



The Effects of Videos and Digital Storytelling on Learner Motivation in the EFL Classroom:

A Literature Review



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Abstract

This literature review presents and discusses two CALL-methods, namely the use of videos and digital storytelling in the EFL-classroom, and their effects on students' motivation to learn English as a foreign language. Due to the rapid development in technology and its incorporation into teaching it is of great importance to examine its effects on learner motivation. The findings are categorised into the following structure: videos and motivation, and digital storytelling and motivation. The discussion part of the review summarises the results, main points, and limitations from the empirical studies reviewed, additionally it also discusses their pedagogical implications. The main conclusion is that videos and digital storytelling do have a positive impact on students' motivation when incorporated in the EFL-classroom, as the empirical studies presented in this literature review have shown. Finally, this review suggests some areas for potential future research in the field of videos and digital storytelling, and their effects on learner motivation in the EFL classroom.

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1 Introduction

1.1 Background

The increase of technology has had a significant impact on society as well as teaching and classroom contexts. In our digitalised era, computer-assisted language learning, henceforth referred to as CALL, is a new way to learn and acquire language which allows for learning both in a traditional classroom context, but also during leisure time. Over the years, several attempts have been made to find the best teaching methods. CALL is one such technique. As a result of implementing CALL in the classroom, teaching and learning have become more authentic and meaningful as technology enables you to bring the outside world into the classroom. Furthermore, the possibilities of interacting with other students and cultures of the target language are many. As a teacher, you can provide the students with invaluable opportunities to communicate with native speakers of English, or with other students of English as a foreign language. As researchers have shown, such authentic and meaningful learning is a vital condition for motivation (McGill, 2010). The students should be able to relate and use their knowledge gained in the classroom in their personal life, outside of the classroom.

Moreover, Aysu (2020) points out that technology incorporated in the classroom provides a broad range of learning activities and authentic materials, and is therefore likely to meet the students' individual needs and learning preferences. Aysu (2020) further describes that technology in the EFL-classroom could not only provide practical material, but also function as a tool to motivate the students and to activate their engagement in the learning process. As technology changes and evolves at a rapid pace, the need to adopt CALL in an educational context is crucial. Since CALL includes several technical tools, we chose to review research concerning two types of CALL tools, videos and digital storytelling, and their effects on learner motivation. Hence the aim of this literature review is to present and discuss a selection of existing research and evidence in the field, and also to point forward to future research. Since language learning and motivation are closely connected (Dörnyei, 1994), it is of great interest to explore what kind of language teaching and material can improve students' motivation.

The syllabus for Swedish elementary school (Skolverket, 2011) stresses the importance of incorporating technology into the classroom to provide students with opportunities to use technological tools, and to enhance and develop their English proficiency. This topic is of great interest and importance for our future roles as teachers in the EFL-classroom, to find ways to implement and use videos and digital storytelling to increase students' motivation. It is important that teachers are aware of and up to date on research regarding CALL, in order to develop and enhance their teaching skills and methods. This is what this literature review seeks to do, to bring into focus some of the latest research regarding the use of videos and digital storytelling in the EFL classroom and the possible effects on learner motivation, highlighting educational development. A theoretical framework is provided in the background section as it is important to define and discuss the concepts and theories in the studies reviewed. Since motivation is the key denominator in the studies, we will begin by defining this aspect of language learning, and its development over the years.

1.2 Theoretical Framework

As a primary step, this section provides a brief historical background, as well as a theoretical framework on motivation in language learning and the ARCS model, followed by a section on CALL, videos, and digital storytelling. We strive to define and discuss these concepts and how they are applied in our particular context. As stated by Skolverket (2011) and its steering documents, teachers have a duty to be aware of the ongoing technological development in order to create the best possible learning environment for the students. Skolverket (2017) stresses the importance that both teachers and students need the adequate competence to be able to deal effectively with the increase and development of digitalisation in school. However, technological competence is not enough, there also needs to be an understanding of the possibilities, challenges and ethical questions that it entails. Moreover, Skolverket (2017) conveys a national goal presented by the Swedish Government that Sweden should be the best country in the world at adopting and taking advantage of the possibilities of digitalisation. In accordance with this statement and goal, it is of great importance to investigate the opportunities provided by computer-assisted language learning, such as videos and digital storytelling, which constitute the focus of this review.

