CONTEMPORARY EDUCATIONAL TECHNOLOGY, 2018, 9(3), 264-283
https://doi.org/10.30935/cet.414

Computers in Reading and Writing Skills through the Motivational Lens: Snagit™, Screencast and E-mail Services

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Received: 16.03.2018 Accepted: 20.06.2018 Published: 15.07.2018

Abstract

The rapid and continuous developments in computer technologies underscores the need to investigate computers' impact on students' motivation in second/foreign language (L2) reading and writing skills. Given this need, the present empirical study aims to examine the effect of computers on students' motivation in L2 reading and writing skills. 35 students studying in the English Language Teaching Program at a state university in Turkey were firstly given a motivation scale as a pretest. Then they went through a five-week treatment phase during which they carried out various reading and writing activities designed around two different authentic short stories (*The Lottery* and *The Cask of Amontillado*) by using three different computer programs, namely *Snagit™, Screencast,* and *e-mail services*. Finally, they were again given the motivation scale to determine the change in their motivation level. The analysis of the data indicated a significant increase in student motivation in L2 reading and writing skills. The findings also indicated that the students' frequency and experience of computer use had no significant influence on L2 reading and writing motivation. Based on these findings, it can be inferred that computers have a positive effect on students' motivation in L2 reading and writing skills.

Keywords: *Instructional technologies; Snagit; Screencast; E-mail services; Motivation; L2 learning*

Introduction

In recent years, particularly with the developments in computer technologies, the connection between computer technologies and motivation has gained considerable importance in both theoretical and empirical studies related to second/foreign language (L2) teaching and learning. In the related literature, numerous studies draw attention to the role of computers as tools facilitating better educational environments in which learners feel motivated towards achieving their goals (e.g., Blake, 2000; Campbell, 2004; Chen, 2005; Jarvis & Pastuszka, 2008; Singh, 2010; Sokolik, 2001; Yilmaz, 2015). For instance, Beatty (2003) contends that while computers provided restrictive activities such as on-screen written exercises with simple graphics three decades ago, they enable more sophisticated activities and tasks that encompass an integration of sound, animation, video and communication in today's world. He adds that all these features provide better educational settings and thus increase learners' motivation.

Along the same lines, scholars and researchers have suggested several reasons why computer technologies increase student motivation in the language classroom (e.g., Barger & Byrd, 2011; Chiu 2008; Dudeney & Hockly, 2007; Jung & Kim, 2004; Lee, 2004; Schoepp & Erogul, 2001;

Shield & Weininger, 2004; Singh, 2010; Shin & Son, 2007; Warschauer & Meskill, 2000). These include: (a) the novelty effect of working with a new medium rather than the traditional tools of teaching and learning; (b) the provision of independent practice and individualized learning; (c) the opportunity to have immediate feedback and edit work; (d) the development of learner autonomy and self-control over learning processes; (e) the enrichment of language learning materials or activities; and (f) the opportunities to have interaction with both teachers and classmates.

Liu and Huo (2007) states that the direct and indirect effects of these benefits have been observed in L2 students' receptive skills (listening and reading), productive skills (speaking and writing), and other language areas (e.g., vocabulary and grammar). With these effects in mind, Sokolik (2001) notes that the developments in computer technologies have increased the interest in seeking ways how these technologies could be used in the language classroom and in making assumptions about how they would affect L2 teaching and learning environments. In this regard, the current study aimed to investigate the impact of the use of computers on L2 students' motivation in reading and writing skills by designing various activities and tasks.

Theoretical Background

Use of Computers for Reading Skills

Computer technologies benefit to reading skills through the vast amount of materials they provide for reading and also through the way these materials are presented. Computers enable L2 students to access to these materials quite easily (Li & Hart, 2002). At this point, Warschauer and Whittaker (2002) note that computer technologies benefit to the linguistic nature of language provided in the language classroom because electronic discourse is likely to be lexically and syntactically more complex than oral discourse and to include a wide range of linguistics functions. Likewise, Sokolik (2001) asserts that there are many educational arenas in which computers tend to have equal or overwhelming performance to that of human performance; hence, computers can serve effectively in fostering language skills when and where human performance may serve inadequately.

