REFLECTIVE PRACTICE

Can Digital Storytelling Enhance Learning Motivation for EFL Students with Low Proficiency and Confidence in English?

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Abstract

The purpose of this study was to investigate the impact of a digital storytelling assignment on the motivation for learning English of students with low proficiency and confidence in English. The participants of this study were non-English major students in Japan who studied in four courses of English as a Foreign Language (EFL). Each course was 15 weeks long and was held in the spring and fall terms of 2018. The study goal of the course was to acquire skills and knowledge to present ideas and messages effectively with the use of Information and Communications Technology (ICT) and English. The findings of a previous study (Kasami, 2007) showed that most students were more motivated for learning through the use of a digital storytelling assignment than through the use of a (non-digital) storytelling assignment, and this study will attempt to confirm the usefulness of the digital storytelling assignment particularly for students whose English proficiency level is low. In this research, three (pre-, midterm- and post-) questionnaires were employed to collect the necessary data. The results of the three questionnaires and two tests were received from 65 students. This research focused on 27 students, from the group of 65, with the lowest proficiency and confidence in English as determined by the results of the pre-test and pre-questionnaire. The analysis of the data showed that the digital storytelling assignment could enhance learning motivation for most participants with low proficiency and confidence in English. Most of the students

in the study also felt confident about conducting a digital storytelling assignment in English.

Keywords

motivation; low proficiency; English as a Foreign Language (EFL); non-English major

1. Introduction

This study was designed to investigate the impact of a digital storytelling assignment on the English learning motivation of Japanese students who showed low proficiency and confidence in English. The participants were non-English major students in four English as a Foreign Language (EFL) courses. This research narrowed the focus of its investigation to 27 students who lacked confidence in English due to a low level of English proficiency. In this research, the impact of the assignment was analysed in terms of motivation for learning by focusing on the aspect of confidence in learning English.

2. Background

2.1. Low motivation and confidence in learning English

Dörnyei (2005) insists that motivation is critically important in language acquisition and learners who do not have sufficient motivation cannot acquire foreign languages successfully. He also emphasised that learners' reduced self-confidence, due to their experience of failure or lack of success, would be a demotivating factor and he stated that generating a willingness to communicate is one of the most central goals in language teaching (Dörnyei, 2001). Some researchers investigated learners' attitudes to Computer Assisted Language Learning (CALL) in terms of behaviours, confidence and anxiety in order to facilitate or enhance linguistic knowledge acquisition and skill development (Macaro, Handley & Walter, 2012).

2.2. Better solutions to improve English education

Many Japanese students have had little experience in using English in real situations and are likely to be afraid of making mistakes when they use English because some of them have studied English for tests and university entrance examinations (Kikuchi, 2013). To facilitate better English learning for Japanese students, it is valuable to let students know that learning English should not only be for tests but also for real communication with people around the world. Dörnyei (2007) states that "An established norm of tolerance ensures that students will not be embarrassed or criticized if they make a mistake and, more generally, that mistakes are seen and welcomed as a natural part of learning" (Dörnyei, 2007: 723). It is necessary for students to make errors and mistakes in order to acquire a new language, as students can learn from mistakes. In addition, it is also necessary to consider the contents of communications rather than focusing only on accuracy. As most non-English major students in Japan do not have opportunities to speak English within their daily lives, it is valuable to create an environment where each person can communicate in English. According to Morizumi (2019), it is really important to focus on the contents of topics or themes of English learning, as another important point which must be kept in mind for English Education in Japan is that it is important to have activities in which students can express their ideas in English without worrying too much about pronunciation and grammar.

2.3. Confidence and motivation in Keller's ARCS model

Song and Keller (2001) state that one of the well-published holistic models of motivational design in educational technology is Keller's ARCS model. Keller (1983) indicated that there were four basic categories of motivational conditions which instructional designers have to understand. The four categories were renamed to Attention, Relevance, Confidence, and Satisfaction in order to strengthen the central feature of each and to generate a useful acronym, ARCS (Keller, 1987). Keller (Keller, 1987: 8) states that

these four conditions "… have to be met for people to become and remain motivated." According to Keller (2010), major categories and definitions of ARCS are as follows (Keller, 2010: 45).