1.2.1 Motivation and Language Learning

The assumption can be made that motivation is a dynamic term and could be viewed as an umbrella concept which covers several components. Motivation is a key factor for success in foreign language acquisition, and it is generally acknowledged by researchers and theories that motivation is an essential factor for longterm L2 attainment (Dörnyei, 1994). As stated by Harmer (1991), motivation is “some kind of internal drive which pushes someone to do things in order to achieve something” (Harmer, 1991, p. 98). The components of motivation have been divided into external and internal sources, or in other words referred to as *extrinsic* and *intrinsic* motivation. According to Harmer (1991) the former is described as motivation coming from the outside, whereas the latter as motivation stemming from within the individual. Extrinsic motivation is the outcome of any outside source which affects the individual’s motivation, some examples are economic factors, the hope to gain financial benefits from doing something, the need to receive a pass on an examination in order to be accepted into a certain university, or be promoted to a higher position at work. Intrinsic motivation is thus the counterpart to extrinsic motivation, since it refers to the individual’s internal need and desire to achieve something. For example, when learning a language, the learner who possesses intrinsic motivation is generally active and enjoys the learning process. Harmer (1991) claims that intrinsic motivation yields better results than extrinsic motivation, since intrinsic motivation is stronger and produces a long term aspiration to learn.

Other definitions of motivation, as proposed by Gardner and Lambert (1972) are *integrative* and *instrumental* motivation. They claim that integrative motivation concerns the learner’s desire and willingness to become a member of the community of the target language. They aim to learn the language in order to function in and contribute to the society, and thus be a part of its culture. Instrumental motivation concerns the external benefits of learning a language, for example receiving rewards in forms of money or good grades (Gardner & Lambert, 1972).

Cook (2016) discusses motivation in relation to teaching, and argues that it poses a difficulty to learn a second language in a classroom context if the students do not have instrumental nor integrative motivation. It poses an even bigger risk to the motivation of language learning if the students have negative attitudes towards bi-or multilingualism. Thus,

motivation and language learning are closely related. Cook (2016) further reports about the interest-building towards the L2 that teachers need to do in order to promote the students' engagement and keep them motivated in the learning process. Students have different backgrounds and different ways of viewing the target language and the society associated with it, something teachers need to consider. Different attitudes and views may therefore affect the motivation (Cook, 2016).

1.2.2 Keller's ARCS Motivational Model

Some of the studies presented in this literature review use the ARCS model by Keller (1987) as a tool to measure motivation. The main purpose of the model is to sustain motivation among people on different levels, and to provide a method for improving motivation in the learning process. The ARCS model of motivation was developed in the late 1970s by John Keller, and has since then been used by several researchers in the motivation field. The model has developed and improved since the seventies, and over time four main categories have emerged. ARCS is based on these four categories which are attention, relevance, confidence, and satisfaction. These are the four conditions for people to become and remain motivated, according to Keller (1987).

Firstly, the attention component concerns the motivational element to acquire and to sustain attention, or as Keller states "As an element of learning, the concern is for directing attention to the appropriate stimuli" (Keller, 1987, p. 3). Secondly, the relevance condition concerns the question of how and why the material is relevant to the learner. To clarify, sometimes students tend to ask why they have to learn a certain matter, and if teachers cannot respond to that, they are facing a relevance problem. Therefore, in order to achieve and sustain motivation, relevance is an important component, both in the content itself but also in how the content is conveyed and taught to the learners. Moving on to the third condition, confidence, which is a highly central factor for motivation, Keller (1987) explains that a low degree of confidence poses a risk for the motivational level. The motivation tends to be low if the confidence level is low. Moreover, fear of failure is also more common among low confident students, which could be an obstacle in the learning process. Finally, the fourth condition concerns the matter of satisfaction. To feel satisfied and good about your

achievements is a crucial element of motivation. Keller (1987) argues that the student most commonly feels motivated if the task, goal and reward are explicitly stated.

To summarise this section concerning the ARCS model, the model is built upon the idea that these four components are key elements of learning, which can improve motivation. The purpose of the model is thus to improve and sustain motivation among learners, and also to provide a tool for teachers in knowing how to guide the students to become more motivated. As stated previously, the ARCS model has been applied as a method to measure motivation in some of the studies presented in this literature review, which enables us to observe how the model can be used practically. The studies relied on pre- and post-tests such as self-reported questionnaires, e.g. The Motivated Strategies for Learning Questionnaire (MSLQ) which along other peremeters are used to measure student's motivational orientations, as well as interviews to gather data.

1.2.3 Computer-Assisted Language Learning (CALL)

Computer-assisted language learning, also known as CALL, is an umbrella term for the use of technical aids in language studies. As a research field, CALL has received an increase in interest over the last few years, and researchers in the area have tried to identify its benefits and limitations. The origins of CALL-methods can be traced back to the 1960s when early computers were used sparsely at some universities.

