they seemed to put on the importance of a good contextualization and overall framing of the activity.

Even though this study was not carried out as an action research, I nevertheless find it interesting to briefly reflect on how the study's findings can contribute positively to my own, or other teachers' future use of digital storytelling as a second language learning activity. In that perspective, the following question is interesting for me as I am approaching the finish line of my study: *Is there anything I can change in the way I use digital storytelling as a second language learning tool?*

At the end of this present study there is not enough room to develop any deep and detailed reflections on the questions outlined above. My inspiration and motivation have nevertheless been spurred to carry out such meta-reflections related to the usefulness of this study to my own practice. Some of my reflections are briefly presented below:

- I believe it will be helpful with respect to structuring the learning activity, as well as helpful for my students in their learning process, if we have a more distinct focus on our reasons for using precisely digital storytelling as a second language learning activity. In other words, do we use digital storytelling as a convenient activity or tool to obtain another goal or is digital storytelling the goal in itself? Such a clarification can also prove to be useful with respect to assessment.

- Related to assessment; there is always room for improvement with respect to clarifying what will be assessed. Since digital storytelling, as perceived by my students, is an all-embracing activity, we need to define what will be brought into the assessment of the stories. Will we assess only the finished product or the whole process? When digital storytelling is used as a tool to obtain another second language goal, how do we then conceive of content as opposed to aspects related to oral pronunciation? As a result of this study, I actually see that it could be useful for my young learners to sometimes focus solely on the usefulness of digital storytelling as a tool to improve oral skills, and hence let the content of the story be of minor importance. Some might say that this will reduce digital storytelling to a pure instrumental tool. I will argue that sometimes the end justifies the means. If the ultimate goal is to obtain improved oral skills, then any method of making it happen is worth it, no matter if this means that digital storytelling for that purpose is reduced to an instrumental tool.

- With respect to digital storytelling as an all-embracing activity, I will also suggest, for my own future use and perhaps also for that of other teachers, that we agree with the students how the written script is to be used and hence assessed. Is it only to be used as a script for the students to structure the story that will later be recorded, or is it

going to have a pedagogical value in itself? If the latter is the case, this means that as teachers, we will easily have access to several products that can be assessed as the result of *one* digital storytelling activity. One product is the written script, which should be assessed according to relevant criteria for a written text in the respective genre. Then there is the oral recording. This one could be assessed as a separate audio file, which gives teachers access to an excellent way of testing the students' oral production skills. Finally, we have the whole digital story, where all modes used to express the meaning should be assessed, but this time not as separate units, but as belonging together. With reference to what is said here, I will argue that even though digital storytelling is perhaps more time consuming than other learning activities we carry out at school, it is an all-embracing activity not only for the learners, but also for the teachers. One should always consider time spent versus benefits derived. With respect to time spent, Ohler (2008) suggests that "If you're crunched for time and you're teaching a content area course rather than a media production course, then forget the polish of the stories and save yourself a lot of time" (ibid., p. 161).

- Finally, this study has also showed me that when digital storytelling in itself is the goal of a learning activity, the framing of the activity and the contextualisation taking part prior to producing the digital stories is important for the student. Such a contextualization can actually also be helpful with respect to "finding" the story to tell. Experience has told me that some students struggle with that part. For my own teaching practice, this might result in carrying out fewer, but much better contextualized digital storytelling activities in the future.

6.3 Suggestions for further research

Various aspects related to digital storytelling as a second language learning activity are interesting with respect to further research. My own reflections presented above could of course be developed further. In addition, it could also be interesting to go one step further with the same research questions as in this study; linked to reflections on learning potentials, but carried out with another target group; i.e. a group of Norwegian second language teachers. Interesting questions to explore could e.g. be:

- How do second language teachers who use digital storytelling reflect on it as a learning activity? What are the learning potentials and what are the obstacles, as perceived by the teachers?

It could additionally be interesting to carry out a study with teachers who do not use digital storytelling as a tool for their language students. What are their reasons for not using digital storytelling and what would it demand in terms of support to get them started, if they are interested in using it?