- *Attention: Capturing the interest of learners; stimulating curiosity to learn*
- *Relevance: Meeting the personal needs/goals of the learner to effect a positive attitude*
- *Confidence: Helping the learners believe/feel that they will succeed and control their success*
- *Satisfaction: Reinforcing accomplishment with rewards (internal and external)*

The ARCS model provides a definition of motivation, a motivational design process, and recommendations for motivational strategies and the model has been validated in numerous studies and discussions (Song & Keller, 2001). Some research in EFL and CALL were conducted based on Keller's ARCS model. For example, Baturay, Daloglu and Yildirim (2010) investigated the perceptions of elementary-level EFL learners towards a web-based grammar learning system in terms of aspects which include learner satisfaction and attention based on Keller's ARCS model, and indicated that learners developed a positive attitude towards the system. In addition, Chang and Lehman (2002) focused on relevance, and a motivational strategy designed to enhance relevance was built into a computer-based interactive program for EFL students from which it was reported that the use of relevance enhancements facilitated students' language learning.

2.4. Solutions with digital storytelling for foreign language education

Digital storytelling has been increasingly integrated into language classrooms (Oskoz & Elola, 2016). Digital storytelling is an educational practice that has received attention in the literature, such as studies by Robin (2006), who stated that "Digital Storytelling has become a powerful instructional tool for both students and educators" (Robin, 2006: 709). StoryCenter Website indicates that digital storytelling can be an incredibly powerful way to foster creativity, engage the community, transform perspectives, and encourage reflection upon learning and life processes. Language learning can also be promoted with digital storytelling, as Ohler (2013) indicated that digital storytelling would have great potential to help students learn a language because of the interplay between writing, speaking, and listening.

There is now an increasingly broad range of studies showing the advantages of digital storytelling for language learning (Abdel-Hack & Helwa, 2014; Ribeiro, 2015; Oskoz & Elola, 2016). Digital storytelling has been investigated for its effects on language learning and recent studies have shown that it can enhance student motivation for learning a foreign language (Liu, Wang & Tai, 2016). Castañeda (2013) stated that digital storytelling projects adhere to the presentational mode of communication, follow the writing process, and allow students to engage other students in meaningful real-world tasks in the foreign language classroom. However, little is known about the impacts of digital storytelling on the learning motivation of non-English major students with low proficiency and confidence in English in Japan.

3. Method

3.1. Objectives

This study explores the potential contribution of a digital storytelling assignment as a tool for enhancing learning motivation of non-English major students with low proficiency and confidence in English in Japan. In this research, the following specific research questions were addressed:

1. Does the digital storytelling assignment enhance motivation for learning of Japanese EFL learners with low proficiency and low confidence in terms of ARCS?

2. Does the digital storytelling assignment enhance confidence in English of the students with low proficiency and confidence in English?

3. How do students with low proficiency and confidence in English perceive the effect of the digital storytelling assignment?

3.2. Courses

The subject of this research was four courses of EFL for non-English major students in the field of Informatics. Each course was 15 weeks long and was held in the spring and fall terms of 2018. There were four courses, with two courses being held in the spring term and the other two courses being held in the fall term. The study goal was to acquire skills and knowledge to present ideas and messages effectively with the use of Information and Communications Technology (ICT) and English. The course was taught over 15 weekly face-to-face lessons in a CALL classroom where each student had access to a computer. In this course, as a midterm assignment, students were required to conduct a (non-digital) storytelling assignment in a small group on a face-to-face basis in English. The general theme of the (non-digital) storytelling assignment was to introduce the student's favourite object. Then, as a final assignment, they were encouraged to create digital stories by recording their voices using software such as Microsoft PowerPoint and Windows Movie Maker. The general theme of the digital storytelling assignment was 'Tips for Better Understanding Japanese Culture.'

The following is an overview of the steps in the assignments. During the 15-week course, the (non-digital) storytelling assignment was conducted from week 6 to week 7, and the digital storytelling assignment was conducted from week 7 onwards (Figure 1).