Warschauer and Healey (1998) divide the history of CALL into three main stages. The first stage is known as *Behavioristic CALL*, which was implemented in the 1960-70s and made use of computers as means to learn by repetition, so called drill and kill exercises. The second, *communicative CALL*, was introduced in the late 1970s to 80s during which time CALL was used in a much less strict manner and meant to encourage students to take risks and explore to find patterns in the language which they were studying. The third stage is referred to as *integrative CALL* and was initiated during the late 1980s and early 1990s. Integrative CALL came as a result of emerging criticism surrounding both the earlier versions of CALL, as they both relied on theories of teaching that were deemed obsolete, as well as the emergence of a more socio-cognitive view on teaching. As more emphasis was placed on the importance of using different skills, and applicability of the language in students' daily life,

the use of CALL changed from sporadic visits to a computer lab once a week into a continuous part of language learning.

Since Warschauer and Healeys' article was published in 1998, the implementation of CALL-methods in teaching have gone through a radical evolution and CALL-methods are now frequently used in classrooms all over the world. Today, the term CALL-methods does not only lend itself to the use of computers but can include a variety of technology, such as mobile assisted language learning, also known under the abbreviation MALL.

1.2.4 Videos as a Motivating Factor for Language Learning

The many uses of videos in the classroom have proven to be advantageous in students' motivation to learn English, as the findings of the studies included in this review show. Videos are ubiquitous today, and most students have grown up surrounded by different kinds of video materials in English, such as movies, TV series, YouTube, and other social media videos. Brown and Lee (2015) claim that videos provide a great language input in an authentic and fruitful context. The use of audio visual input enables the learner to use several senses simultaneously, in this case listening and watching, which benefits language acquisition (Brown & Lee, 2015).

In accordance with Brown and Lee (2015), Harmer (2001) states the benefits of videos incorporated in the classroom as a motivating feature to learn, as the students are exposed to both moving visual and auditory elements, which increases the interest and motivation. Moreover, McGill (2010) claims that authenticity is a key factor for language learning and motivation, and the implementation of videos allows teachers to bring the outside world into the classroom, hence creating a motivational environment for the learners.

However, videos have not always been an obvious choice in foreign language teaching and learning, since they have not always been as accessible as they are today. Computers and the Internet contribute to an infinite source of different video materials that can be used for pedagogical purposes in language learning and teaching. In the current review, the focus will be on viewing and creating videos, since the studies presented focus on those two methods.

1.2.5 Storytelling as a Motivating Factor for Language Learning

Digital storytelling, from hereon referred to as DST, builds upon traditional non-digital storytelling as a tool in language learning. DST makes use of the technological advances of recent years by incorporating CALL into an already existing method of teaching.

Storytelling allows the learners freedom of creation more explicitly than many traditional methods of language teaching. Encouraging creativity, storytelling enables learners to incorporate their own experiences, ideas and thoughts into their projects which boosts confidence, one of the key factors to increase motivation according to Keller (1987). Traditional storytelling is considered to be a useful way to boost creativity in learners, which increases motivation. Wajnryb (2003) argues that the dynamic nature of stories inspires motivation, as they require active participation while their meaning and content draws the listener into the story.

The process of DST closely resembles that of traditional non-digital storytelling. There is a heavy focus on planning the direction of the story, as well as the language that will be used, and the structure of it. To make the planning process more comprehensible, a lot of DST projects include the making of a storyboard. Storyboards are frame by frame pictures in which the learner plans their story in detail, the storyboard then serves as a blueprint for the final project. In the studies mentioned in this review the final project was to create a digital story in the form of a video.

1.3 Aim and research question

The aim of this literature review is to present and evaluate research in the CALL-and motivation field of language learning, and how CALL-methods implemented in teaching affect students' motivation to learn English. The CALL-methods that we chose to include are videos and digital storytelling, and the question we explore is how the implementation of them can affect students' motivational level. We also seek to identify a gap in contemporary research, and suggestions of how to fill that gap with further research will be discussed in the last section of the review.

1.4 Method

The selection of articles included in this literature review are based on research investigating two types of CALL-methods, and their effects on motivation. Since CALL is a broad research field we had to delimit the area to make it feasible. Therefore, due to our interests, we chose to include videos and digital storytelling as CALL-methods, and how these can affect students' motivation to learn English as a foreign language. Our prime focus for this review were studies which involved students in or around their early teens, except for the study by Jung (2021) in which the participants were between 18-20 year old. It is interesting from our point of view since we will be teaching this age and level as future teachers. However, we decided to include a few studies that deviated from the age limit as we found them to be relevant to the subject despite the slightly older age of the participants. For this paper, ten peer reviewed studies are included which were located using the databases Supersearch, ERIC, and Google Scholar. To identify relevant studies, we used the following search terms: *motivation, videos, digital storytelling, computer-assisted language learning, CALL, English as a foreign language, English as a second language, EFL, ESL*. Some studies, for example Jung (2021) was found through the "snowball technique", as explained by Ridley (2012), which means exploring the bibliography of a chosen study and follow up some of their references.

