Abstract
This study explored the impact of a digital storytelling (DS)-integrated methodology on English as a foreign language (EFL) learners’ (narrative) writing skills. This current study was conducted at School of Foreign Languages, Cumhuriyet University with the participation of 43 EFL English-major-students. Because it was an experimental research study, two groups (one experimental and one control) were chosen for this study randomly; the former was exposed to DS-integrated (narrative) writing instruction, the latter was taught through traditional (narrative) writing practices. The experimental phase lasted for 14 weeks. Before the experimental phase, a pre-test was given to both groups in order to determine their writing proficiency levels and at the end of this experimental phase, the same test was re-administered to both groups in order to see if there were any changes in their (narrative) writing proficiency. The results showed that both instruction types namely, DS-integrated writing instruction and traditional paper-based writing practices were effective in developing learners’ (narrative) writing skills. But the quantitative data also showed that the experimental group students scored significantly higher than the control group students at the post test as a result of the participation into the DS-integrated instruction process, suggesting the superiority of DS over traditional writing applications. Overall, the results of this study can help educators who are willing to meet today’s students’ needs and expectations in the 21st century composition classes by opening up a new channel for them to express themselves in different modalities.

Keywords: Digital storytelling; multimodal composition; WeVideo; narrative writing; technology

1. Introduction

The ever-changing technology has dramatically affected our education system populated by “digital natives” who were born into the digital world and grew up with technology naturally (Prensky, 2001, p. 1) and now educational specialists are seeking for new ways in order to meet the needs and expectations of students in the 21st century. Language learning and teaching is not the exception since technological advancements have made a change in not only how we use languages, but also how we learn them (Kern & Schultz, 2005). Accordingly, the definition of literacy has also shifted in a way that goes well beyond print-linguistic mode of expression, and now it encompasses reading and producing a text in different
modes by using both verbal and non-verbal elements. Accordingly, the pedagogy of new literacies referring to being able to understand and produce multimodal texts based on a mixture of different meaning-making modes has started to gain importance in education.

Changes in the definitions of literacy have forced educators to re-define writing and writing instruction in a way that incorporates multimodality into the writing instruction. One such tool is digital storytelling (DS) allowing learners to write in different modalities to make meaning, communicate, and persuade the audience. At its core, DS is the combination of traditional storytelling with the newest technology and as a multimodal writing genre, through it learners can have the opportunity to express their stories by using different multimedia tools such as music, photographs, graphs or videos (Robin, 2006; Thang, Lin, Mahmud, Ismail, & Zabidi, 2014). Although it is a new but a very effective tool for storytellers, very few studies in the literature explored the use of DS in narrative writing curriculum (e.g. Abdel-hack & Helwa, 2014; Elola & Oskoz, 2010; Kulla-Abbott, 2000; Yamaç, 2015); therefore, there is a need for a research study to test the effectiveness of DS in the writing curriculum in different contexts. With this in mind, this current study aimed to investigate whether there were any effects of using DS on English as a foreign languages (EFL) learners’ (narrative) writing skills.

1.1. Literature review

Although there are various different definitions of DS, in general, it is the newest version of the ancient storytelling. DS refers to telling a story by using different multimedia elements such as images, music, and narrated voice, hence leading to the creation of more powerful, authentic and effective stories (Digital Storytelling Association, 2002). This modern version of storytelling, namely DS, has seven important elements (point of view, a dramatic question, emotional content, gift of voice, the power of soundtrack, economy, and pacing), each of which adds a new and vivid dimension to the story and eventually makes it more realistic (Robin, 2008). DS is generally prepared at three important stages, namely the preparation stage (topic selection, determining the audience, storyboarding, script writing, and discussing and editing the script), the production stage (choosing the suitable non-verbal elements and accompanying the script with the proper multimedia tools), and the presentation stage (showing the end-product to the audience).

With the turn of the 21st century, this technology-supported application has gained importance in education, perhaps because it creates a context in which learners can deal with technology more meaningfully. This tool creates a learner-centered setting where students are responsible for their own learning. Students can also construct meaning from their own experiences and this meaning-making process requires them to utilize different content areas and channels holistically to express the aimed message. Therefore, learners use their analytical and higher-order cognitive skills in order to produce an end-product to be shown to the others. (Jonassen, Peck, & Wilson, 1999; Maina, 2004). Because of these readily available advantages, DS has also attracted the attention of educators in the language learning and teaching field.