Figure 1

The steps in the assignments
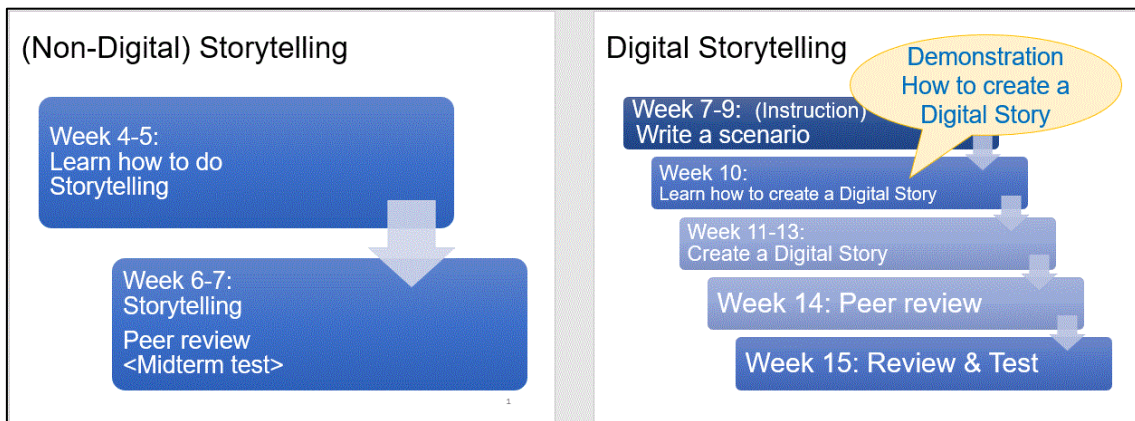
In the week 7 to week 9 classes, students wrote a scenario in English with the use of a scenario sheet. It was necessary to take enough time to write the scenario before moving on to editing the digital story. It took more than two weeks to write and review the scenario sheet.

Then, in week 10, students watched the demonstration on how to create a digital story given by the teacher. After that, each student received hands-on practice to make a digital story with sample photos and image data. Other basic knowledge related to copyrights and portrait rights was also taught in Japanese.

In the week 11 to week 13 classes, each student was required to create his or her own digital story over the three-week period.

In the week 14 class, after recapping what had been learnt in the course, each digital story was uploaded in wmv or mp4 format to Google Drive and shared with the classmates. All students had to submit the final version of their digital story by the beginning of week 15.

In this digital storytelling project, each student was supposed to create a digital story individually and help each other by sharing scenario sheets and digital stories in a group.

For reviewing the course and data collection, a midterm-assessment questionnaire was conducted on the same day as the (non-digital) storytelling assignment and a post-assessment questionnaire was conducted in the last week of the course.

3.3. Participants and the subject of this study

The participants comprised 86 Japanese university students in four courses. They were second, third, and fourth year students in the field of Informatics who had completed the freshman one-year English course, and who had different English proficiency levels (from beginner to intermediate). Three (pre-, midterm- and post-) questionnaires were employed to collect the necessary data. The results of the three questionnaires and two tests were received from 65 students. From the data, as the subject of this study, this research focused on 27 students who lacked confidence in English and had low English proficiency according to the pre-test and pre-questionnaire. The 27 students were chosen using the following criteria. First, the pre-test (level check test) was conducted in the second week. The lower achievers who had lower percentages of correct answers (less than 30%) were selected. Second, in the pre-questionnaire, students who answered negatively to the question of "Do you have confidence in your English?" were selected. The students were asked to indicate their degree of agreement on a 4-point Likert scale (1-Not at all, 2-No, 3-Yes, 4-Yes very much), and the students who answered negatively (1-Not at all or 2-No) were chosen. Only 27 students who had both low English proficiency and negative responses were selected as the subject of this study. All students had studied English in junior high school and high school and learnt English for more than one year before taking this course in the university. There were 19 males and 8 females, all of whom had limited opportunities to use English outside the classroom in their normal Japanese setting. All participants volunteered to undertake this research.

3.4. Procedure

The analysis focuses on the aspect of confidence and motivation in the digital storytelling assignment. The question items were adapted from Keller's ARCS model and data was also analysed based on Keller's ARCS model. The question items related to Keller's ARCS model in the questionnaires were written in Japanese in order to avoid misunderstanding by Japanese EFL students.

4. Results

The findings indicate that students perceived digital storytelling to be an effective assignment in the classroom.