Considering the presentation of the reading materials, Li and Hart (2002) state that computer technologies allow non-linear reading through *hypertexts* in which L2 students can click on highlighted expressions in a text and access to other linked documents and build further insight into the target text. Moreover, computer technologies enable texts to be presented via a wide combination of multimedia aids such as sound, graphics, photographs, animation, video, direct links and references to dictionaries, and glossary (Beatty, 2003; Kledecka-Nadera, 2001; Sokolik, 2001), which promotes comprehension of the text at hand. All these facilities of computer technologies enhance reading skills by enabling the target language to come alive to learners who perceive it as a distant abstraction (Warschauer & Healey, 1998). Kledecka-Nadera (2001) further states that text manipulation programs provide various activities for language learners, and these activities encourage learners to develop an insight into the target language by helping them to become actively involved in reading texts and language learning.

In a study at University of Illinois at Urbana-Champaign to implement language learning resources on the Web, an English as a Second Language Web magazine called EX*CHANGE was founded (Li & Hart, 2002). The rationale behind the attempt was to explore the ways in which ESL learning resources of high-quality for intermediate level learners could be stored,

designed, and presented on the Web. The online magazine indicated a number of advantages over traditional paper magazine: (a) saving time and effort; (b) getting work done easier and faster; (c) enabling cheaper presentation of color pictures, audio, and even video as texts; (d) providing an archive to maintain and retrieve materials; (e) building a wide audience without expensive promotion and advertising; and (f) a rapid and burgeoning growth readership, more than one hundred readers per day from more than forty different countries. As the outcomes of the study reveal, computers increase the number of readers and contribute to reading skills substantially.

Use of Computers for Writing Skills

Computer technologies offer various forms of computer programs to be utilized either asynchronously or synchronously in order to promote writing skills (Ferris, 2002). E-mails, contrary to the traditional communication tools, have now become the major means of communication for many people, and a great number of studies have been carried out about its use in language classrooms for asynchronous communication between learners, between learners and instructors, and between learners and others outside the classroom (Sokolik, 2001). Providing learners a stress-free environment, e-mails have considerable influence on learners' motivation to practice what they have learned in the classroom (Pim, 2013; Sullivan & Pratt, 1996; Terrell, 2011; Wang & Vasquez, 2012; Warschauer, 1996; Warschauer & Healey, 1998).

Another major contribution of computer technologies to writing skills is found in open-ended computer activities in which computers are utilized as a medium of instruction in language education to address at challenges presented by the transcription process, including handwriting or typing, spelling, capitalization, punctuation, formatting, editing, and so forth (Parette & Peterson-Karlan, 2007). In a study by Cunningham (2000), students' opinions on using computers in a writing course was investigated, and students reported that computer writing activities were challenging but non-threatening. Cunningham further adds that students' positive attitudes to writing through computers augment their writing skills by increasing their motivation to write, revise, and share their ideas with their classmates. Likewise, Warschauer and Healey (1998) underscore that electronic tools and online dictionaries, both translating ones and monolingual ones, contribute substantially to the writing process. They also note that students consider computers beneficial in terms of focusing on the mechanics of their writing texts. In a similar vein, Gousseva (1998) contends that since electronic interaction in writing classes allows students to see different viewpoints and enables them to read and learn more, students often have positive attitudes to using computers in writing skills.

Computer technologies encourage L2 students to compose creative texts through the use of various visuals, which, in turn, provides opportunities for learners to construct their own learning experiences in writing skills (Dzekoe, 2017; Godwin-Jones, 2018; Li & Storch, 2017). In this regard, ChanLin (2000) points out that the use of pictures, graphs, maps, and tables have positive effects on the recall and retention of information. Similarly, Bartoletti (2008) contends that because computer technologies enable L2 students to concentrate on meaning, reorganize and classify similar ideas easily, and make better use of their visual memory through the information represented spatially and visually, they feel quite motivated to write more often and foster their writing skills. In another study by Yilmaz (2012), the impact of computer-assisted language learning (CALL) on students' motivation level was investigated.