The evidence gathered from the previous research showed that DS positively affected learners’ motivation (Yoon, 2012), engagement (Sadik, 2008), 21st century literacy skills (Niemi, Harju, Vivitsou, Viitanen, & Multisilta, 2014), identity construction (Skinner & Hagood, 2008), critical and problem solving skills (Yang & Wu, 2012), and linguistic skills (Yoon, 2014). In addition to these advantages, DS can be an effective communication tool because of its potential enabling learners to convey their intended messages in different modes by expanding their repertoire of expression and representation in the target language.

Depending on this, some scholars (e.g. Takayoshi & Selfe, 2007; Vinogradova, 2014; Yancey, 2006) are calling for an update in the writing instruction to include this new genre in the writing curriculum as
a new communication and expression tool. These researchers acknowledge that with the technological advancements, writing has grown out of being a mere mechanical process as in the previous centuries; rather, writers should make use of various technological tools in order to express the intended message (Hicks, Turner, & Stratton, 2013). In other words, in the 21st century, writing is no longer “mono-modal” but “multimodal” (Shin & Cimasko, 2008, p. 377); that is, people inevitably need to utilize different channels for expression and meaning-making such as text, visuals, music, video or graphs, etc. At this point, DS allowing different ways of expression is certainly a good alternative for writing practices in this new era.

Although the ultimate purpose of DS is to create an artifact to be presented to the audience, the script writing process is, in fact, considered as the most essential part of the DS application. This is because a good script makes the digital story more powerful (Xu, Park, & Baek, 2011). That is to say, in the digital story making, the writing element has the primary importance because it is acknowledged that if the script writing is ignored, the final product (the digital story) cannot be truly effective or successful (Banaszewski, 2002). In fact, DS does not negate the traditional writing process because digital-story making follows the process writing steps such as drafting, editing, revising, and sharing steps in order to produce a good script which is the core of the digital story and finally an artifact to be presented to the real audience.

As seen, DS goes through the same writing procedure as the traditional pen-paper writing process in which students write in a single mode, but unlike traditional methods, it expands the repertoire of expression by using different channels of communication relevant to the real-life settings (Connolly, 2008; Harrison, 2011). Many of the writing conventions used in traditional writing classes will still be learned, while students will also take advantage of multimedia devices to convey their messages in other modalities in addition to the linguistic-only mode.

DS, as a multimodal writing methodology, can help to close the gap between students’ everyday and in-school writings. Thus, a great number of students who are not truly motivated to take part in traditional writing projects can be willing to get involved in these authentic writing processes (Miller, 2010; Ohler, 2008) because their final products will be presented to an authentic audience. It seems that DS is a “real-life” pedagogy validating students’ personal experiences and incorporating student’s out-of-school involvement into the classroom setting (Connolly, 2008). Through DS, learners whose previous pieces of writing most probably lacked detail, voice, or creativity, for the first time, can show their writing abilities more creatively (Miller, 2009).

Moreover, digital-story making also helps identity-construction because learners need to reconsider “who they really are” or “who they want to become” in these personal stories. Because DS is largely based on telling a personal “story”, this new pedagogy is highly suitable for narrative writing that allows learners to reflect on their personal experiences and accordingly helps learners to form their identities.

Despite the numerous benefits of DS in writing, few studies in the related literature explored the role of DS in writing instruction. This limited research indicated that DS positively affected learners’ motivation and engagement in the writing skill (LoBello, 2015; Xu et al., 2011) and perspectives toward writing (Oskoz & Elola, 2014; Timuçin & Irgın, 2015). Moreover, the research investigating the effectiveness of DS on writing performance is far more limited. And these research studies were notably conducted in first language or English as a second language contexts (Ballast, Stephens, & Radcliffe, 2008; Flihan, 2013; Foley, 2013; Kulla-Abbott, 2006). In the EFL setting there is a dearth of research; therefore, a research study is needed to test the impact of DS on EFL learners’ writing performance. In order to fill in this gap in the related literature, this study aimed to answer the following research question/s:

1. Are there any effects of using DS on EFL English-major-students’ (narrative) writing skills?
1.1. Does the treatment type (DS-integrated or traditional writing instruction) differentially affect these students’ (narrative) writing skills?