### 4.1. Students' perceptions of motivation in terms of ARCS

The students were asked to rate the assignments (with a score ranging from 1 to 9, where the greater numerical value represented a stronger motivating factor). The questionnaire items were set based on Keller's (2010) ARCS model of motivational design. The questions were set with a semantic differential scheme by asking how much the student felt about the assignment by placing a mark in between two adjectives opposite each other on the web (e.g., This learning experience is 'interesting' vs. 'boring'). According to Keller's ARCS model the middle score (5) represented a neutral response (e.g., 1=strongly boring, 5=neutral, 9=strongly interesting). For the analysis, the score from 1 to 4 was categorized as a negative group and the score from 6 to 9 was categorized as a positive group. Question items based on Keller's ARCS model were as follows:

- Attention: Is this learning experience interesting?
- Relevance: Is this learning experience valuable for you?
- Confidence: Are you confident in this experience?
- Satisfaction: Are you satisfied with this experience?

Overall, more than 74% of all the students answered positively (Figure 2).
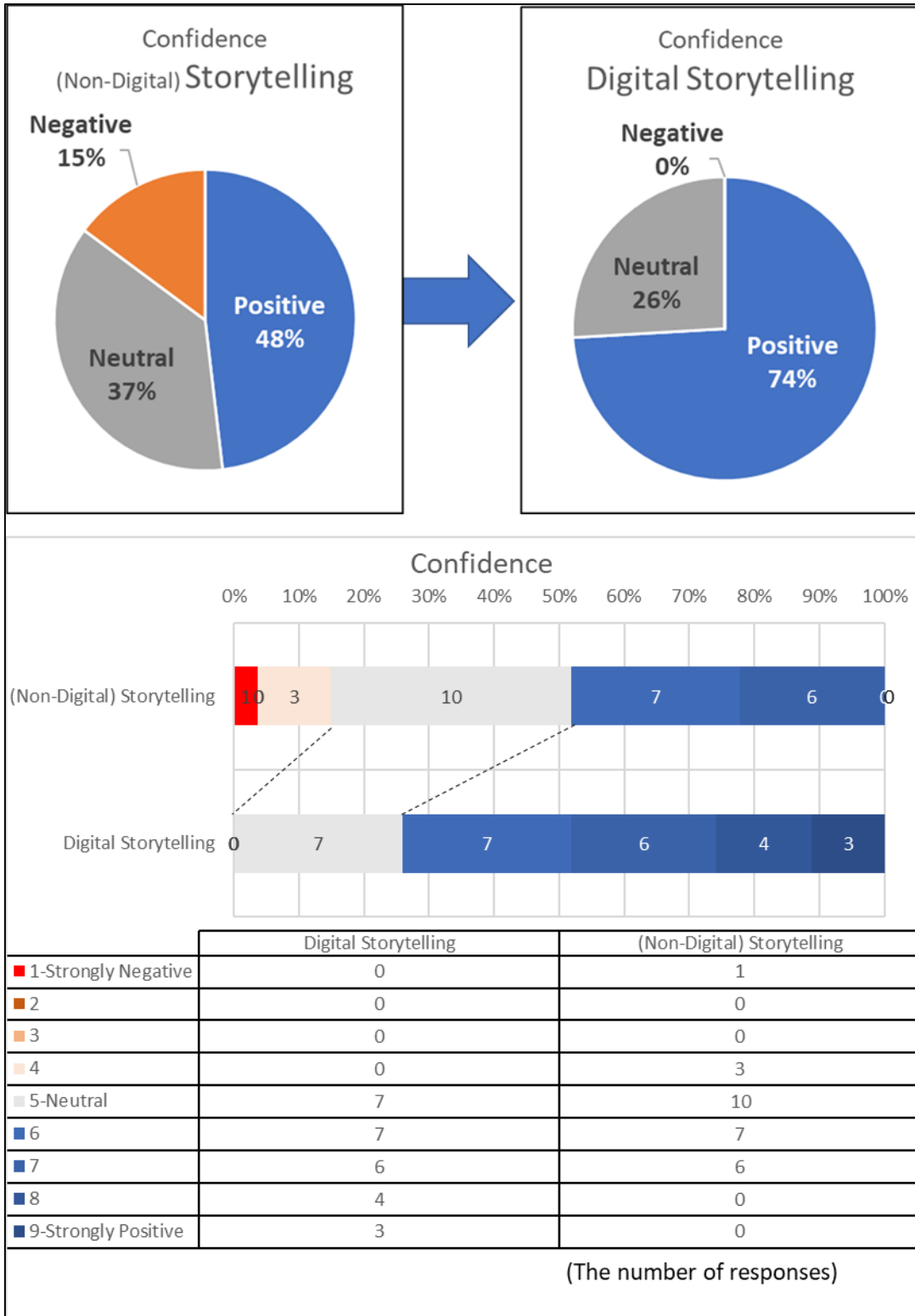
Figure 2

