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How Digital Tools Can Be Used in Storyline



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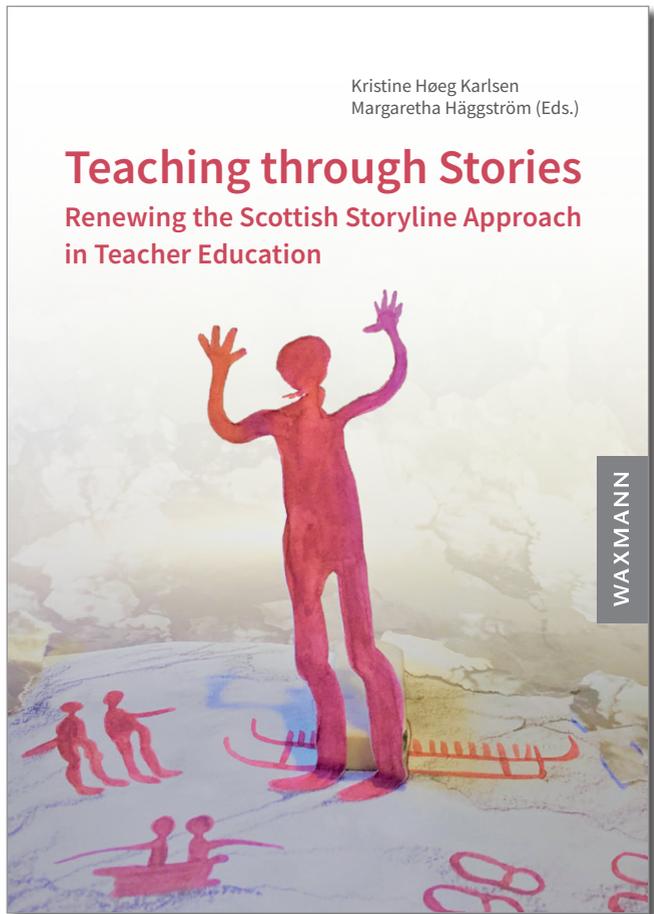
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Chapter 18

How Digital Tools Can Be Used in Storyline

Ellen Romstad

Abstract: Can digital games be compared to digital Storyline? How can we bring interest and motivation for challenges, problem solving and exploration of students “game world” into the classroom? A Storyline’s most important principle is to link students’ learning to realistic scenarios where they learn through stories they find exciting. As in games, we show how with various digital learning tools we can let students experience and immerse themselves in communication skills, thinking skills and skills for life (Omand, 2017). With the help of thorough planning and professional, digital skills, teachers can give their students challenges and tasks in the form of key questions or professional loops. With a new curriculum that emphasises in-depth learning, a Storyline project can incorporate core elements in the subjects as well as the overall and interdisciplinary themes of public health and life management, democracy and citizenship, and sustainable development, thus bringing the central part of the curriculum’s overall part. Teachers must have general, good digital skills and willingness to allow students to experience a learning environment characterised by collaboration, sharing and engagement. Here, digital learning resources are highlighted, with emphasis on how they can be used in the best possible way according to the principles of The Storyline Approach, combined with challenges and expectations of essential 21st century skills.

Keywords: Digital Storyline; digital tools; 21st. century skills; learning through assessment

Introduction

Digital Storyline as an Approach for Professionals to Address the New Norwegian Learning Standards/Curriculum/Core Competencies