6.4 Final thoughts

My first encounter with digital storytelling added a new dimension to my teaching practice. Three years after that encounter; i.e. in 2006, we had a new national curriculum in Norway, with a strong emphasis on basic skills development. I was early of the opinion that digital storytelling was interesting in an academic perspective, also for English as a second language, since it had potentials of embracing several basic skills as well as the main areas of the subject, as visualized below.

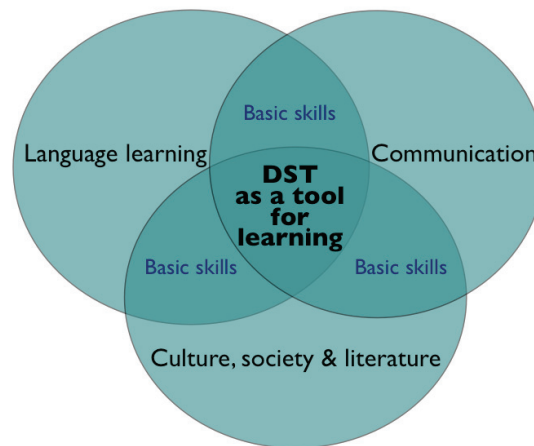


Figure 6.1: Digital storytelling in the light of the Knowledge Promotion

However, one thing is what we, as teachers, believe and practice with regard to learning. Another thing is what our students define as interesting, motivational methods or tools to enhance their own learning, and how the learners themselves see potentials for learning in the various approaches more or less imposed on them by their teachers. This study has given a voice to such learner reflections around digital storytelling as a tool for language learning.

Research has shown that when students reflect on their own learning processes, this is something that will impact their learning positively. Hattie found that there is a high correlation between metacognition, or thinking about thinking, and achievement (Hattie, 2009). With respect to the latter, I can hope that this study has

been useful not only for myself, but also for all the respondents and research participants who took part in the study and shared their reflections with me.

I additionally hope that my study can be a contribution in order for teachers to obtain increased awareness of own pedagogical, digital competence (Karlsen & Wølner, 2006). It is my opinion that for a teacher to meet the requirements set in the Knowledge Promotion with respect to digital skills development, it is not enough to have knowledge about technology, pedagogy and content as three separate bodies of knowledge. With reference to Mishra & Koehler (2006) the focus should be on the intersection between these three. This means that we must aim at obtaining a technological, pedagogical content knowledge, so that the implementation of new technology becomes part of what we should do anyway in the subject. I will argue that the latter also applies for the learners. In this respect it is interesting to see that the learners in my study actually define the learning potentials from digital storytelling as related to a use of technology that precisely aligns with several of the learning objectives and that the learning outcome of a digital storytelling activity is understood as greater than the finished story itself.

As referred on the front page of this thesis, Dina made associations to one of her childhood favourites when she reflected on learning potentials from digital storytelling. Whether her fellow students think about digital storytelling as a Kinder Surprise or not, is not for me to say. All the learners in this study have nevertheless been able to point to a variety of learning potentials from digital storytelling activities. This tells me that digital storytelling indeed has a role to play as a second language learning activity.

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2. Kirsty Mc Geoch's blog: <http://12digitalstorytelling.blogspot.com/>
3. Quality Research International:
<http://www.qualityresearchinternational.com/glossary/>
4. Technological Pedagogical Content Knowledge: <http://tpack.org>

Appendix 1: Letter from the Norwegian Social Science Data Services with permission to collect data for the study

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårlagas gate 29
N-5007 Bergen
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www.nsd.uib.no
Org.nr. 985 321 884

Hildegunn Otnes
Program for læretutdanning
NTNU
7491 TRONDHEIM

Vår dato: 28.10.2010

Vår ref: 25222 / 3 / MSS

Deres dato:

Deres ref:

KVITTERING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 11.10.2010. All nødvendig informasjon om prosjektet forelå i sin helhet 27.10.2010. Meldingen gjelder prosjektet:

25222	<i>Digital Storytelling as an educational Tool in second Language Learning</i>
Behandlingsansvarlig	NTNU, ved institusjonens øverste leder
Daglig ansvarlig	Hildegunn Otnes
Student	Anita Normann