Students' perceptions of digital storytelling in terms of Keller's ARCS model
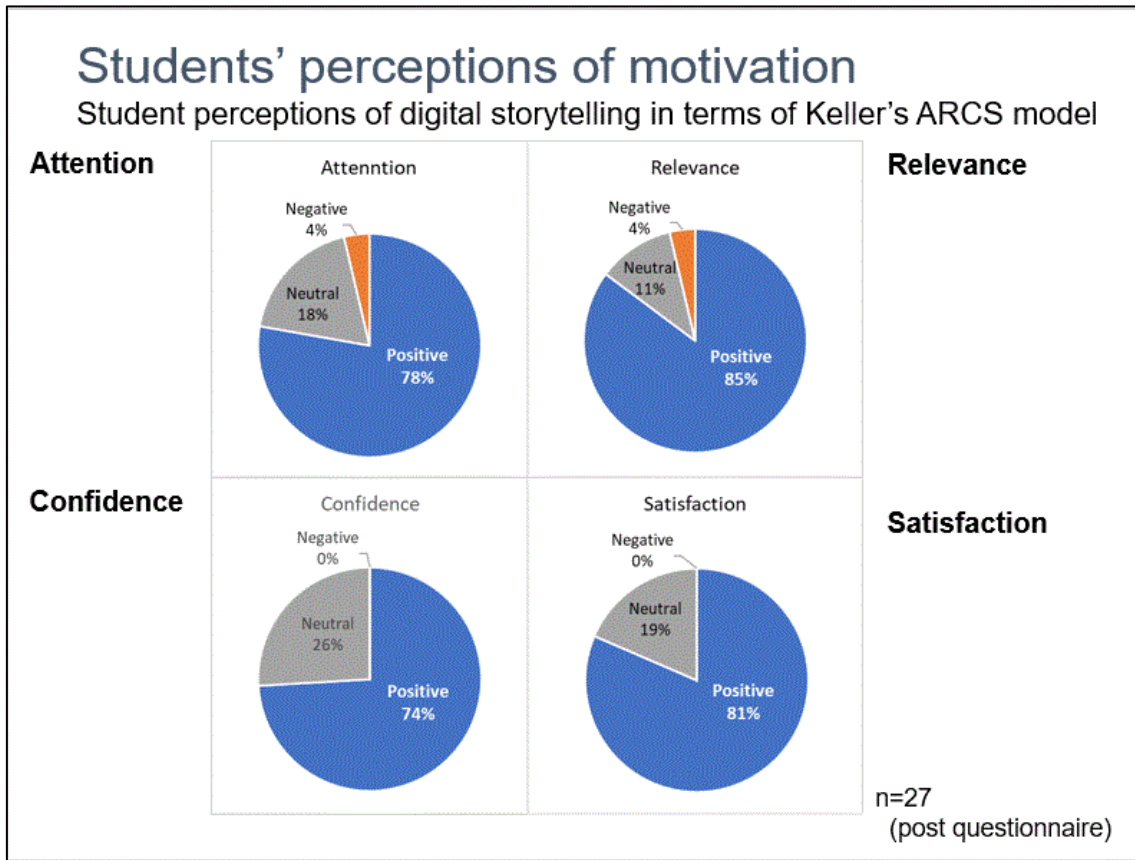
In the midterm assignment, the (non-digital) storytelling assignment, 15% of all the students answered negatively to the questions regarding "Confidence", but in the final assignment, the digital storytelling assignment, nobody who had answered negatively to the question did so in relation to confidence. Overall, more than 74% of all the students answered positively in the digital storytelling assignment (Figure 3).