In order to keep the review as up-to-date as possible, no studies older than ten years were chosen, thus studies before 2012 were excluded. Most of the empirical studies in the literature review section are studies from Asia, such as Java, Taiwan, South Korea, but also one from Europe, Turkey (Erlangga, 2021). We were not able to find any studies that had been conducted in Sweden regarding videos and digital storytelling and their relation to motivation.

2 Literature Review

In this section, we present and discuss ten empirical studies from 2012-2021, and their results. The researchers of the studies have looked into the use of videos and digital storytelling in an EFL-classroom setting, and their effects on learners' motivation towards learning English. Two main themes have emerged during the process of reading the empirical studies, and they

will be categorised into the following sections: videos and motivation, and digital storytelling and motivation. Due to the nature of the studies the manner of presentation slightly differs between the two. As the methods used in the studies regarding DST are much more homogenous than those on video, we chose to treat them accordingly. Lastly, in the discussion section, the results of the studies will be compared and problematized, along with the pedagogical implications.

2.1 Videos and Motivation

The empirical studies reviewed in this section concern the use of videos and their potential effects on students' motivation to learn English. Since videos can be used in many different ways, the studies included here have investigated the outcomes from watching videos (Park & Jung, 2016; Paramitha et al., 2016), and also when students have created videos of their own in video-based projects (Jung, 2021; Erlangga, 2021; Huang, 2015). Firstly, the studies which investigated the method of viewing videos to enhance students' motivation will be presented and discussed, followed by the studies concerning video creation projects.

Park and Jung (2016) conducted a study to explore the impact of videos and their effects on EFL-learners' motivation in a school setting in South Korea. The experiment was carried out over a period of eight weeks with 15 participants. The materials used for the study were different types of TED talks, TV news reports, short movies, and sitcoms, with the intention to observe if these types of authentic videos could facilitate their motivation in English and make them more active during classes. Park and Jung (2016) describe a typical lesson which could start with a review of previous knowledge that was taught the lesson before, followed by new instructions and vocabularies. After this, the students watched different types of videos with English subtitles, and a translation into their mother tongue was provided. After watching the videos, key concepts were explained by the teacher and various group activities were conducted such as discussions, simple role plays and quizzes.

To gather the data of the study, three methods were used. Firstly, two questionnaires were administered to the students, one at the initial phase of the study and one at the final stage, to be able to compare the motivational level of the participants. The questionnaires consisted of 14 questions concerning motivation in language learning, such as attitudes and

desire to learn. Secondly, the researchers interviewed the students in order to obtain insight into the learners' expectations about and perceptions of using videos as teaching material. Finally, video recordings were made and used as a tool to observe interactions and behaviours between students and teachers, and to indicate any development of motivation.

The result of the questionnaires revealed positive outcomes regarding the participants' attitudes and motivation to learn English, after eight weeks of being exposed to videos for learning purposes, as opposed to before the treatment when they were learning mostly through traditional text-based material. The majority of the students indicated that they felt more interested and motivated to learn, and that English had become more fun. Additionally, the result of the interviews showed an increased level of motivation and participation among the students, one student stated: "It was very exciting to guess the meaning of new expressions that I have never heard of. Also, watching the sitcom was very motivating for me to study English harder, because now I really want to know about their culture and speak fluently like the characters in the sitcom" (Park & Jung, 2016, p. 85).

Finally, in correspondence with the overall result of the study, it could be established that videos do have a positive effect on students' motivation to learn English. Park and Jung (2016) discuss the challenge that teachers must face to motivate the students and make them involved and activated in the language learning process. Hence, in the light of evidence of the study (Park & Jung, 2016) videos could be a useful tool to motivate the students to learn English, especially to boost the integrative motivation since the students showed an increased interest in the culture of the target language after the treatment.

As several studies and researchers show, the use of videos can enhance and increase students' motivation to learn English since it provides an authentic and meaningful teaching tool. A study by Paramitha et al. (2016) also indicated an improvement of motivation when incorporating videos in the EFL classroom. Their study was conducted in Java with 31 participants. The central aim was to investigate to what extent motivation was enhanced when students were exposed to videos, and the results were based on both qualitative and quantitative data. To measure the motivational level, several methods were used including interviews, pre-and post-tests, observations, and questionnaires. The result was divided into five main categories connected to motivation, namely positive task orientation, high aspiration, need for achievement, perseverance, and goal orientation. Thus, the motivational

level was measured according to these five categories, and the results could be analysed in the light of them. The overall result of the study, in accordance with the five categories, indicated that the students' motivation to learn English did improve after using videos as a learning tool. The questionnaires implied that the participants felt motivated to learn English after watching and learning through videos.