When a teacher chooses to use the Storyline Approach (TSA) with their pupils as a pedagogical approach, they have a clear idea and plan for the goals, learning standards and competencies that can be developed and achieved. TSA provides good opportunities for formative feedback and final performance evaluations or grades. Storylines can be created through several mediums, but why not make a Storyline with an emphasis on digital tools? In a society where technology is making major changes within the classroom, digital technology and tools give students quick access to information. Students using a Storyline will have to work on analysing information within a subject. This is excellent, as critical thinking is of utmost importance for understanding facts according to the (national education ministry’s) Directorate of Education’s guidelines (Regjeringen.no. 2016–2017). According to Gilje, Flygt Landfald and Ludvigsen (2018), we are looking at a change in the learning landscape, where it will be especially im-

portant to give the students relevant skills before they start new projects. Teachers are expected to create ideal lessons using new teaching materials, methods and tools to learn with (Gilje et al., 2018). Great demands will be placed on teachers in the future, and this in turn will require teachers to participate in learning environments for collaborative learning and sharing. As a teacher it is important to have a collaboration space to share ideas with other educators. School researchers have called for better methods to achieve in-depth learning, which is highlighted as internationally important (Fullan et al., 2018) and also applicable in the new Norwegian curriculum starting in autumn 2020. Teachers can create in-depth learning by linking technology and TSA. This is because, when TSA is utilised, students are trained in several of the collaborative forms required by the new curriculum.

This way of learning is about developing a general understanding of concepts within subjects and, with proper progression over time, the learner accumulates important skills for learning. A teacher's digital competence will become more and more important in the future.

Omand highlights Storyline's opportunities to allow students to experience and immerse themselves in tasks where they train and become competent in communication, thinking, enterprise, and 21st century life. (Omand, 2014, p. 5). In other words, students must receive good training in digital judgment. This entails experience in privacy, copyright and information literacy. It is also important to highlight how digital competence has become more relevant in the upcoming curriculum, and our students must learn how to reflect, be explorative and creative.

Imagine a platform where players face challenges they must solve using the rules of the game. A digital Storyline or a Wiki Storyline can be such a platform and, can be suitable for pupils in primary school. It can also be used by students in teacher education as we can easily increase the degree of difficulty according to age and proficiency. Some of the apps, such as BookCreator can be used from both kindergarten and the early years, as well as in the upper school. Games can also help realise subject matter in a new and different way, by giving participants the opportunity to go into depth. In a Storyline, a teacher can guide students in one or more directions by using key questions where they have to make decisions. According to Omand, the key questions give learners an opportunity to develop the ability for creative thinking (Omand, 2017). Game educators also envision games that present subject matter in a new way, giving students multiple entrance gates to one and the same phenomenon (Nøsen, 2017). This can be compared to the challenges faced by learning from a Storyline. It is possible to find educational games that require you to master algorithmic thinking along with a good deal of mathematics to succeed in the game. The benefits of learning through such games have proven to be very motivating. One of the most experienced gaming educators in Norway is Magnus Sandberg. He says we have to dare to take advantage of the opportunities that games give us, and I would like to highlight elements of game pedagogy that can be transferred to this digital Storyline method (Minecraft Et undervisningsopplegg, 2020). As in games, a well-executed Storyline with varied digital resources gives the learners an opportunity to work interdisciplinarily to develop complex skills, with good opportunities for formative assessment. This is an inclusive way of

working where everyone can experience mastery and participation. Teachers who use TSA as stated in the guidelines from the Directorate of Education, can give their students in-depth learning as they develop their understanding of concepts and connections within a subject area. With the new curriculum, emphasis will be placed on three interdisciplinary themes, and all these three topics are well suited as a starting point, and as the academic focus of a digital Storyline. These are: democracy and citizenship, sustainable development, and public health and life management. This is where I see Storylines being able to fit in well, as they use key questions that provide learners with challenging assignments. They can then become ‘students of a deeper understanding’ when challenged and engaged in tasks where they analyse, solve problems, reflect on their own learning, and thereby construct holistic and lasting comprehension.