Figure 3

The improvement from (non-digital) storytelling to digital storytelling assignment

	Digital Storytelling	(Non-Digital) Storytelling
■ 1-Strongly Negative	0	1
■ 2	0	0
■ 3	0	0
■ 4	0	3
■ 5-Neutral	7	10
■ 6	7	7
■ 7	6	6
■ 8	4	0
■ 9-Strongly Positive	3	0
		(The number of responses)

4.2. Motivations in the aspects of the sub-category of Confidence

The students were asked to rate both (non-digital) storytelling and digital storytelling assignments (scores ranging from one to nine, where the greater numerical value represented a stronger motivating factor). The questionnaire questions were set

according to sub-categorical question items using a semantic differential scheme by asking how much the student felt about the assignment by placing a mark in between two adjectives opposite each other on the web (e.g., objectives were 'vague' vs. 'clear'), as referred to in the research by Suzuki, Nishibuchi, Yamamoto, and Keller (2004) based on Keller's ARCS model which introduced the website to check and revise motivational design of instructional materials. The middle score (five) means a neutral response (e.g., 1=strongly vague, 5=neutral, 9=strongly clear). This section focuses on the aspect of confidence (C1, C2 and C3).

There are three sub-categories in the aspect of Confidence in the ARCS model. There are C1: Learning Requirements, C2: Success Opportunities and C3: Personal Control. The questions for the three sub-categories were as follows based on Keller (2010, pp. 50-51).

C1: Learning Requirements

Did the assignment assist in building a positive expectation for success?

(1. Objectives were vague --- 5. Neutral ----9. Objectives were clear)

C2: Success Opportunities

Did the assignment support or enhance beliefs in your competence?

(1. Steady progress was impossible --- 5. Neutral ----9. Steady progress was possible)
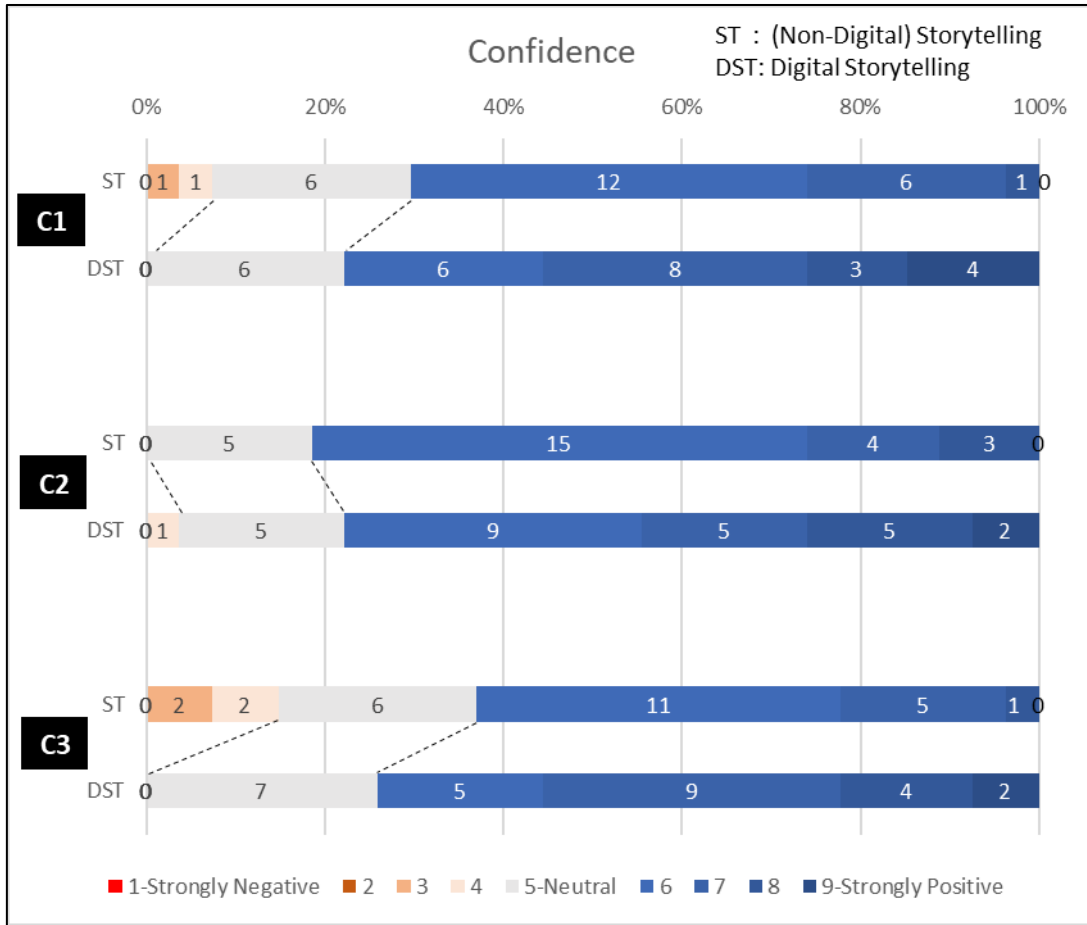
C3: Personal Control