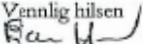
Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/forsk_stud/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 01.06.2011, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Børn Henriksen


Marie Strand Schildmann

Kontaktperson: Marie Strand Schildmann tlf: 55 58 31 52
Vedlegg: Prosjektvurdering
Kopi: Anita Normann, Kringsjåveien 33 A, 7032 TRONDHEIM

Appendix 2: Letter of information and parental consent

Anita Normann,
lærer i 9A,
xxxxxx ungdomsskole
xxxxx kommune

Epost: anita.normann@trondheim.kommune.no
Tlf.: xxxxx (privat) xxxxx (jobb)

xxxxxxx, 26.11.10

Til foreldre/foresatte for elever i 9A, 9B og 9C som har valgt engelsk fagfordypning:

Forespørsel om innsamling av data til mastergradsforskning

I forbindelse med at jeg ved siden av lærerjobben tar en videreutdanning på mastergradsnivå i faget *didaktikk for engelsk og fremmedspråk* ved NTNU, skal jeg dette skoleåret gjennomføre min mastergradsforskning. Forskningen min vil ha følgende overordnede tema: *Digital storytelling in second language learning*. Jeg er spesielt interessert i å finne ut hvordan elevene selv ser på bruken av *digital storytelling* innenfor språkopplæringa, og hvordan de reflekterer rundt eget læringsutbytte når de jobber med produksjon av digitale historiefortellinger (som er den norske betegnelsen) som en del av sitt læringsarbeid i engelsk.

Forskningsarbeidet vil basere seg på *kvalitativ metode*, og jeg ønsker å bruke alle arbeidsloggene som elevene skal skrive som en del av mitt datagrunnlag. I tillegg ønsker jeg å innhente data ved bruk av spørreskjema, samt intervju et representativt utvalg av elevene i gruppa, anslagsvis 5-6 elever. Hvilke elever som skal intervjues er det enda ikke tatt stilling til. Nærmere informasjon om utvalg av elever for intervju sendes til de aktuelle foresatte når dette er klart.

Hvert intervju vil ta ca. 45 min., og jeg vil gjøre lydopptak av intervjuet. Disse opptakene vil bli slettet etter at arbeidet er fullført. Alle opplysninger som kommer fram i spørreundersøkelser, logger og intervjuer er konfidensielle, og elevene vil bli anonymisert i den endelige masterteksten. Innsamlet data vil bli slettet når prosjektet er fullført.

Rektor er orientert om mitt arbeid, og har gitt sitt samtykke til innhenting av data. I tillegg er prosjektet meldt inn til Norsk Samfunnsvitenskaplig Datatjeneste (NSD) i henhold til retningslinjer for forskningsetikk og personvern. Min veileder på Program for Lærerutdanning ved NTNU er Hildegunn Otnes.

På bakgrunn av dette ber jeg altså om tillatelse til:

- å gjennomføre en spørreundersøkelse om elevenes forhold til bruk av DST (digital storytelling) som et læringsverktøy i engelsk
- å bruke refleksjonsloggene din sønn/datter skriver i emnet *engelsk fagfordypning* som datagrunnlag i mitt mastergradsarbeid
- å evt. intervju din sønn/datter om arbeidet med digital storytelling
- at informasjonen som kommer fram kan bli analysert, tolket og brukt i mitt mastergradsarbeid

Jeg vil understreke at det er frivillig å delta, og at man når som helst kan trekke seg fra prosjektet uten å oppgi noen grunn til det. Dersom man velger å trekke seg, vil allerede innhentede opplysninger slettes. Om dere velger å avstå fra deltagelse i mitt

forskningsprosjekt, vil dette ikke ha noen betydning for elevens forhold verken til meg som lærer og medansvarlig for emnet *engelsk fagfordypning*, eller til skolen for øvrig.

Oppstart for forskningsprosjektet er 01.10.2010. Selve mastergradsarbeidet beregnes avsluttet 01.06.2011, men datainnsamlinga begrenses til perioden 01.11.2010 til 17.12.2010.

Ta gjerne kontakt hvis noe er uklart.

