Chapter VI

DISCUSSION AND CONCLUSION

6. INTRODUCTION

The discussions in this chapter will embrace these and other aspects since the researcher 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 this researcher has additionally chosen to do sometimes during the discussion is to reflect on what he did not find in this study, compared to what one might expect, based on other, relevant studies. The researcher has also contributed with his own experiences a few places, to shed light on the discussed findings. The two topics for discussion in this chapter are closely linked to the research questions and the hypotheses.

In section 6.2 the discussion will focus on digital storytelling in the light of learning and learner differences. This researcher also will discuss digital storytelling as an all-embracing activity for second language learning, in section 6.3. These two 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 the end that the researcher will specifically revisit the research questions and hypotheses, and hence conclude his whole study.

6.1 FINDINGS

On the contrary, the objective was rather to reach a naturalistic generalization (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, the researcher presented fairly thick descriptive analyses. Thick descriptions will, according to Postholm, also enable naturalistic generalizations, 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 the order of importance.
DISCUSSION AND CONCLUSION

When this researcher analyzed, triangulated and interpreted the research participants’ reflections on the two subjects learning and digital storytelling as a second language learning activity, he found that:

- 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 learning on the other hand, seems to be related to scaffolding, modeling 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 not many differences between the genders on how they reflect on, 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 learning.
• both boys and girls see learning as a direct result of access to new technology.
• Both boys and girls believe that DST helps them to use and learn a high level of vocabulary and help them to think critically due to the limitation of script writing.
• 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 at the end of this chapter the researcher will also present his personal comments with respect to the findings of the study.

6.2 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 interested to use digital storytelling in their second language learning? This is a question that the researcher hopes to answer in the current section of the chapter. What he 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 3.1.1, it is the traditional socio-constructivism that he leans on here.

6.2.1 Scaffolding and the Role of the Teacher

With reference to Lepper et al. (2005), it is clear that learning from digital storytelling for these students depends 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 modeling how to use digital storytelling in order to enhance learning is another important role for the teacher, especially for extrinsically interested students. According to Kost (2003), extrinsically interested students typically rely even more on the teacher’s precise instructions, support, and modeling than intrinsically interested
students. This is true that teachers always have to balance on the one hand the challenges offered in the tasks they assign to their 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 of 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), the researcher will say that students who dominant 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 3.1.1. When students have access to computers every day at academic class, scaffolding related to how to use the new technology efficiently in order to enhance academic achievement is important. Lovleen makes an interesting remark related precisely to the importance of receiving good instructions on the tools to use. she says that for her, digital storytelling is an alight instrument to use, however nothing superior (Lovleen). However, during the interview, she does point to digital storytelling as becoming increasingly interesting to use as an efficient learning tool, related to her own increased knowledge on how to use it. In other words, the more Lovleen has learned about how to use digital storytelling effectively in her learning, the more motivating she finds this working method to be, and the greater impact it has on her own learning, according to herself.
6.2.2 Learning with and From Others

Scaffolding and the metaphor 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 the researchers’ 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 16, 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 (section 5.2.3.2.2).

The same is the case for Gaurav, who always makes a short introduction in the beginning of his script, to help him viewers understand his story: *I had a short introduction in the digital story because I think it is ok for the viewers to receive some information first* (Gaurav). 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. The researcher will argue that this aspect is precisely related to learning with others. Another example related to the zone of proximal development is found with Ashita and Sonu. They actually link their own inspiration 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 learning is hence linked to that of their peers.

Ashita also confirms that she not only learns from working with his own task and sources and by that constructs her own knowledge. In addition, she also learns when *watching her friends’ products*. (Ashita). In other words, she points to learning from others as an important element in her own knowledge production. This is in line with what this researcher presented about the socio-constructivist view on learning in section 3.1.1. 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.
6.2.3 Learning as Teaching Others

As referred in the summary of the study’s findings, in section 6.1, many of the respondents relate learning to teach 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 (section 3.1.3), which will be discussed further in section 6.3.3. 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, the researcher found that his respondents also conceive of learning in different ways, (section 5.2.2). He will below look at how Ravjot’s learning, as perceived by her, relates to Bloom’s taxonomy of the cognitive domain (section 3.2).

When Ravjot refers to learning as receiving knowledge (section 5.1.2.1), this researcher 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. Ravjot, 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, Ravjot 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 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. Based on the interviewee's respondents, the researcher believes that students learn best when they are expected to present their learning or knowledge to others.

6.2.4 Situated Learning and the Importance of Contextualization

The researchers’ analyses, shows that the success of using digital storytelling as a learning tool in English relies on and is related to which overall topics students work in class
and how they 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, the researcher will argue that both Avneet and Sonu reflect on precisely this aspect with their learning when they point to the importance of working well together with the play prior to carrying out the storytelling activity. As Avneet said: *If we had not discussed those parts of the book together, we might have thought that those parts were not important* (Avneet).