While the students in the control group of the study were instructed through traditional teaching materials, the students in the experimental group were taught using three different computer programs (Jing, Screencast, and e-mail services) to carry out a variety of activities and tasks designed around three short stories written by world-wide known authors. The quantitative and qualitative findings showed that the experimental group students had a significantly higher level of L2 motivation than the control group students both in reading and writing skills.

The review of the previous studies related to L2 students' perceptions on and attitudes to computer technologies shows that computer technologies have made significant inroads into reading and writing skills in the language classroom. However, the use of emerging computer programs in L2 teaching and learning from a motivational perspective stands as an area of research to be explored yet. Consequently, the present empirical study aims to shed further light on this particular phenomenon.

Purpose of the Study

The current study attempted to investigate possible impact of computers on L2 students' motivation with particular focus on reading and writing skills by addressing the following research questions:

RQ1: What impact does the use of computers have on L2 students' motivation in reading and writing skills?

RQ2: What relationship exists between L2 students' motivation in reading and writing skills and their (a) frequency of computer use and (b) experience of computer use?

Methodology

Research Design

The present study employed an experimental research design referred to as *one-group pretest-posttest* to elicit data. As it can be understood from the name of the design, the study was conducted with a group of students at a state university in Turkey in the Fall Semester of 2016-2017 Academic Year and consisted of three major stages of pretest, treatment, and posttest. At the pretest stage, the students received an L2 reading and writing motivation scale (RWMS) to measure their available level of motivation (see the Appendix). At the treatment stage, the students went through a five-week treatment during which the students carried out various reading and writing activities and tasks via using three different computer programs (Snagit™, Screencast.com, and e-mail services). Finally, at the posttest stage the students were re-administered the RWMS to detect the change in their L2 motivation level in reading and writing skills.

Setting

The study was carried out in the Department of English Language Teaching (ELT) at a state university in Turkey. The ELT Department served effectively as a convenient research setting

because the teacher-training program applied in the department included a course called "Advanced Reading and Writing Skills", which enabled the application of a variety of reading and writing activities for research objectives. It also helped the researcher to avoid any artificiality bias in the classroom setting and thus on the data collected because the activities and tasks were naturally incorporated into the classroom procedure as extensive studies. Moreover, because the researcher was employed in the same department and had constant access to the students and classes, he could provide the students with assistance whenever they needed. Besides, since the Faculty of Education had a computer laboratory with 40 computers, it was considered to serve quite effectively for the purpose of the present study.

Participants

Thirty five freshman ELT students aged 18-22 participated in the study. While 19 of them (54%) were female, 16 of them (46%) were male. The difference in the numbers in relation to gender reveals that ELT Departments are usually preferred by female students in Turkey. At the time of data collection, the students had been studying English for more than eight years and had passed a very challenging standardized university entrance exam to get accepted to foreign language departments of universities. This exam certified a minimum upper-intermediate level of English proficiency. All the students pursued the same teacher-training program to be teachers of English as a Foreign Language (EFL). Moreover, none of the students had the experience of being abroad before the study.

Instruments

An L2 reading and writing motivation survey (RWMS) which consisted of two different parts was used to elicit data. In the first part, there were items related to the students' demographic information (age and gender) and computer-related characteristics (frequency of computer use and experience of computer use). In the second part, a motivation scale based on the studies of Bulut and Abuseileek (2007), Jarvis and Pastuszka (2008), Sakai (2007), and Warschauer (1996) was used to measure the students' L2 reading and writing motivation level. The scale consisted of 36 items (19 items for writing skill, and 17 items for reading skill) with a 5-point Likert scale including response categories of: *strongly agree, agree, no idea, disagree,* and *strongly disagree*. RWMS had nine negative items (Item 3, 8, 11, 15, 22, 28 and 32) which aimed at measuring the students' L2 reading and writing motivation level in addition to acting as the control items that guaranteed whether or not the participants read the items while completing the questionnaire. The scale was subjected to reliability analysis via a pilot study carried out with the sophomore students in the same department, and Cronbach' Alpha Coefficient was found to be .96 which indicated a high reliability (Buyukozturk, 2002).