Digital Tools and the Teacher’s Professional, Digital Competency (PfdK)

In this chapter, I choose to include a variety of digital tools that we can use in the digital Storyline but will also mention and explain what a Wiki Storyline is, because it is a digital mode of work that can also be used. Digital technologies at all levels of education are constantly evolving, and teachers must update themselves and develop their professional, digital skills, their PfdK. The digital tools or resources used in school today may be out of date in a year or two. Rimmereide, Blair and Hoem (2011) have tried out Wiki Storyline in their initial teacher education at Volda University College, where the students have collaborated and published with Wiki as a digital platform. They have developed this method over several years, and they also highlight the great advantage that comes from varying digital tools to reach different learning goals. In particular, they have used the method to achieve written and oral goals in language training (Rimmereide et al., 2011). A Wiki Storyline is web-based and may be more suitable for students or older students in language learning.

It is also a service that involves advertising features where the content produced can be read by everyone, but Wiki has recently developed a solution for ‘closed rooms’ or closed learning platforms for classes with a greater opportunity to protect students’ personal interests and integrity. It is crucial that teachers stay informed and develop professional digital skills when they are preparing students for the 21st century. They will then apply these skills to concrete projects in a digital Storyline. A digital Storyline is where the students themselves participate in choosing the appropriate digital learning resources or tools can be part of the learning process. But it will always be the teachers who have the big picture in mind, the overview, the final say and who must be well acquainted with the topic as well as the tools the learners will use.

The purpose of this chapter is to show how teachers can develop learning programs that build on students and students’ already well-developed digital skills, and with that get them motivated and perhaps more engaged than one would get with a more familiar Storyline where digital tools are also included but are not the primary tool. The new curriculum emphasises even more than the ‘old’ LK06 in getting students to collaborate

on text creation, and teachers can choose to use websites like Google Site, Padlets or OneNote from Microsoft, as well as blogs. Rimmereide and others also consider Google Sites more modern than Wiki for teachers to administer. As in the new Norwegian curriculum, but also mentioned in several other countries (Fullan et al., 2018), six global competences are emphasised under the concept of in-depth learning. Teachers must facilitate learning activities where the learners have the opportunity to develop these. These are competencies such as creativity, collaboration, communication, citizenship, critical thinking and, not least, character (Fullan et al., 2018).

Higher Education Storyline

Østfold University College uses TSA for and with its student teachers and sees this as an opportunity to work on a method that student teachers can incorporate into their own teaching. For some students, initial training has been emphasised, and it is the opportunities for interdisciplinarity that are highlighted for the students. In the thorough planning of a Storyline, teachers can incorporate elements of game pedagogy. This is where the student envisions playing and moving in a gaming type world. The Storyline could incorporate a world where the student participates. By varying the digital tools, it is quite possible to incorporate the competency goals and skills we want students to live and immerse themselves in. But, if we are to achieve that, we must also allow student teachers to experience this as part of their own teacher education. Teachers at Østfold University College have planned and implemented a meta-Storyline on the theme *Storyline as an approach*. The purpose of this was to give the teaching students experience with a creative teaching method, where the students learn by being active and participating. This meta-Storyline is mentioned in an ideas booklet prepared by teachers and students at Østfold University College. The purpose was to assist the student teachers to prepare for good creative learning environments themselves. Such methods must be learned, and a creative teaching method such as Storyline can fulfil the ‘requirement’ that student teachers acquire knowledge of varied work methods (see, Karlsen Bjørnstad, & Høeg, 2016). One challenge student teachers need to consider includes attendance and privacy regulations which must be taken into account when it comes to eventual final publication (GDPR). This is an important competency to address. If future teachers learn to use Storyline, particularly digital Storyline, they will be better equipped to meet challenges future teachers must be prepared for. Knowledge of online privacy guidelines will be a natural part of future teachers’ professional, digital skills.

How Can Students Experience In-Depth Learning with Digital Storyline?