Vennlig hilsen

.....
Anita Normann

Svarslipp

Tillatelser

1. Jeg/vi gir tillatelse til at vår sønn/datter kan delta i spørreundersøkelse om bruk av *digital storytelling* i engelskfaget.

2. Jeg/vi gir tillatelse til at Anita Normann kan bruke min/vår sønn/datter sine refleksjonslogger fra arbeidet med *digital storytelling* i emnet engelsk fagfordypning til sin mastergradsforskning ved NTNU/PLU 2010/11.

3. Jeg/vi gir tillatelse til at min/vår sønn/datter kan trekkes ut til intervju/samtale om bruken av *digital storytelling* i engelskfaget.

Forutsetningen for tillatelsen er at informasjonen som framkommer gjennom intervjuet blir behandlet med respekt og blir anonymisert, og at prosjektet ellers følger gjeldende retningslinjer for personvern.

Jeg/vi har snakket med min/vår sønn/datter om dette, og han/hun har også gitt sitt samtykke til deltagelse.

Elevens fulle navn:

Sted:

Dato:

Underskrift av elev:
.....

Underskrift av foresatt(e):
.....

Vennligst returner svarslippen til lærer så snart som mulig.

Appendix 3: Questionnaire

Spørreskjema til elever ved oppstart av prosjektet
Oktober 2010.

Anita Normann,
Lærer ved xxxxx ungdomsskole og mastergradsstudent ved Program for
Lærerutdanning/NTNU

Overordnet tema for forskningsarbeidet:
Digital Storytelling in second language learning

Til eleven,

Nedenfor følger noen spørsmål som skal gi meg litt generell bakgrunnsinformasjon om din forståelse av og din erfaring med arbeidsmåten *Digital Storytelling* (DST). Det som kommer fram her skal brukes som en del av forskningsmaterialet i forbindelse med mitt mastergradsarbeid i faget *didaktikk for engelsk og fremmedspråk*. Spørreskjemaet besvares anonymt, og all data vil bli slettet etter at forskningsarbeidet er ferdig.

Jeg vil at du tar deg god tid til å lese og tenke gjennom spørsmålene før du svarer. Det er svært viktig at du svarer så ærlig som mulig, uten tanke på hva medelever svarer, og uten tanke på om du tror at læreren ønsker at du skal gi et bestemt svar. Det er ingen "rette svar" her, det er kun din personlige mening jeg er ute etter.

BAKGRUNNSINFO:

| Gutt Jente | Alder

SPØRSMÅL 1:

Hvordan forstår du hva det vil si å jobbe med digital storytelling (DST)?

Her vil jeg at du skal rangere svarene dine fra 1 - 4 ved å sette tallet 1 på det du selv synes er den beste forklaringa, tallet 2 på det som er nest beste forklaring osv.

1. Å jobbe med DST betyr å lage en digital fortelling satt sammen av et selvskreivet manus som fortelles med egen stemme, i tillegg til at det brukes bilder og evt. musikk for å understreke budskapet i historien	
2. Å jobbe med DST vil si det samme som å bruke Moviemaker	
3. Å jobbe med DST handler om formidle kunnskaper gjennom å fortelle en historie	
4. Å jobbe med DST betyr å laste ned musikk og kopiere bilder fra Internett og å redigere dette i Moviemaker sammen med opptak av et manus	

Har du en annen forklaring som du selv mener vil passe bedre for hva det vil si å jobbe med DST:

.....

SPØRSMÅL 2:

Ut fra din forståelse av hva digital storytelling er, har du fått opplæring i å jobbe med DST på ungdomsskolen?

Sett kryss.

1. Ja	2. Nei

Hvis du har svart ja på spørsmål 2: Gå direkte til spørsmål 4.

Hvis du har svart nei spørsmål 2: Fortsett med spørsmål 3.

SPØRSMÅL 3:

Du har ikke fått opplæring i å jobbe med DST på ungdomsskolen. Betyr dette at du...

Sett ett kryss for det alternativet som passer aller best.

1. ... ikke vet hvordan du skal jobbe med DST?	
2. ... har lært å jobbe med DST av andre <i>på</i> skolen?	
3. ... har lært å jobbe med DST av andre <i>utenfor</i> skolen?	
4. ... har lært å jobbe med DST <i>på egen hånd</i> ?	