As the studies and their results regarding viewing videos have been presented, the following three studies conducted research investigating the creation of videos, and how that affects the motivation to learn English. To investigate this research topic, Jung (2021) conducted a qualitative case study in an EFL classroom setting in South Korea, with eight participants within the age span of 18 to 20 years. Before the treatment, the students were informed about how to create the video and were instructed to work in pairs. The purpose of the video project was to create an infomercial video about an imaginary product that was supposed to facilitate and be used in their everyday life. Jung (2021) explains that before the video project, the students had a considerably high level of extrinsic motivation, several of the participants stated that they were motivated to learn English because they wanted good grades, to please their parents, and increase their chances of employment abroad.

The experiment lasted for 12 weeks, and during these weeks various data collection was being made parallel to the video making, such as semi structured interviews with the participants, a reflection journal, and field notes. The study was divided into two parts, one pre-stage and one post-stage, which permitted the researcher to compare the data. In the pre-stage phase, semi structured interviews were organised which elicited data concerning the students' motivational level towards English. Additionally, in the post phase, semi structured interviews were conducted again with questions regarding the participants' perceptions of the infomercial video project and how or if they felt that their motivation had improved in any way.

After compiling the responses from the interviews and according to the overall result of this video project study, Jung (2021) concluded that the students' extrinsic motivation remained high, but that it increased further after the treatment. The participants indicated that they felt more motivated to learn English after these 12 weeks of video implementation in the classroom, they also stated that it was a new, fun, and exciting way to learn. The results of this study are in line with several researchers in the area of CALL and motivation (e.g. Paramitha

et al., 2016; Park & Jung, 2016; Yang & Wu, 2012) which indicate that learners seem to have a general positive attitude towards the use of technology in the classroom, in this case videos and DST, and that their motivation to learn English has increased after the incorporation of videos.

Moreover, Erlangga (2021) conducted research with the aim to investigate the students' involvement in the process of creating videos of their own and its effects on motivation. A quantitative research design was applied which included 16 students from a high school in Indonesia. The participants were supposed to make videos and act as actors, and while doing this, the researcher collected the data in the form of questionnaires, statistics, frequencies, and standard derivations. The data on motivation was collected according to the four scales of ARCS, and the results can be viewed in the light of those. Attention, which is the first section, intended to measure the degree to which the materials sustained and initiated the learners' motivation. Erlangga (2021) used a questionnaire comprising twelve questions regarding learners' attention in relation to the material. The result in the attention scale indicated an increase in motivation, the majority of the students stated that they found the video-project fun and new, and therefore their motivation increased. A quite different result was found in the relevance scale. To measure the relevance component, a questionnaire was used consisting of nine items which examined the value and utility of the material to the learner. The result indicated no change in the relevance scale, the students did not seem to find the material more relevant than before the treatment, which could be interpreted that a sense of relevance was not affected. Thus, the overall increase in motivation was not connected to the materials being more relevant. The third scale, confidence, revealed that most of the students felt an increase of self-confidence, which also had a positive impact on their motivation to learn English. Finally, the fourth measurable element, satisfaction, did not indicate a significant change, as was also observed in relation to the relevance scale. According to the overall result of the study (Erlangga, 2021), it could be concluded that students became more motivated since the scores on both the attention and confidence scales increased, whereas the relevance and satisfaction scales did not reveal any change, neither increase nor decrease, in terms of motivation mediated by video.

Huang (2015) applied a quasi-experimental study to examine the effects of video projects on EFL learners' motivation in Taiwan. The study consisted of 43 participants and

lasted for one semester, and during this period of time both qualitative and quantitative data were collected. The video project was organised into three stages, and in the primary stage videos were used by the researcher in the classroom. In this introductory step, which lasted for eight weeks, the participants were encouraged to familiarise themselves with different types of videos recommended by the researcher. The students were also supposed to choose a topic for their video project and involve themselves in the creation of videos, and then upload a first draft of a voice blog on their shared learning platform. In the second stage of the project, students were asked to make a two minute long video integrating what they had expressed in their voice blog, and they could choose to work individually or in pairs. In the third and final stage, students presented their videos in class and gave constructive feedback to their peers. The study then examined the motivational development after participating in the video project, and to measure the motivation, the researcher used several methods including pre-and post-tests, pre-and post motivation questionnaires, reflection sheets, peer evaluation, and semi structured interviews. In order to measure the motivational development, the students were asked to fill out a motivation questionnaire at the beginning of the semester and another one at the end of the treatment when they also handed in their video project. Huang (2015) used a 1-5 point Likert scale with 34 statements ranging from “strongly disagree” to “strongly agree”, which enabled the researcher to compare the results after the implementation of the video project.