In this chapter, I will highlight the benefits of a digital Storyline, and will present some selected apps, programs, and tools that can be good solutions for schools, colleges, and universities. This is similar to what is basic in Chapter 5 where the authors also highlight and use Lindström and the four dimensions of learning: Learning *about it*, *in*,

with and through. The use of digital tools are not only about learning, the students are learning in a way they can control and can go as deep as they are able to. Furthermore, I use the concept of digital tools to highlight functions that increase interaction as a basis for better learning. Fullan et al. state that it is not the digital tools themselves that provide learning or in-depth learning; but, together with the other three elements (1) educational practices, (2) learning partnerships, and (3) learning environment, digital tools support the process (Fullan et al., 2018). Teachers who use TSA or digital Storyline provide in-depth learning where students gradually develop their understanding of concepts and connections within a subject area (as recommended in the Directorate of Education guidelines.) In the new curriculum, emphasis will be placed on three interdisciplinary themes, and they are well suited as a starting point or as the academic focus of a digital Storyline. The three topics are:

- democracy and citizenship,
- sustainable development,
- public health and life management.

TSA thus fits in well with its approach to learning by using key questions that provide students with challenging assignments. They become deep-learning students and genuine learners when challenged. In addition, when students are engaged in tasks where they analyse, solve problems, and reflect on their own learning they develop holistic and lasting understanding.

Digital judgment as well as competency as part of a teacher's professional repertoire will become increasingly more important in the future. Omand highlights Storyline's opportunities to allow students to experience and immerse themselves in tasks where they train and become better at similar skills in communication, critical thinking, life mastery, enterprise and employability (collaboration, community, ability to work on topics over time (in-depth learning) and information technology (Omand, 2014, p. 5).

Why and How Can Digital Storyline Be a Contribution to the Subject renewal and the New Norwegian Curriculum LK20?

Students can achieve the relevant competencies school researchers specify, while also becoming good text and story creators via multidisciplinary project work. Using TSA as a starting point, students could use SWAY, Padlets, BookCreator, make animated films with Puppet Pals, green-screen or VR/AR film, Clips, programming or code. The focus of TSA is the story. By using the course of action in a digital Storyline, students can take an active part in their own learning process. This is because in creating a fictional world they must apply their own knowledge. The key concepts can be illustrated digitally. This may facilitate the learning process, provide the appropriate amount of challenge as well as increase motivation. The models students create and the visualisation demanded within TSA reinforces the relationship with the fictional characters, beings or roles that are created.

Most national curricula, in addition to Norway's, have an important say in developing an inclusive community that promotes health, well-being and learning for all. With a digital Storyline, but also with a Wiki Storyline, I imagine that we can have an even better dialogue between the students than we can with a familiar Storyline, because we can achieve a greater degree of interaction. In Chapter 1 the authors are referring to former studies and how TSA generates positive interdependence among the students. In utilising digital aids, the students have a relationship with and ownership of, a good starting point for creativity and choice is inherent. A Storyline can contain different subjects depending on the values or themes that are emphasised in each project. According to the new curriculum in Norway, in-depth learning can be done by working in different ways with the same theme. In order to involve students, the senses must be used in one or more ways. We must be aware and include digital platforms we know can engage both girls and boys. Most of the apps described in this chapter are also helpful for pupils with emotional difficulties. It is more about how we use them and not about which apps. Digital tools can provide our students with different interactive and exciting experiences and perspectives. These experiences may differ from a Storyline that doesn't utilise IT, because we give the students more and other opportunities to show their skills. For example, in Norway and in other Nordic countries, exploratory methods are encouraged, and this is facilitated with an interdisciplinary project like this. Based on my experience as a teacher for students with special needs I have seen this over and over again, for instance when a young boy started to make almost professional movies using iMovie using his fellow classmates as the actors.

New Technology Requires Professional, Digitally Competent Teachers

An important goal for teachers, at all levels of education, is to be professionally and digitally competent. Teaching colleges have a responsibility to instruct teachers so that they can again teach their students how to use digital tools in the best possible way, as referred to in Chapter 4 as professional development. Through a digital Storyline, there are opportunities to teach students how to navigate and create a context in a world full of digital information, as Michaelsen envisions within the educational community (Michaelsen, 2019). In order for teachers to carry out good and effective learning in a technology-rich learning environment and to be able to bring IT, pedagogy and professional content together teachers must acquire three important skills:

- subject knowledge,
- pedagogy, and
- technology.