SPØRSMÅL 4:

Hvor ofte har du brukt DST som arbeidsmåte i fag eller tverrfaglig prosjekt på ungdomsskolen?

Sett ett kryss.

1. Aldri	2. 1-2 ganger	3. 3-4 ganger	4. 5 ganger eller mer

Hvis du har svart aldri på spørsmål 4: Gå direkte til spørsmål 6

For de andre: Fortsett med spørsmål 5

SPØRSMÅL 5:

I hvilke sammenhenger har du brukt DST som arbeidsmåte på ungdomsskolen?

Sett kryss ved de fagene der du har brukt DST en eller flere ganger. Hvis du har brukt DST i forbindelse med tverrfaglige prosjekter, som f.eks. KOM prosjekt, krysser du av for **I tverrfaglige prosjekter**.

Norsk		Fremmedspråk	
Engelsk		Kunst – og håndverk	
Matte		Gym	
Samfunnsfag		Musikk	
Naturfag		I tverrfaglige prosjekter	
RLE			

SPØRSMÅL 6:

Hvordan vil du forklare hva læring egentlig er? Hva betyr det f.eks. for deg å lære noe?

Svar så utfyllende som mulig.

.....

.....

.....

.....

SPØRSMÅL 7:

Hvordan vil du, helt generelt, vurdere ditt eget læringsutbytte ved bruk av DST som arbeidsmåte i engelsk?

1. Større læringsutbytte enn ved andre arbeidsmåter	2. Samme læringsutbytte som ved andre arbeidsmåter	3. Mindre læringsutbytte enn ved andre arbeidsmåter	4. Annen type læring enn ved andre arbeidsmåter

For alle: Begrunn svaret ditt.

.....

.....

SPØRSMÅL 8:

Tenk deg at du selv fikk velge arbeidsmåte til et tema i engelsk. Hvor stor betydning ville hver av årsakene nedenfor ha for om du da hadde valgt DST som arbeidsmåte?

Sett ett kryss for hver årsak.

JEG VILLE HA VALGT DST FORDI...	Veldig stor betydning	Ganske stor betydning	Litt betydning	Ingen betydning
1. DST er en arbeidsmåte jeg synes jeg behersker godt				
2. Jeg liker godt å bruke data i læringsarbeidet mitt på skolen og/eller hjemme, og derfor passer DST bra				
3. DST er en arbeidsmåte som gjør at jeg kan jobbe med utvikling av flere ulike basisferdigheter i engelsk samtidig (altså en arbeidsmåte der jeg både kan bruke språket skriftlig, bruke språket muntlig, lese, lytte og bruke digitale ferdigheter)				
4. Å bruke DST fører til at jeg <i>forstår</i> et tema i engelskfaget bedre				
5. Å bruke DST fører til at jeg <i>husker</i> et tema i engelsk bedre				
6. Å bruke DST er en god måte å dokumentere (vise) både språkkunnskaper i engelsk og kunnskaper om et tema i engelsk				
7. DST er en morsom arbeidsmåte				
8. DST er en lærerik arbeidsmåte				
9. DST er en motiverende arbeidsmåte, (gjør at jeg får lyst til å jobbe med faget eller temaet)				
10. Å bruke DST skaper variasjon i læringsarbeidet mitt				
11. Jeg er ikke særlig glad i å <i>skrive</i> tekster på engelsk, og med DST kan jeg fortelle en historie eller formidle kunnskaper om et tema på engelsk på andre måter enn bare ved å skrive				
12. Jeg synes DST egner seg spesielt godt til å jobbe med å bli bedre i muntlig engelsk ettersom jeg kan <i>høre lydopptak</i> av meg selv				
13. Når jeg bruker DST synes jeg at resultatet (det ferdige produktet / karakteren) blir bedre enn når jeg <i>bare</i> skriver, eller når jeg <i>bare</i> presenterer noe muntlig.				
14. Å bruke DST i engelsk er en måte å arbeide på som betyr at jeg selv kan være mer aktiv og engasjert i læringsarbeidet mitt enn når jeg jobber på andre måter				
15. Når jeg bruker DST som en arbeidsmåte på skolen kan jeg ta i bruk kunnskaper eller erfaringer fra hverdagslivet mitt / fritida mi (f.eks. datakunnskaper eller annet)				
16. DST handler om å formidle personlige historier, enten selvopplevde historier eller at jeg viser kunnskaper om et tema ved å være en annen person, og denne måten å presentere kunnskaper på liker jeg godt				
17. Jeg selv ofte lærer mye av å se på DST'er som andre har lagd, og tenker at andre også kan lære av mine DST'er				