2. Method

2.1. Participants

This present study was conducted with 43 intermediate level EFL English-major students (from the departments of English Language Teaching and English Language and Literature) (31 female and 12 male students between 18-25 ages) from the two classes of the preparatory department at School of Foreign Languages (SFL), Cumhuriyet University (CU).

At this prep education, these students were exposed to 25-hour instruction every week in the four main skills and grammar. Five-hour writing instruction, mainly based on teaching different paragraph types, was provided for these students per week. This five-hour writing course was utilized in order to conduct the current study. At the beginning of the term when the current study was carried out, two classes were assigned to the researcher/lecturer by SFL at CU, one of which was named as the experimental group and the other of which was chosen as the control group by the researcher randomly. The researcher of this present study was also the lecturer of these two groups in the writing course.

2.2. Materials and instruments

For this study, a video-editing tool, namely WeVideo (www.wevideo.com), a hand-out on how to use WeVideo, storyboard sheets, a Google Drive account, and a Facebook (www.facebook.com) account were used. Students prepared their digital videos by using the free video-editing application (WeVideo), got feedback from the lecturer throughout the process using their Google Drive accounts and lastly shared their digital stories on Facebook and received feedback from their classmates.

For this study, the data were collected quantitatively by using pre- and post-tests, and a five-point rubric composed of seven subcategories to assess these test scores. Before the study was implemented, both groups (experimental and control groups) were given a pre-test which aimed to assess learners’ writing proficiency. The test asked both groups to write a narrative paragraph on a given topic. After the experimental phase, the same test was given to the two groups in order to see if there were any changes in their writing performance. The researcher and a colleague from SFL at CU rated both pre-and post-tests and the sum of the ratings was used for the subsequent analyses.

2.3. Data collection procedures

Before the actual study was implemented, the study had been piloted with the participation of 45 EFL English-major students from SFL at CU. Similar to the present study, in the piloting session, there were one experimental group exposed to DS-integrated narrative writing instruction and one control group taught through traditional writing practices. With the help of this piloting process, the researcher made necessary revisions and checks for the actual study.

After the pilot study, in the following term when the actual study was conducted, the researcher implemented the experiment which lasted about 14 weeks. Prior to the experimental phase, the researcher administered the pretest to determine both groups’ writing proficiency levels. In the treatment phase, both groups (experimental and control) had the same learning materials and syllabus in order to improve their writing skills. These two groups were taught in the same amount of time per week (5 hours each week). Throughout the implementation, the experimental group was exposed to DS-integrated writing instruction; however, the control group dealt with traditional writing practices. Since the main
The purpose of this study was to assess the effectiveness of DS on narrative writing performance, in the first weeks of the experimental phase, both groups spent all the writing course time (five hours each week) on this particular paragraph type activities. But to the end of the term, for both groups, the allocated time for the implementation reduced to 2 or 3 hours per week. The researcher/lecturer implemented the experiment alongside the other course requirements. All in all, both groups spent the same amount of time (almost 42 hours in total) on the project implementation throughout the process.

At the end of the implementation, the experimental group prepared five different digital stories by following the procedure below:

1. writing and rewriting the narrative which constituted the core of each digital story in three drafts (first, second and final drafts)
2. storyboarding
3. selecting the suitable multimedia elements such as music or images and accompanying these multimedia elements with their scripts
4. recording the voice
5. using WeVideo to make digital stories
6. in-class presentations of digitally-prepared videos
7. sharing prepared videos via Facebook
8. getting feedback on their videos via Facebook.

As for the control group, they wrote five different narrative paragraphs on the same topics given to the experimental group in three drafts (first, second and final drafts). At the end of the term, both groups were given the same test in order to see if there were any changes in their narrative writing proficiency.

3. Results

The present study investigated if DS had an impact on EFL English-major-students’ (narrative) writing skills and if the treatment type differentially affected experimental and control groups’ (narrative) writing skills. Data were gathered quantitatively by analyzing both two groups’ pre- and post-test results. For the analysis of the data, the Statistical Packages for Social Sciences (SPSS) program was utilized. A 2×2 mixed Analysis of Variance (ANOVA) was run in order to see whether there was a group by time interaction for the dependent variable (the writing score). The independent variables were the two-time points (pre- and posttests) and the group variable.