These are specified by the “TPACK” model developed by Mishra and Koehler. This again is a further development of Shulman's idea of Pedagogical Content Knowledge (PCK). At the heart of the TPACK model is the complex interaction between the aforementioned teachers' three most important skills. These emerge in the TPACK model as Professional Knowledge (CK), Education (PK) and Technology (TK) (Mishra & Koeh-

ler, 2007). These comprise the teacher's professional, digital competencies. While the emphasis was initially on subject didactics, today according to the researchers (Bjarnø, Giæver, Johannesen & Øgrim, 2017) the greatest pressure is put on the teachers' professionalism and pedagogy. Teachers require complex competencies in order to implement digital skills in line with curricula (Bjarnø et al., 2017). It is important to see this in connection to the study in Chapter 8, where the focus also was the development of the pedagogical content knowledge, there using TSA for teaching Primary School Mathematics. Together with TSA utilising SWAY or the BookCreator app, students can create digital stories. They can also be made using the Puppet Pals app to animate films. By using green screen effect, learners can create documentaries – and or fantasy films. With Clips and AR/VR technology, teachers can motivate students to create text through collaboration and dialogue.

Digital Working Methods towards New Curricula

With subject renewal and new curricula, the focus is on the content of the curriculum as well as the digital working methods utilised with students. Being professionally, digitally competent (PfdK) allows for subject exploration using creative themes and digital activity. In order to complete a digital Storyline, generally good IT skills are prerequisites so that the joy of creativity, dedication and exploration come to the forefront. This way of working is the ideal within the subject renewal, learning in a deeper way, or in-depth learning. Student teachers should have opportunities to try this out while becoming certified so that they can provide in-depth learning opportunities in turn for their students. Blikstad-Balas (2018) emphasises digital competence and willingness to plan the teaching based on what technology the students have available. Often it is the teachers' lack of knowledge that is a barrier to forward thinking systematic change, not access to technology. Since pupils in primary and secondary education are often 'alone' with the internet they become responsible for their own learning. Blikstad-Balas (2018) considers this and believes that teachers need to increase their own professional digital skills. It is necessary to be able to guide the students through the technology-rich landscape. She emphasises and envisions the classroom of the future where we are aware of students with Internet access to 'the whole world'. It is not ideal to allow students to navigate and find their own sources to use as the basis for further knowledge and learning. She emphasises how important it is for students to learn how to critically assess texts and sources. They must learn how to make academically reasoned choices, and again, she highlights that this is the teacher's central responsibility as the one who integrates technology in exploring subject material (Blikstad-Balas, 2018).

Examples of Good Digital Tools We Can Use

Kahoot is a game-based learning platform and can be used by both teachers and pupils to get an initial overview of what students have knowledge of but can also be used along the way or as a final evaluation. Omand is concerned with assessment, and emphasises

BookCreator: En app for å lage multimodale bøker, sammensatte tekster eller tegneserier med lyd, bilde/tegning, video eller egen tale.



Img 1: Book Creator. (<https://bookcreator.com/features/>).

the opportunities a teacher has, while working on a Storyline, to see students' development of competence, skills and attitudes (Omand, 2014). To create a good classroom environment, a quiz like this should be collaborative, not just competing against each other. Throughout the project, teachers explore allowing students to 'train' using various activities they envision can provide in-depth learning. At the same time, they should look at how students bring knowledge and skills into new and challenging assignments.

BookCreator is an app where students create multimedia books to combine texts or comics with pictures, drawings, videos or their own recorded speech/audio. Students can write their own texts. They can also read or draw. Students often create texts or draw digitally in other apps, but some like to draw on paper. Pictures of these drawings can be placed into *BookCreator* and further worked on. Thereafter, the students can publish their multimedia books. Using the app or with the web version of *BookCreator*, students can document their progress and thoughts along the way. Students can also show off their digital books and share them with fellow students and family. Here both process and result are important, and I imagine that teachers can give continuous formative assessment both within the app itself as their own audio file, or within a separate sharing app such as *Showbie*, a useful web service that facilitates the workflow between teachers and students. It is used all over the world, mostly in the primary school.