SPØRSMÅL 9:

*Igjen: Tenk deg at du selv fikk velge arbeidsmåte til et tema i engelsk. Hvor stor betydning ville hver av årsakene nedenfor ha for at du hadde bestemt deg for **IKKE** å velge DST som arbeidsmåte?*

Sett ett kryss for hver årsak.

<i>JEG VILLE <u>IKKE</u> HA VALGT DST FORDI...</i>	Veldig stor betydning	Ganske stor betydning	Litt betydning	Ingen betydning
1. Jeg syns ikke jeg har fått nok opplæring i hvordan vi jobber med DST				
2. Jeg syns jeg får for lite eller for dårlig hjelp og veiledning underveis når vi jobber med DST				
3. Jeg liker andre arbeidsmåter bedre enn DST				
4. Det er vanskelig å få tilgang til datamaskin på skolen				
5. Jeg har ikke tilgang på det nødvendige datautstyret hjemme (f.eks. pc, Internett, redigeringsprogram, lydopptaksmuligheter)				
6. Jeg syns andre arbeidsmåter gir meg større læringsutbytte				
7. Å jobbe med DST er vanskelig				
8. Å jobbe med DST tar for lang tid				
9. Å jobbe med DST medfører for mange ”utenomfaglige problemer” (f.eks. tekniske problemer, mangel på utstyr når jeg trenger det, mangel på rom for lydopptak etc.)				
10. Det er vanskelig å finne og/eller velge ut stoff blant ulike kilder				
10. Det er vanskelig å vise gode kunnskaper gjennom å skrive en tekst (manus) på 150-200 ord				
11. Jeg liker ikke å høre opptak av min egen stemme				
12. Det er vanskelig å finne gode, lovlige bilder til teksten min				
13. Det er vanskelig å redigere (bruke Moviemaker)				
14. Jeg syns ikke DST egner seg som en god arbeidsmåte i engelsk				
15. Det lett blir for mye fokus på form og for lite fokus på innhold				
16. Jeg liker ikke at andre elever kanskje skal se/høre på min DST				

SPØRSMÅL 10:

Til slutt vil jeg gjerne vite noe om hvor ofte du bruker ulike typer dataprogram eller Internett utenom skolesammenheng. Jeg har her kun fokusert på det jeg mener kan ha en nytteverdi for et evt. arbeid med DST i en skolesammenheng (gjennom at du kan få erfaring, kunnskaper, idéer osv).

Sett ett kryss for hver linje

	Mer enn 7 ganger	5-7 ganger i uka	3-4 ganger i uka	1-2 ganger i uka	Sjeldnere enn 1 gang pr. uke
1) Jeg spiller dataspill					
2) Jeg søker etter informasjon på nettet					
3) Jeg ser på filmklipp på YouTube					
4) Jeg kommuniserer vha chat, blogg, mail, Facebook, Nettby, MySpace e.l.					
5) Jeg bruker data til å gjøre lydopptak (stemme og/eller musikk)					
6) Jeg bruker data til å jobbe med lydredigering					
7) Jeg bruker data til å jobbe med bilderedigering					
8) Jeg bruker data til å lage bildepresentasjoner					
9) Jeg bruker data til å jobbe med videoredigering					
10) Jeg bruker data til å skrive (NB! Utenom skoleskriving)					
11) Jeg bruker data til å dele lyd, video, bilder med andre, f.eks. via Facebook, Nettby, MySpace, egen hjemmeside, blogg e.l.					

Er det andre program/aktiviteter du gjør på data utenom skolen som du mener kan ha nytteverdi for et evt. DST arbeid i skolesammenheng?