One of the research questions was whether video projects have an effect on students’ motivation to learn English, and in agreement with the results of the study, the answer to that question is a positive yes. The results of the study and the questionnaires indicated that the involvement and creation of videos do have a great impact on students’ motivation, videos can in fact improve motivation. According to the semi structured interviews, students expressed that they felt that their motivation to learn English had increased after creating videos, and that they felt motivated to do projects like this one in the future. The findings of this study (Huang, 2015) are also in line with the study by Yang et al. (2012) who found that students’ motivation improved in terms of self efficacy and task value, after being exposed to videos in the form of digital storytelling.

2.2 Digital Storytelling and Motivation

In recent years there has been a significant increase in the amount of research that investigates the many factors which comprises learner motivation. The empirical studies in this section are centred on the effects of DST on learner motivation in the EFL classroom. A majority of the studies focused on students between the ages of 10 and 11, with the exception of Yang et al. (2012) in which the students were 15 years old. The number of participants in the studies ranged between 50 to 117 and the studies were conducted over the course of one to five months. All studies featured in this section were conducted in Asia. Only three of the five studies make note of the gender ratio between the number of participants. In Yang et al. (2012), and Hung et al. (2012) the ratio between male and female participants is approximately equal. However, in the study conducted by Aljaraideh (2020) only male students were included.

All studies followed the same pattern of dividing students into two separate groups, one experimental group and one control group. The students in both groups were taught the same content through different activity designs. Students in the control groups were taught storytelling in a traditional non-digital manner where the teacher only used digital tools for instructional benefits rather than allowing the students themselves to interact with them. An example of the sparse use of technology in the control groups can be found in Yang et al. (2012) where the teacher used powerpoint presentations as a complement to spoken instructions. While the control groups were mostly exposed to technological tools as instructional support, the experimental groups were given an active part in the creation of digital material in the form of digital coursework and other coursework related projects. Liu et al. (2018) mention that a key difference in the control group and experimental group is that the teacher spent considerably less time giving instructions to the students in the experimental group, instead prioritising more time to work on their own projects. In addition to both groups learning the same content, Yang et al. (2012) and Liu et al. (2018) also had both the experimental and control group be taught by the same teacher.

In many of the studies conducted on DST in the EFL classroom, the DST-activity was to create some form of video project. Instead of moving pictures there is often a Powerpoint-like element to the projects in which students use pictures and add narration to create a video. The phases of the DST projects in the studies included are all similar. The

experiments all begin with an introduction in which the students are introduced to the different phases of DST, sometimes visualised by an already existing digital story. In the introductory phase the students learn vocabulary and grammar that they will then utilise when creating their stories, and they are encouraged to ask questions to make sure they understand the layout of the project and what is expected of them. Liu et al. (2018) note that in this phase the students get to read non-digital stories to get an understanding of stories as a genre.

The next phase is the gathering of topic related knowledge and materials needed in the creation of the stories. In the study conducted by Hung et al. (2012) the students are in this stage asked to use digital cameras to take pictures to serve as material for their stories. This is usually the phase in which storyboards are introduced as the students are expected to start planning their stories more thoroughly, with the exception of Yang et al. (2012). In Hung et al. (2012) this second phase of the DST also serves as an opportunity for the students to elicit peer-feedback to determine whether they need to rethink or alter their plan in any way.

After the second phase Yang et al. (2012) diverged from the structure of the other studies and added another phase, referred to as *Script & Review*, after the second phase. In this script and review-phase students compose story drafts which are then subject to peer review. Following the peer-review, students perform oral storytellings, after which they design their storyboards and gather materials, such as images and audio, for the final DST project.

In the next phase, the completion of the DST-projects, the studies make use of a few different editing programs. Yang et al. (2012) and Hung et al. (2012) use Microsoft Photo Story 3, Parsazadeh et al. (2021) use Powerpoint, Aljaraideh (2020) Adobe Flash Cs5 and Sound Forge, and Liu et al. (2018) use a program created specifically for their study called *Story & Painting House*. Though the programs in which the stories are created differ between the studies, the final DST-projects in all of them is to create a video using both audio and visuals. After the finalisation of the DST-projects in Parsazadeh et al. (2021) and Liu et al. (2018), the projects are subjected to a final peer-review.

In all studies data was collected partly through the use of questionnaires designed to measure motivation. One such example is MSLQ, which was used by Yang et al. (2012), Parsazadeh et al. (2021) as well as Liu et al. (2018). It is worth noting that in all studies but one, the questionnaires to measure motivation were distributed at least twice during the course of the study, usually as pre- and post-tests, in order to compare the results. At the beginning of

the study conducted by Aljaraideh (2020), the same questionnaire was distributed twice with a two week interval to ensure its validity. However, in the case of Liu et al. (2018) the motivation questionnaire was only distributed once, at the end of the study. Apart from questionnaires, Yang et al. (2012), Parsazadeh et al. (2021) and Hung et al. (2012) also conducted interviews with participants chosen at random at the end of the studies, to gain further insight into the effects of DST on motivation as experienced by the learners themselves.