SWAY is a web-based presentation program where older students create presentations by combining text and media. With *SWAY* you can retrieve photos and movies at the same time as you work, and *SWAY* suggests suitable images and movies for your presentation based on words used. *SWAY* alludes to being able to 'sway' through history by clicking your way down and is especially well-suited for touch screens. You may move or click your story in the direction you want. It can be shared with others via a



Img. 2: Puppet Pals. Credits: Ellen Cecilie Romstad.

link and is deemed appropriate to use considering the privacy regulations that we at school must take into account (GDPR).

PuppetPals is a digital puppet theatre app. Students can insert their own pictures, read in their own voice or add music. In a Storyline, the students will go into fictional roles. Thus, they are given the opportunity to create their own characters, and give them voices, personalities and attributes. Considering the new curriculum theme of life mastery and public health, utilising a Storyline created as a digital puppet theatre, students may learn about the perspectives and feelings of others. It can be used by students from the youngest to the eldest. Maybe they will become better at seeing and understanding their classmates? Here it may be pertinent to step out of the Storyline itself and combine the role-playing with professional loops and in-depth class discussions, preparing for life in general.

GreenScreen is a simple app in addition to a feature in the *iMovie* app and for similar apps for androids and Windows. The point is to create reports and movies, and with a green background they can place themselves anywhere in the world or in any environment. Students can let their fictional characters live 'their own lives', and the qualities, interests or abilities that are commonly presented as 'identity cards' in a familiar Storyline can be turned into a movie in which the characters must present themselves. This could take the form of an interview.

iMovie is an app for making movies that now also allows creation of greenscreen effects within the app. Here you can record answers to key questions, but also show maps



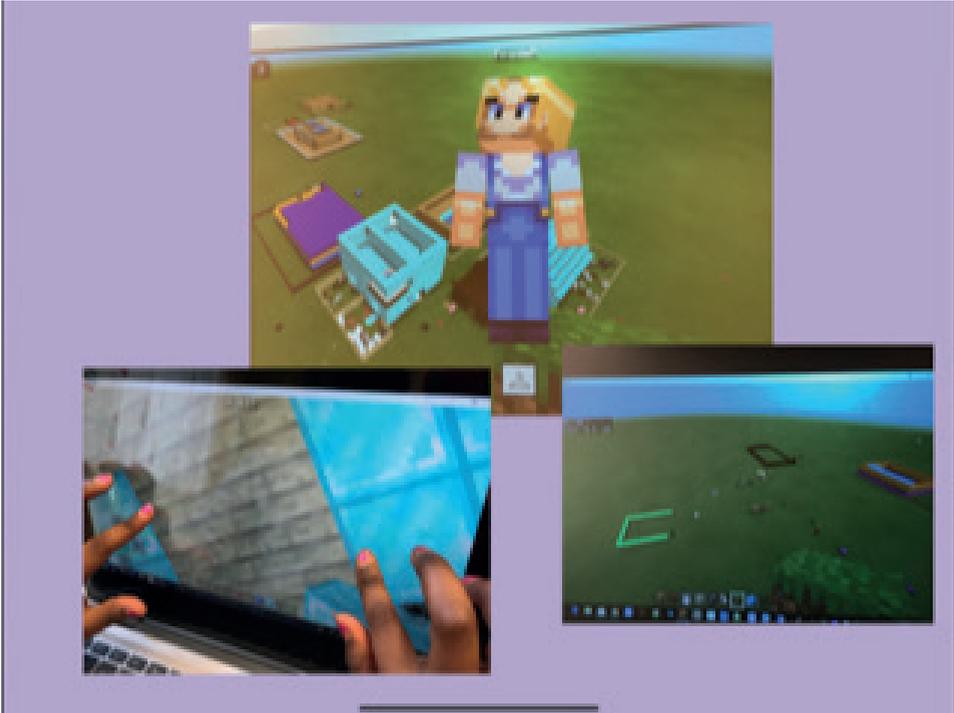
Img. 3: MineCraft Storyline 3. Credits Ellen Cecilie Romstad.