.....

TUSEN takk for at du ville delta i spørreundersøkelsen!

Anita

Appendix 4: Interview guide

INTERVJUGUIDE

20.12.10

Intervjuguide for gjennomføring av halvstrukturert intervju/samtale med elever i 9.klasse i forb. med mastergradsforskning rundt det overordnede temaet ”*Digital storytelling as an educational tool in second language learning*”, høsten 2010.

Hovedforsknings spørsmål: *What are the potentials for learning when digital storytelling is used as a second language learning activity in lower secondary school, as perceived by the students and expressed through their reflections?*

Innledning

Informasjon til eleven ved oppstarten av intervjuet:

- 1) Presentere opplegget, og si litt generelt om hva vi skal snakke om
- 2) Fortelle hva intervjuene skal brukes til
- 3) Fortelle om konsekvenser og frivillighet
- 4) Forklare hvordan informantene bør forholde seg til spørsmålene

Bakgrunnsspørsmål / oppvarmings spørsmål:

- 5) Elevens forhold til engelsk som fag, rent generelt (hvordan eleven liker faget, og om evt. preferanser i forhold til skriftlig vs muntlig aktivitet, eller til arbeidsmåter i faget)
- 6) Elevens egen vurdering av sitt faglige nivå i engelsk
- 7) Elevens definisjon av *digital storytelling*
- 8) Elevens forhold til DST som arbeidsmåte **i engelsk**

Hoveddelen av intervjuet vil bygges opp som en halvstrukturert samtale rundt fire hovedtema, hvor to hypoteser ligger til grunn for spørsmålsstillinga.

Hypotese 1: Mange elever opplever en sammenheng mellom motivasjon og læringsutbytte, og derfor spiller elevens generelle forhold til arbeidsmåten DST inn når eleven reflekterer over den læringa som skjer i DST arbeid i engelsk. (Sp.mål 1 & 2)

- 1) Elevens refleksjoner rundt begrepet *motivasjon*:
 - a. Hvordan forstår du begrepet?
 - b. Hva er det som motiverer deg personlig i et læringsarbeid i engelsk? Hvorfor?
 - c. Hvilken betydning har bruken av DST som arbeidsmåte på din motivasjon i læringsarbeidet i engelsk? Hvorfor?
 - d. Har din motivasjon til å bruke DST i språklæringsfag endret seg i løpet av høsten? Hvorfor?
- 2) Elevens refleksjoner rundt begrepet *læring*:
 - a. Hvordan forstår du begrepet?
 - b. Hva tenker du at *læring* i engelskfaget generelt sett handler om?

Hypotese 2: Mange elever ser på læring ved bruk av DST i engelsk som læring hovedsakelig av tekniske ferdigheter. (Sp.mål 3 & 4).