Before conducting the mixed ANOVA, all the assumptions such as outliers in the data, normality tests, homogeneity of covariance, and homogeneity of variances across groups were checked and it was found that the assumptions were all met. Following this, a 2x2 mixed ANOVA was calculated and indicated that there was a significant interaction between the time points and the group variables, $F (1, 41) = 23.673, p < .001$, partial $\eta^2 = .366$ (Table 1), suggesting that the treatment type differentially impacted writing scores at two time points (pre- and posttests) in the experimental and control groups.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
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<td>time * group</td>
<td>Sphericity Assumed</td>
<td>253.056</td>
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<td>23.673</td>
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<tr>
<td>Error(time)</td>
<td>Sphericity Assumed</td>
<td>438.270</td>
<td>41</td>
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The data were further analyzed in order to see the nature of this two-way interaction. With this aim, firstly the estimated marginal means were interpreted (Figure 1).

This graph clearly indicates that before the implementation, the two groups had nearly the same proficiency level in writing. But at the end of the study, although the two treatment types were effective in developing (narrative) writing performance, it is apparent that the increase in the experimental groups’ ratings was higher than that of the control group. This shows that DS-integrated writing instruction impacted students’ writing skills more positively than traditional writing practices.

In addition to the interpretation of the graph lines, for between-group and within-group comparisons, General Linear Model (GLM) ANOVAs were also used to investigate the source/s of the two-way interaction. Follow-up ANOVAs indicated a significant difference between the control group’s pre-and post-test writing scores, $F(1,19) = 77.067$, $p < .001$, partial $\eta^2 = .802$, meaning that the control group significantly scored higher at the post-test compared to the pretest ($MD=7.60$, $SE=.87$ mmol/L, $p < .05$).

A significant difference in experimental group’s pre-and posttest results was also elicited, $F(1, 22) = 179.247$, $p < .001$, partial $\eta^2 = .891$. This result reveals that the experimental group also increased their scores from the pre-test to the post-test significantly ($MD=14.48$, $SE=1.08$ mmol/L, $p < .05$).

The results also showed that at the beginning of the experiment, both groups’ pre-test results were not statistically significant, $F(1, 41) = 0.34$, $p = .855$, partial $\eta^2 = .001$. However, at the post-test, there was a significant difference between the control and the experimental groups’ writing scores, $F(1, 41) = 38.843$, $p < .001$, partial $\eta^2 = .486$. This finding suggests that the experimental group outperformed the control group at the post-test writing scores with a significant mean difference value ($MD=6.75$, SE = $1.08$ mmol/L, $p < .05$).

On the light of these results, it is worth noting that both instructional types, namely DS-integrated and traditional writing instruction types, had a significant effect on learners’ (narrative) writing performance in the positive direction. Yet, considering the significant difference between the two groups’ post-test scores in favor of the experimental group and the mean differences calculated by
extracting the groups’ pre-test scores from their post-test scores showed that the mean difference score calculated for the control group ($MD=7.60$) was lower than that of the experimental group ($MD=14.48$), it is safe to conclude that both types were effective in developing (narrative) writing skills; however, the DS-integrated (narrative) writing instruction type had a more positive influence over learners’ narrative writing skills than its traditional counterpart.

4. Discussion

This study showed that DS-integrated writing instruction type was more superior in comparison with traditional writing activities to improve learners’ narrative writing practices. This finding is consistent with the prior research (Abdel-hack & Helwa, 2014; Bandi-Rao & Sepp, 2015; Kulla-Abbott, 2006; Oskoz & Elola, 2014; Yamaç, 2015) which reported that DS was a viable methodology for developing the writing performance.

The superiority of DS over its traditional counterpart can be explained in some aspects. First, DS provided an authentic environment in which the students worked on real-life tasks. Thus, this authentic methodology might have attracted learners’ attention and accordingly they enjoyed more during the activities, which may have eventually led to more persistence in the task and putting sustained effort to do the best.

Additionally, DS, as a multimodal writing tool, enabled the learners in the experimental group to produce their stories by using other modalities such as visuals, music or voice-over effectively to convey the intended message in addition to using the linguistic mode (Kulla-Abbott, 2006). That is, the students went beyond writing in one single mode, the linguistic mode, and added different aspects to their stories. “[T]hey thought about implicit and explicit messages of the images they used. (…) The power and the layers of meaning present are impossible to obtain just with a written narrative” (Vinogradova, 2014, p. nd). Thus, they could express their messages much more vividly, realistically and accordingly more powerfully. DS enabled learners to use different channels to express the aimed meaning by allowing them to add an element of imagery and sound to the storytelling process, making the story both visually and aurally appealing and in turn more realistic both for the writer and for the audience (Simpson, 2011). Therefore, the students in the experimental group, who better expressed themselves via this tool than using pen and paper, may have developed their writing skills specifically in the narrative writing type more than the other group.