In their findings, all studies agree that learner motivation was greatly boosted by the use of DST. All studies noted significant differences between the learner motivation recorded in the control groups, and experimental groups. While a lot of studies made no mention of the differences between extrinsic and intrinsic motivation in relation to DST, Liu et al. (2018) and Parsazadeh et al. (2021) did. Both studies saw a significant increase in extrinsic motivation in learners, but recorded only a slight change in their intrinsic motivation. Liu et al. (2018) speculate that the difference between the increase recorded in learners' extrinsic and intrinsic motivation could be due to the online platform which was used in the experimental group. The online platform, they speculate, might have led to an increase in extrinsic motivation as students wanted to perform better in order to impress their peers.

Apart from a significant boost in learner motivation, Aljaraideh (2020) also noted that students in the experimental group appeared to have retained more knowledge than those in the control group. The gain in proficiency is echoed by Yang et al. (2012) who found that by the end of the study the students in the experimental group had increased their level of proficiency much more than those in the control group. This was established through an English achievement test measuring vocabulary, grammar, listening, reading, and writing. As learners' level of proficiency increases, so does their confidence, which is one of the four conditions of learner motivation according to the ARCS model (Keller, 1987).

In their study, Liu et al. (2018) saw a close correlation between motivation and creativity. The level of motivation reported by individual students and the level of creativity displayed in their projects was found to be closely related. Parsazadeh et al. (2021) note the relationship between motivation and engaging activities, such as DST. During their interviews a majority of the students in the experimental group indicated that they found DST to be a good motivational tool to use in language education. Students interviewed in Hung et al.

(2012) expressed similar thoughts and believed DST to be more exciting and interesting than traditional storytelling projects, and that it had in fact helped increase their motivation to learn.

3 Discussion and Pedagogical implications

This section will further discuss the results of the aforementioned empirical studies, as well as highlight pedagogical implications. We will also point to some limitations of the studies reviewed. First and foremost, the results of the studies on both videos and DST point in the same direction. The current two CALL methods have shown to have positive effects on learner motivation in all the studies presented in this review. Over the years of teaching English a foreign language, there has always been the challenge of attaining and retaining motivation among the students. As previously stated in this review, motivation and long term L2 attainment are interrelated (Dörnyei, 1994; Harmer, 1991), and therefore it is of great importance to find methods that actually increase and improve L2 motivation. In the light of evidence from the studies reviewed in this paper, videos and DST are two such methods which positively influence learner motivation. In some of the studies reviewed (Yang et al., 2012; Hung et al., 2012; Liu et al., 2018; Aljaraideh, 2020; Parsazadeh et al., 2021) DST and videos are intertwined. This shows that videos and DST are in fact interrelated, and can be used in symbiosis in the classroom.

Some of the studies used Keller's (1987) ARCS model to measure motivation. This model has proven to be a useful tool to understand the intricacies of motivation, however, it also involves some potential limitations as the model seems to rely on the presumption that all participants in a study are on the same level of motivation. In a classroom setting with little room for individual adaptation, the ARCS model could be less effective than in a more individual setting. This raises the question of whether the findings of the studies really are reliable, or whether there is a larger margin of error than can initially be assumed when reviewing the results. As Keller (1987) explains, motivation is typically considered to be highly individualised and subjective, which could pose some difficulties in measuring it. The researchers in the studies reviewed are dependent on, and restricted to, the honesty of the students in the questionnaires, scales, and self reported pre-and post-test. One must interpret the results and speculate about the answers, there is never a 100 percentage guarantee that the

answers are in fact true. Furthermore, Ushioda (as cited in Brown & Lee, 2015) states that one should consider motivation as a “process rather than a measurable cause or product (p. 3).” Ushioda, as referred to in Brown and Lee (2015), further argues that motivation is a socially constructed product mediated in the relationship between humans. This is interesting, since the studies included in this review did intend to measure motivation, hence there are two opposite viewpoints in regards to measuring motivation.

Alongside the possible limitations of the ARCS model, there is also room to consider how the gathering of data was conducted. As the studies all relied on self-reported pre- and post-study questionnaires as well as individual interviews with the researchers, one must consider the manner in which the questions were posed. The researcher may possess a preconceived bias which risks influencing the students’ answers and thus producing an unreliable study result. Another aspect to consider when interpreting the results of the studies is how the use of pre- and post-tests may unintentionally affect students’ responses. There might be a subconscious desire to improve one’s results from the beginning and end of the course, which in itself may lead to an improvement in the reported data on which the results of the studies are based. To combat this phenomenon some studies altered the phrasing of the questions in the pre- and post-questionnaires to avoid students feeling pressured or inclined to report false improved results.