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 (Norman 2011). 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. Norman believes 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”. This researcher will in fact point to Avneet’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 Avneet’s learning was partly constructed in a social setting. When students carry out a number of focused literary discussions and activities related to what they 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 artifact. This aspect is also in line with a socio-constructivist view on learning.

6.2.5 Learning, Digital Storytelling, and Gender Differences

The researchers’ interest in looking for differences between genders. In the questionnaires, they were asked to tick off for gender with the full name. 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 girls than boys 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 the data that more girls than boys 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 this study and also based on the researcher’s own experience, he will however not pay too much attention to this last finding. In classes where he has been working with digital storytelling, he has 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 3.4.

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 favored 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.). The researcher will argue that both the last two mentioned findings from Barton might account for why more girls than boys, in his 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 (2002) also points to the need of variety as a trait related to boys’ learning styles. This researcher 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, the researcher saw from his study that boys and girls had a slightly different view on the role of technology in their learning. Whereas all respondents and interviewees were interested in variation in the working method, more girls than boys 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.

This researcher will be very cautious to describe the findings presented above as representing a typical pattern, neither in his study nor working classes in general. He believes that teachers should not highlight differences between the sexes in their classes. Along the
same line, he does not want to stereotype one group of respondents in this study. Boys and girls are obviously not homogenous groups, and many other factors than gender might also influence how they learn.

6.2.6 Learning, Reflections on Digital Storytelling as a Learning Tool

The researcher will discuss the finding linked to academic achievements. The academic achievement could also be understood as embracing more than formal grades.

This finding is related to students’ reflections on digital storytelling as a learning tool. Three classifications were outlined for the analyses, each of which was also defined with three subcategories. In the process of triangulation, this researcher some students who looked at digital storytelling also as a tool to express personal reflection. When triangulating these results to check how the same students, for example, Ravjot and others defined learning, the researcher saw that they understood learning, in general, to be related to being able to teach others. This tells the researcher 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.

The researcher also finds it useful to look at the above in the light of Bloom’s taxonomy of the cognitive domain, as described earlier (section 3.2) 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 “the play, King Lear”, one way to demonstrate personal reflection was 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, some students were clearly better at verbalizing their perceptions around reflections and also better at showing reflection in their digital stories than the other students. Based on this the researcher 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.

6.3 DIGITAL STORYTELLING AS AN ALL EMBRACING ACTIVITY FOR SECOND LANGUAGE LEARNING

The researchers’ study shows that the respondents 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 (section 3.4) on the one hand,
whereas the other framing is placed within multiliteracies and the use of several modes to express meaning (cf. section 3.1.3).

Finally, the researcher still leans on a socio-constructivist view on how learning takes place, but in this section, he will additionally relate the discussions to some of the new constructivist theories (section 3.1.3) to shed light on his findings.

6.3.1 Basic Skills Development

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

6.3.1.1 Oral Skills

All the respondents 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 the researchers’ experience in this research, he agrees digital storytelling lends itself easily to practicing such oral skills. Along the same line, it can be argued that digital storytelling represents a new way of practicing 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. The researcher found that for few 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 6.3.1, this researcher discussed the role of the teacher and the importance of scaffolding. He 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. The researcher’s 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 to listen 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, this researcher will suggest that support and what he 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 5.2.3.1.1), 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, the researcher finds it interesting when student Ruchika reveals that she needs to work more on some of her 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 Ruchika 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 the 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 5.2.3.2), several of the 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 3.1, 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 artifact 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 her story will be shared, Ruchika wants to rehearse her pronunciation even more.

As such, this represents a situation where both parties take advantage. Ruchika practices her 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. The researcher 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). This researcher will, therefore, argue that digital storytelling used as a tool to obtain another goal can be understood also in this light.

6.3.1.2 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 are told to write a script of 150-300 words, which for some of them is a rather limited length (cf. e.g. Anmol’ comments in section 5.2.3.1.2). As presented in the analyses, this requirement is the reason to why Anmol 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 Gaurav’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 Gaurav’s words from the interview, the researcher will argue that this might require even more of the writer. The 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.

The researcher 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 every student. 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). The researcher from his experience in this project sees 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, he also sees that the digital aspect, related to the use of several modes, is appealing to them.

This tells him 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. The researcher has 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 the next focus.
6.3.2 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, the researcher 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) he 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.

The researcher found that his respondents 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. Ravjot told that she would let her own reflections come to the fore in her story through the way she used carefully chosen transitions. Palak 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. Tina 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 Tina. 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, the 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 has their specific limitations and possibilities, also referred to as modal affordances (ibid.2003).