- 3) Elevenes generelle refleksjoner rundt *digital storytelling* som læringsverktøy/arbeidsmåte i engelsk:
- a. Beskriv din læring (hva du lærer og hvordan du lærer) når du jobber med DST i engelsk.
 - b. Hva vil du peke på som fordeler ved å bruke DST som arbeidsmåte i engelsk?
 - c. Hva syns du er ulempene ved å bruke DST i engelsk?
 - d. Hva syns du bør kjennetegne en meget god DST lagd i engelskfaget?
 - e. Hva syns du bør telle når en ferdig DST skal vurderes? (Språk? Innhold? Det tekniske?) Hvorfor?
 - i. Noe annet som du syns bør telle på vurderinga? Hvorfor?
 - f. Tenk deg at vi jobber med et bestemt tema i engelsk. Hvis du fikk velge arbeidsmåte selv, ville du da ha valgt DST? Reflekter høyt rundt dette.
 - g. Ut fra din erfaring; i hvilke sammenhenger mener du at DST generelt sett egner seg godt til å bruke som et læringsverktøy innenfor språkfag?
- 4) Elevenes refleksjoner rundt *opplevelsen av og erfaringene med* å bruke DST i det spesifikke prosjektet som er gjennomført i høst (”*Fra bok til digital fortelling*”):
- a. Syns du at DST var velegnet seg som arbeidsmåte i det litterære arbeidet i høst? Hvorfor? / Hvorfor ikke?
 - b. Har din forståelse av hva DST er og hvordan vi kan lære når vi bruker DST i språkfag endret seg i løpet av høsten? På hvilken måte?
 - c. Hvordan vil du beskrive ditt eget læringsutbytte i høstens DSTarbeid? (Syns du at du har lært noe? Hva slags ”type læring” har funnet sted for deg? Innenfor hvilke områder har du utviklet deg faglig?)
 - i. Hva opplevde du som **mest** lærerikt for deg selv i høstens DSTarbeid? (forarbeidet med boklesing & div. muntlige aktiviteter, utarbeiding av manus til DST, arbeid med det muntlige/ lydopptaket, redigeringsarbeidet, presentasjonsfasen?). **Hvorfor?**
 - ii. Hva opplevde du som **minst** lærerikt for deg selv i høstens DSTarbeid? (forarbeidet med boklesinga, utarbeiding av manus, arbeid med det muntlige/ lydopptaket, redigeringsarbeidet, presentasjonsfasen?). **Hvorfor?**
 - d. Hvordan vil du beskrive læringsutbyttet av å jobbe med DST i engelsk sammenlignet med andre arbeidsmåter i faget?
 - e. Til slutt skal vi snakke om de tre fasene i arbeidsprosessen; forarbeid, produksjon og presentasjon/vurdering. Tenk deg at du skal gi noen

gode råd til andre. Hva vil du si er det viktigste å huske på for å oppnå god engelsklæring når det gjelder:

- i. Forarbeidet (planlegging, finne stoff, finne fokus for egen historie, utarbeide manus & storyboard, finne bilder). Hvorfor?
- ii. Produksjonsfasen (arbeid med redigeringsprogram, gjøre lydopptak, sette sammen til ferdig film). Hvorfor?
- iii. Presentasjon/vurdering (dele med andre, gi/få respons, vurdere hva man kunne ha gjort annerledes). Hvorfor?

5) Evt.: Fortell om hvordan du tenkte i arbeidsprosessen i ditt konkrete DSToppdrag i høst. Hva lærte du av å gjøre det akkurat slik?

Anita Normann
NTNU/PLU
13.12.2010

Appendix 5: Reflection log

Refleksjonslogg uke 50: DST-arbeidet

"From book to digital story"

Navn:

Til eleven

Loggspørsmålene dreier seg om hvordan DST arbeidet har vært for deg, og hvordan du tenker rundt ditt eget læringsutbytte av dette arbeidet. Det er svært viktig at du svarer ærlig og utfyllende, slik at jeg kan bruke dette som et materiale i min mastergrads-forskning. Det du svarer her vil på ingen måte påvirke verken karakteren i dette engelskemet, ditt forhold til meg som lærer, eller det videre arbeidet ditt på skolen. Ved at du svarer på spørsmålene vil du bidra til at jeg og andre lærere kan forstå mer av hvordan elever reflekterer rundt egen læring når de jobber med DST i engelsk.

- Spør meg hvis det er noe mer du lurer på!

Anita

1. **Hvilken DST-oppgave har du hatt i engelsk fordypning, og hvordan har du opplevd dette arbeidet?**
Begrunn svaret ditt.
2. **Hvor motivert var du for akkurat denne oppgaven?**
Begrunn svaret ditt.
3. **Nå vil jeg at du skal reflektere over din egen læring i dette DST arbeidet.** Hva syns du har gått bra og hva har gått mindre bra? Tenk på de ulike fasene i arbeidet når du svarer. Hva er det viktigste du har lært i arbeidet? Hva er du mest fornøyd med? Hva ville du ha gjort annerledes?
4. **Har du lært noe i dette DST arbeidet som du syns du ikke har fått visst fram/dokumentert?**
5. **Ut fra det du har erfart tidligere og i høst: I hvilke sammenhenger mener du at DST egner seg godt til å bruke som et læringsverktøy/en aktivitet innenfor engelsk?**
6. **Til slutt: Er det noe mer du vil si om bruken av DST som et læringsverktøy (eller som en metode / en arbeidsmåte) i engelsk, relatert til din egen læring?**