Some of the authors of the studies speculate that the large increase in learner motivation through the use of CALL can be ascribed to the relative newness of the use of technology in classrooms. Schools rarely make full use of all the modern technology that is available to them, but rather tend to rely on traditional methods of teaching. All the studies included in this review were conducted before the Covid-19 pandemic. It is interesting to speculate as to how the results of the studies might be different after the imposed online education which followed the pandemic in many areas of the world. Perhaps some of the newness which some of the studies mention has been washed away, or perhaps schools have altered their methods of teaching to include more CALL in their daily work?

In addition, another limitation concerns the number of participants included in the studies reviewed. The number of participants vary greatly between the studies, which could result in different outcomes depending on the heterogeneity of the participants. The study by Jung (2021) consisted of eight participants while the study by Hung et al. (2012) included

117. Moreover, there are great varieties in terms of the time aspect of the studies reviewed. Huang (2015) conducted a study which took place over one semester, whereas the study by Park and Jung (2016) lasted for eight weeks. The great difference in number of participants and duration of the study could result in a difference in reliability.

As future teachers, it is pivotal to emphasise pedagogical implications as well as the role of the teacher in DST- and video-teaching. Teachers have an essential role in bringing new, interesting, and motivating material to the classroom. However, motivation does not only occur in the interaction between the student and learning materials, but more importantly, between the teacher and the student, between human beings (Brown & Lee, 2015). The social interaction between individuals is irreplaceable. Consequently, technology can work as a support for learning, but it cannot replace the actual role of the teacher.

CALL-methods, such as videos and DST, have proven to improve learners' intrinsic motivation, since the participants became engaged and interested in the culture of the target language. As pointed out by for example Park and Jung (2016) and their results, the students became more curious about English culture after being exposed to videos, since they were provided with authentic material. According to Harmer (1991) the intrinsic aspect of motivation often generates a stronger L2 proficiency level in learners. Therefore, in line with this finding, teachers could strive to use videos in their teaching as it improves students' intrinsic motivation to learn. Authentic materials, in this case videos, have been found to have a positive impact on students' motivation in the EFL classroom. Furthermore, as stated by Skolverket (2011) teachers should promote and foster students' curiosity about and awareness of different cultures, hence videos could be a meaningful method to achieve this goal. Also, as one student stated in Park and Jung (2016), videos increased interest to learn about the culture and speak fluently like the characters. In agreement with Harmer (1991) it has also been reported by Cook (2016) that the intrinsic motivational level is the most vital one and also the most difficult as a teacher to influence.

However, the study by Paramitha et al. (2016) contradicts the results of Park and Jung (2016), since the results indicated that the extrinsic aspect of motivation increased the most after being exposed to video material in the classroom. This is interesting from a motivational perspective since the students in both studies were all learning through viewing videos, the question arises as to why different types of motivation were affected. One could interpret that,

as discussed previously, motivation is a complex and subjective phenomenon to measure accurately. Different factors such as individual differences, learning goals, and attitudes to the target language might affect motivation. Therefore, according to the results provided by Park and Jung (2016), Paramitha et al. (2016) and Cook (2016), teachers should strive to encourage both extrinsic and intrinsic motivation in the classroom among the students, since they are interrelated. To summarise, it could be concluded that videos and DST in the EFL classroom influence and improve both intrinsic and extrinsic motivation.

4 Conclusions

The common denominator in the studies presented in this review is motivation, and the overall conclusion is that videos and DST do have a positive impact on learner motivation, as the studies reviewed have shown. There is a general consensus among researchers in the area (e.g. Park & Jung, 2016; Jung, 2016; Erlangga, 2021; Aljaraideh, 2020) that these two types of CALL methods increase and enhance students' motivation. However, it is of great importance to remember the crucial role of the teacher to guide and encourage the students to achieve the educational goals, and not only rely on the use of technological tools.

Concerning areas for future research, we have found gaps concerning technology and motivation. Firstly, to our knowledge, there has been no study which investigates videos and DST and their effect on learner motivation in a Swedish EFL classroom setting. It would be interesting to explore the application of these methods in a Swedish classroom and to observe and analyse the outcome, as most of the studies reviewed in this paper were conducted in Asia. Secondly, more studies could be conducted with the aim of investigating students' attitudes and perceptions towards technology in the classroom, and how that may affect motivation. With the imposed change in teaching that came as a consequence of the Covid-19 pandemic, it would also be beneficial to investigate how the rise of online teaching has affected students' perception of digital tools in the classroom.

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