A 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 efficiently, in order to support their own learning” (Ohler, 2008). The researcher believes that 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 Tina’s level with respect to choosing pictures, many of her peers nevertheless clearly demonstrate that they are media competent. The researcher 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 areas, 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 the researchers’ 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).

In this study, the researcher finds the respondents’ feeling and eagerness to choose digital storytelling as a preferred learning tool at the university. It must however, be emphasized here that digital storytelling is one of the several activities involving the use of digital tools that students can use to work on their knowledge construction and knowledge documentation.

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.

6.3.3 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 is focused, the topics that the learners communicate about are of minor importance and could be related to anything, as long as they are meant for the learners and enhance second language learning. However, one of the main areas of 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). The researcher sees this as related to digital storytelling as a bridge between existing knowledge and new material (Ausubel, 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), 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).

The respondents relate second language learning; i.e. their 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” (Norman 2011). They have hence become media “prosumers”, to use a popularized expression. This is also in line with the findings of this study. The researcher will hence argue that when several of the 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. Even the researcher has 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 this study. In communal constructivism (section 3.1.3), students
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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 this study have a special focus on their target group, the researcher 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 the researcher 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. The researcher 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). The researcher has 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, he believes that this can have a positive effect on their learning outcome and not to forget, on the overall quality of the product itself.

In 2012, a few of the researcher’s previous students of English made a personal digital story. When the researcher showed that story to the present research participants, as a teaser,
he will argue that this had numerous advantages. the present students learned factual information related to the topic in question. 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 this study pointed to aspects that the researcher categorized as belonging to the subcategory learning strategies in the analyses. he finds it interesting to look at this in the light of the new constructivist learning theory navigationism, as this was presented in 3.1.3. 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. The researcher believes 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. The researcher role 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. he sees this in his classes each time they 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, the researcher finds it particularly relevant that Brown also points to the importance of being able to reconfigure, represent 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).
6.4 CONCLUSION

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, the researcher has also looked at students’ reflections on learning. In this chapter, he will briefly bring it all together and conclude his study. In addition, he also wants to look ahead. He then sets out to explore students’ reflections. To close the circle, he, therefore, wants to come back to his own practice again in this chapter. This will be done by briefly reflecting on how some of the findings in this study can improve his own future use of digital storytelling as a learning activity for his second language learners.

6.4.1 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? Here the kind of learning would be self-learning, as perceived by the students and expressed through their reflections?

And the second question was:

Can DST offer a diverse interactive learning experience and improve the involvement of students in the process of learning?

The researcher found that the 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. In addition, they express concern related to the amount of time digital storytelling processes may take at University, mainly due to various technical problems that might occur, as well as not having access to the equipment they need, when they want it. The present students believe that DST helps them to find, use, learn and teach each other various amount of vocabulary and moreover helps them to think critically due to the limitation of scriptwriting and presented
digitally. 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.

The researcher principal interest with this study was, as mentioned, to explore students’ own reflections on learning potentials from digital storytelling as an educational activity. he nevertheless saw this as being related to learning. This is why the first hypothesis was outlined:

*When DST is used as a second language learning activity, it increases the ability for critical thinking and enhances the use of higher level vocabulary.*

Related to this hypothesis; as mentioned above, many students point to a learning outcome, the data shows that this is in full accordance with what several of the respondents confirmed. Based on this, the researcher has to conclude that his first hypothesis, on the whole, was confirmed. The students were indeed reflecting on the kinds of learning taking place in digital storytelling activities in English.

At the outset of this study, the researcher asked himself whether DST offer a diverse interactive learning experience and improve the involvement of students in the process of learning. Would the students define their learning outcome from digital storytelling as primarily related to learning digital technical skills? Based on these questions a second hypothesis was outlined:

*DST works through reflection, creating different interpretations and offering diverse, various interactive learning experiences.*
As discussed in this chapter, 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, the research participants did not limit their reflections around learning outcome to the learning of technical skills. On the opposing, they all pointed to and reflected on several types of learning potentials, as presented in chapter 5. They have agreed that Digital Storytelling involved them to learn and understand, in a better way. The second hypothesis was hence confirmed as well.

The majority of the findings in this study were as expected. It pleased the researcher to see that 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 him to see how much emphasis they seemed to put on the importance of a good contextualization and overall framing of the activity.

Finally, with respect to digital storytelling as an all-embracing activity, this study has also shown the researcher that when digital storytelling in itself is the goal of a learning activity, the framing of the activity and the contextualization 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 the researcher that some students struggle with that part. For the researcher own practice, this might result in carrying out fewer, but much better contextualized digital storytelling activities in the future.

6.5 Suggestions for Further Research

Various aspects related to digital storytelling as a second language learning activity are interesting with respect to further research. 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 Indian 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? Thus, more studies involving teacher’s use of digital storytelling can be taken up, and can be projected as a useful tool for future training programs.