of the areas or places where the Storyline plays out. I imagine that a whole Storyline could easily be made with *iMovie* and video, speech with text, music and other effects. It's also possible to make a pre-formatted trailer summarising the entire Storyline. *iMovie* is for all ages.

Clips is an app for students in all ages, for producing and sharing videos with text, effects, graphics and audio. It is easy to add text while recording a video and can be a great choice for many students. By being able to dictate text that is automatically saved in the movie as 'subtitles' anyone can write and makes it possible for all kind of pupils to be able to write and say whatever they want, even if they have some learning difficulties.

MineCraft Education is an app where the game *Minecraft* is incorporated into the classroom. It is especially suitable for engaging students in learning through collaboration and communication, and also to work on critical thinking. Today, *Minecraft Education* is even used with second graders in Norwegian primary schools. Experienced teachers reiterate that the students do not 'play' computer games, they work seriously with mathematics, physical language and natural sciences. Furthermore, it is also possible to write reports in the gaming world, and by combining *Microsoft 'Learning Tools'* the text can be digitally read aloud (<https://www.onenote.com/learningtools>). The images 3 and 4 are included to show how ten-year-old pupils in Norway already use *Minecraft*, and I describe here in the article how to use it in a digital Storyline.

Students need future skills and competency in programming and coding. This can also be accommodated in a digital Storyline. With guidance, students determine appro-



Img. 4: Minecraft Storyline. Credits: Ellen Cecilie Romstad.

appropriate technology to bring action and relationships into their Storyline. Teachers may utilise a platform where students enter a game and are presented with challenges. This corresponds to the key plot of the Storyline, and this is something that can be done in many ways. If teachers are slightly ahead of students in programming knowledge, then they have the opportunity to present real challenges. With such a challenge, teachers can send students into a subject loop, where they have to work on the problem they have to 'solve', and then be drawn back into the Storyline. With the *GreenScreen* app or the greenscreen effect, students can answer 'key questions' and travel back in time using a movie they create themselves. Here I can take a look at what Omand says in Chapter 14, talking about questioning and how fundamental this is to the Storyline Approach. The sequences in a Storyline follow each other chronologically and are initiated using these open-ended key questions. By entering the Storyline in the *SWAY* app, I see many exciting opportunities. Leaving the Storyline 'open' in a *SWAY* will provide good opportunities for the development of learners' comprehension and critical thinking skills. The beginning or opening of a new Storyline is important. The teacher strives to be engaging or present a fictional situation at a certain time and place. Here all the digital aids I have mentioned could be useful. In order to introduce a new theme, teachers often utilise role-play. If the role-playing game is filmed, there will be something permanent that can be seen again and again. The role-play could also be a scene in one of the apps, like *Puppet Pals*. With a simple green background or screen, and this app on an

iPad, students can ‘pretend’ they are sent back in time. They can suddenly be spectators as exciting things happen!

VR (Virtual Reality) and AR (Augmented Reality) open up new ways to learn and experience. They employ visual senses and experiences that cannot be realised through other media. Being in a virtual environment can be useful e.g. for visualisation, aspect ratio and shapes, and for digital excursions. There are several opportunities to create and program content for VR and AR, and it is important that teachers know and can offer VR and AR as good experiences. A film made with AR technology results in an ‘extra’ layer of information, and students get to experience new ways of learning and experiencing – closely linked to the visual sense. With AR we can visualise sizes and shapes, and those who participate can go in and create their own universe. Here, too, it is possible to incorporate core elements and learning objectives from the curriculum, and this can have a good effect for students in the school with concentration difficulties. Based on earlier experiences working with pupils with ASD (Autism Spectrum Disorder) I can only see possibilities, not difficulties using this new technology. Augmented reality uses technology combining physical world data with virtual data, along with both graphics and sound. With the new curricula, the students will explore and look for patterns and find connections

Assessment – Why Use Digital Aids in Storyline?