Did you clearly know that the success was based upon your efforts and abilities in this assignment?

(1. Not creative in learning --- 5. Neutral ---9. Was creative in learning)

The results of the questionnaire survey are shown in Figure 4.

Figure 4

Sub-categories in the aspect of confidence

Regarding C1: Learning Requirements, students generally answered positively to the question, "Did the assignment assist in building a positive expectation for success?", in the (non-digital) storytelling assignment; two students answered negatively, six students' answers were neutral, and 19 students answered positively. In the digital storytelling assignment, there was an observed improvement and nobody answered negatively. The number of students who answered positively increased from 19 to 21. More students answered positively in the digital storytelling assignment in the aspect of C1: Learning Requirements. In order to compare (non-digital) storytelling and digital storytelling, statistical tests were conducted. In this study, the Wilcoxon signed-rank test was used as the data from the questionnaires are non-parametric.

The result of a Wilcoxon signed-rank test indicated that "digital storytelling" C1: Learning Requirements (mean rank = 12.63) was rated more favourably than "(non-digital) storytelling" (mean rank = 8.50), Z = -2.493, p = 0.013.

Regarding C2: Success Opportunities: With regard to the question "Did the assignment support or enhance beliefs in your competence?", in the (non-digital) storytelling assignment, no student answered negatively, five students' answers were neutral, and 22 students answered positively. In the digital storytelling assignment, one student answered negatively. However, the strongly positive response tended to increase and there was no statistically significant difference between (non-digital) storytelling and digital storytelling assignments according to the result of a Wilcoxon signed-rank test.

Regarding C3: Personal Control: With regard to the question "Did you clearly know that the success was based upon your efforts and abilities in this assignment?", in the (non-digital) storytelling assignment, four students answered negatively, six students' answers were neutral, and 17 students answered positively. In the digital storytelling assignment, there was an improvement, and nobody answered negatively and the number of students who answered positively increased to 20. Many students evaluated their C3: Personal Control positively. It is inferred that this is because the teacher did not try to input language and linguistic knowledge unilaterally and students were free to think what to write as they were responsible for their own learning. The result of a Wilcoxon signed-rank test indicated that "digital storytelling" C3: Personal Control (mean rank = 12.08) was rated more favourably than "(non-digital) storytelling" (mean rank = 8.88), $Z = -3.024$, $p = 0.002$.

It is inferred that more students had a vague impression of the successful digital storytelling assignment because they had opportunities to watch the digital stories created by other students in the past. Also, they were able to create their stories based on their strengths.

4.3. Students' perceptions of the effect of digital storytelling

An open-ended question, "What points were good and bad in this course?", was presented at the end of the course. Students were asked to write down their answers to the question, and from the eight comments received, all of them were positive.

The following comments are from the students. The comments from Student A, B, C, D and E revealed that the digital storytelling assignment helped students to feel confident and willing to participate in English learning. Some students with low levels of proficiency and confidence in English also indicated that the digital storytelling assignment helped them to feel more motivated and organize their ideas and build their confidence.