The reason for the better performance of the experimental group students in their writing performance can also be linked to the audience effect. These students had the opportunity to show their final products to their classmates through in-class presentations and by sharing their stories via Facebook and received feedback from them about their personal stories. Accordingly, the presence of the real audience might have encouraged these students to write better and to put sustained effort on writing as compared to the students in the control group.

Having a larger and authentic audience might also have impacted the experimental group students’ motivation and engagement, which are the two important factors eventually leading to higher proficiency in writing. The motivating factor of DS was also confirmed by the results of LoBello’s (2015) research which indicated that DS helped learners to be motivated in the task more by showing increased effort, energy, and persistence in activities as compared to traditional writing tasks.

The other explanation of the superiority of DS over traditional writing tasks can be based upon the fact that DS-integrated instruction reinforces process writing steps such as drafting, editing, revising, and sharing the end-product by requiring learners to go back and forth between these steps to produce an artifact to be presented to the others. Thus, this pedagogy enabled the students to get involved in steps
of process writing with a deliberate focus and an in-depth investment in those procedures (Flihan, 2013), which may have naturally affected their writing performance more positively than the control group students.

A further factor can be attributed to the storyboarding phase in which the students were required to plan their stories carefully by analyzing the important story elements including the characters, plot or setting in detail. Because the students needed to visualize their stories by using different multimedia elements, they examined their stories a number of times to produce a rather realistic story. They not only focused on the script writing, but also worked on giving dimensions to the narrative by accompanying the script with the suitable multimedia elements. Kajder (2004) suggested that “in creating the storyboards and examining their scripts closely, students discovered that their scripts needed rewriting and reseeing” (p. 67). But the students who dealt with traditional writing tasks may have missed these gaps or omissions. Therefore, it seems that in the current study, a more deliberate focus on these elements in the storyboards might have led to a more careful design of the story.

Lastly, the students in the experimental group got different kinds of feedback (self, peer, & instructor). With the help of these different types of the constructive feedback, the students could evaluate their performance, monitor their progress and in turn develop their writing skills in order to produce their best end-products.

5. Pedagogical Implications and Conclusions

The findings of this study showed that DS is a promising methodology for improving writing skills especially in the narrative genre. Considering the need for a shift from the traditional literacy to multimodal literacy skills in composition classes, the findings of this study can shed light on some key processes to those who wish to form an authentic technology-rich context in which students convey their intended messages by using both verbal and non-verbal elements. Teachers in the 21st century education system can benefit from this application to help learners create realistic, vivid and alive stories from their heart and express these stories more effectively and more powerfully. Through DS, students may feel themselves as author, because presumably for the first time their personal stories in which they reflect their most authentic selves are privileged by a real audience. For all these, in the DS-integrated writing instruction, as compared to traditional writing classes, students generally find writing more motivating and engaging, which are two important constructs to develop the skills in question.

But, despite its numerous advantages, teachers should be cautious using this technology-rich tool because not-proper utilization or integration of this methodology can create some problems in class especially for those students who have limited access to technology and accordingly have limited experience in technology use in their real lives. Not to make this methodology overwhelming, teachers should have training on how to use this application before applying it in the classroom setting. Additionally, students should be encouraged to focus on the writing process, but not on the end-products. That is, the writing process should not be overlooked in order to create an artifact. The teacher should always remember that the writing process in DS methodology is of primary importance, not the use of multimedia elements. Lastly, before using such an application, teachers or school administrators should make a detailed plan indicating the needed time, the aim of the implementation and its match with the curricular goals, assessment issues, and the necessary equipment. Otherwise, the implementation may not produce satisfying results. But in the well-planned and organized integration of this methodology, DS seems to be a viable tool for educators who would like to reshape traditional writing classes and open the composition classes to the 21st century multimodal literacies.
References


Dijital öyküleme: Çok biçimli öyküsel yazma türü

Öz

Anahtar sözcükler: Dijital öyküleme; çok biçimli yazma; WeVideo; öyküsel yazma; teknoloji

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