Teachers can give formative assessments with digital tools, and in the process evaluate how students communicate and collaborate, just in the same way as they can grade the ‘finished’ products. Teachers can specify learning goals and determine criteria along with students and then assess whether or not they were reached. A success factor in using digital technology and success is to be aware of what students can achieve with various tools and to make use of them in relevant academic activities. Students may want to have access to a ‘resource bank’ delivered from and with available and digital technology, but there must always be clear academic goals during planning and while working. With the new curricula, pupils should be more active in relation to their own learning, and they must not only present the facts but also show that they can use information to analyse, evaluate or discuss. Our job as teachers is to teach students how to learn. With digital Storyline, we give students a good opportunity to do just this. Students’ participation and co-responsibility in their own learning is a central theme in the new curricula. Our job as teachers is increasingly to facilitate learning-enhancing activities with the appropriate digital tools. We can also allow students to choose how they would like to demonstrate their comprehension on topics, as well as self-evaluate. Teachers integrate the various core elements and competency goals, either in the form of key questions or as professional loops. If teachers are a bit ahead of students in programming knowledge, then they have the opportunity to present real challenges. If they are behind their own pupils it will be difficult to give them challenges to learn from, or to experience in-depth learning. Within such a challenge, teachers can send students into a subject loop, where they have to work on the problem they have to ‘solve’, and then be drawn back into the Storyline.

Summary

Gjems refers to research where children learned by working with others and collaborating in writing texts, thereby expanding understanding and acquiring new knowledge (Gjems, 2009). According to Gjems, teachers should use interthinking, that is, questions during the process that help increase learning outcomes by requiring students to justify their answers and provide explanations. Students should be encouraged to think collaboratively. While keeping the educational goals in mind, discussing and evaluating which digital tools to use along with the students is, in itself, a collaborative learning activity. Students could then develop the ability to make independent choices about which digital tools they want to use. In class, it may be appropriate to let everyone try animation, making comics, VR or AR in order to learn when it might be best to use that tool. It will nevertheless be the teachers who control the processes in such a way that they can influence this choice. In other words, the teacher must be professionally, digitally competent. At the same time, we must address and decide why and how to use technology. According to Dons, we live in a time when technology is largely integrated into our lives, and both children and young people live with technology. He encourages professional judgment and practical wisdom in this digitalised era. But he also considers that there may not be enough understanding about how to integrate students' digital skills well enough into the school. Even Plato perceived writing as a threat to his oral dialogue. This suggests that though we may be welcoming of new technology, at the same time we must change our educational and digital practices. Dons points out that teachers must allow for analogue and digital experiences, and that through a video, blog or websites they can produce academic content (Dons, 2020). We can make this connection by having students create specific models in creative subjects such as arts and crafts. They can then use these analogue models of houses and fictional people in their digital Storyline.

The digital opportunities teachers envisage must be available and clear learning goals must be set for and with the students. This is how digital tools, together with students' knowledge, motivation for learning and interaction can become a digital Storyline. Mitchell in Chapter 11 also emphasises the importance of learner motivation, and how TSA has a positive impact on learners' motivation. If these factors are taken into consideration, we ensure that project-based learning can be used across multiple subjects and themes. Blikstad-Balas (2018) is a Norwegian school researcher who specifies what is most important for providing students with the best learning opportunities. She encourages teachers to engage students, use relevant digital resources, renew their own teaching, and try out new techniques continuously with students. According to her, a teacher is never fully trained (Bikstad-Balas, 2018).

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