- *I was excited because what we did in this course was what we had never tried. (Student A)*
- *I was able to study in a fun environment. (Student B)*
- *I learnt English in a fun way, even though I had hated it previously. (Student C)*
- *My English skills have been improved. (Student D)*
- *It was good that I did my best in learning English. (Student E)*

From the comments, it can be seen that most students felt more confident about and enjoyed learning English. In summary, the digital storytelling assignment is perceived as a new enjoyable way to learn English in a fun environment by giving students the freedom to create their own work. Students have a great interest in conducting the digital storytelling assignment and their confidence has been enhanced by increasing their familiarity with English learning.

The following comment from Student F regards his hobby. Student F thought deeply about the theme throughout the assignment and it probably enriched his life outside of class.

- *It was great for me to have the experience to think about myself, which helps me feel more satisfied with what I have done and my hobby while creating my digital story. It was a very good opportunity for me to review and think deeply about them. (Student F)*

The comments from Students G and H showed the importance of creating a supportive learning environment that lowers students' anxiety levels.

- *It was good to have attentiveness and support throughout the lesson. (Student G)*
- *I was glad I had good advice while thinking together in the class and for the assignment. (Student H)*

While the students were responsible for each student-centred learning task, they could ask their teacher when they had questions and received support from their classmates or teacher if necessary. It is inferred that language learners benefited from less stressful and anxiety-free environments.

They were generally motivated to communicate in English using the digital storytelling assignment. Consistent with previous research in digital storytelling (Kasami, 2014; Kasami, 2017), the results of this study showed the benefits of digital storytelling on increasing motivation of students with low proficiency and confidence in English. From the comments, it can be inferred that the digital storytelling assignment might reduce their anxiety levels for communicating in English and it helps students to be comfortable in the classroom, which can enhance their motivation to express what they want to say in English to the audience across the internet. It is also good that digital storytelling can give students opportunities to present and explain what they think in English and what they want to express to their audience.

5. Conclusion

This study explored how the digital storytelling assignment enhanced learning motivations of non-English major Japanese students with low proficiency and confidence in English.

The responses to the questionnaires revealed a number of things about their motivation for learning. The answers to the research questions are stated below.

First, the analysis of the questionnaire data regarding the ARCS motivational model showed that most EFL lower-level students also answered positively, which means that they were motivated for learning in terms of aspects of ARCS.

Second, in the aspect of Confidence, there was a great improvement with the digital storytelling assignment observed in 'C1: Learning Requirements' and 'C3: Personal Control'. No significant difference was observed in 'C2: Success Opportunities'.

Third, the response comments to the questionnaires indicated that the digital storytelling assignment was likely to motivate students' learning.

The analysis of data showed that the large majority of EFL students with low proficiency and confidence in English were in favour of conducting digital storytelling in the EFL classroom. Another finding from students' comments was that the digital storytelling assignment encouraged even students who did not like studying English to learn English in a fun environment.

The results showed that most students enhanced their motivation for learning. Many students enjoyed expressing themselves in English through working on their digital story. In particular, the digital storytelling assignment enhanced their confidence in English learning. The research results have significant implications for future instructional design with ICT in EFL education for students with low proficiency and confidence in English. The digital storytelling assignment helped students with low proficiency and confidence in their English to find comfort in their learning space and to boost their motivation to learn.

There are a number of limitations with this study that need to be addressed. The first limitation is the small dataset size. With only 27 data points, the evidence from this study is insufficient to make broad generalizations, and it is difficult to extrapolate the findings of this study to a wider array of contexts. The research could be further enhanced through the application of digital storytelling assignments to larger data sets collected in a variety of contexts. The second limitation is the lack of longitudinal data. While students indicated their motivation for language learning was enhanced, no follow-up survey was conducted to verify it. More long-term studies that track students' learning motivations would be worthwhile for future study. The third limitation is that the data was analysed based only on questionnaire data. It could be better if it were triangulated with other data, such as interview data and comment sheets written by the participants. The fourth

limitation is that this research has not been proved by academic performance; therefore, future research needs to focus on that aspect of proficiency.

While there are some limitations and opportunities for improvement in future studies, most students reported favourable impressions of the assignment. They perceived the digital storytelling assignment as having a positive effect on their language learning and motivation enhancement. Conducting digital storytelling tends to provide language learners with challenging environments and opportunities to use English for real communication. They were given opportunities for creative production through their digital stories.

Acknowledgements

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