Materials Used in the Study

In the study, the students used three computer programs to read two classic short stories and do the reading and writing activities and tasks ascribed to the stories. Below is detailed information on these computer programs and short stories:

Computer Programs

Snagit™ (Version 11.1 on Windows®): Snagit™ 11 is a downloadable computer program launched by TechSmith Corporation©. It allows users to capture a text, an image or a video of what they see on their computer screen (see Figure 1). Using Snagit™ 11 Editor, users can edit, save and share their captures at any time they wish. For instance, they can save their captures in various formats (e.g., PDF, GIF, JPG, and EPS), insert them into Word, PowerPoint or Excel documents and share them via Screencast, YouTube, Twitter, Facebook, and so forth. The basic features of Snagit™ 11 and Snagit ™ 11 Editor are as follows (TechSmith, 2018):

In Snagit™:

- Save often-used capture settings as Profiles.
- Apply edge effects, filters, and other effects during capture.

In Editor:

- Add stamps, arrows, callouts, edge effects, and more.
- Assign keywords and flags to captures and other media files.
- Use the powerful search capabilities to find captures according keywords, flags, or other information automatically gathered during capture.
- Email, copy and paste, or print your screen captures. Or, upload them your web site.

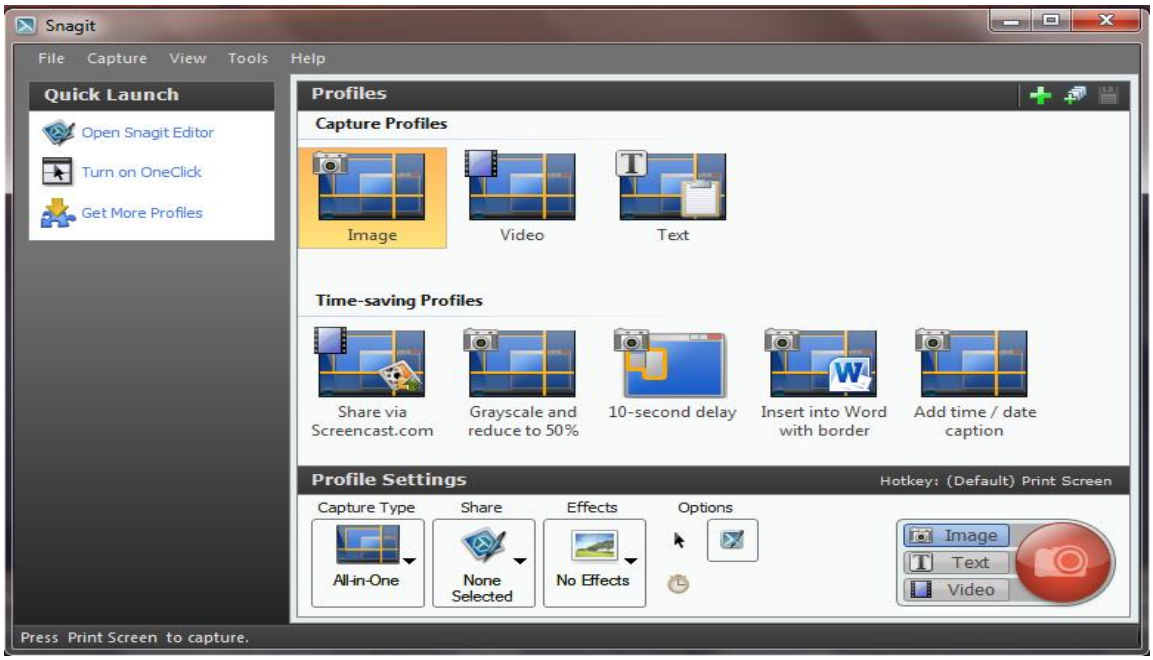

Figure 1. Interface Overview of Snagit™

Regarding the use of Snagit™, TechSmith Corporation© provides further information and practical examples both in written and in audio-visual formats on their website at http://www.techsmith.com/.

Screencast: It is a media hosting solution which enables users to create an account in order to upload their files and documents into their libraries and share them with other users. Screencast also allows users to make comments on each other's files or documents, thus facilitating interaction among users (see Figure 2).

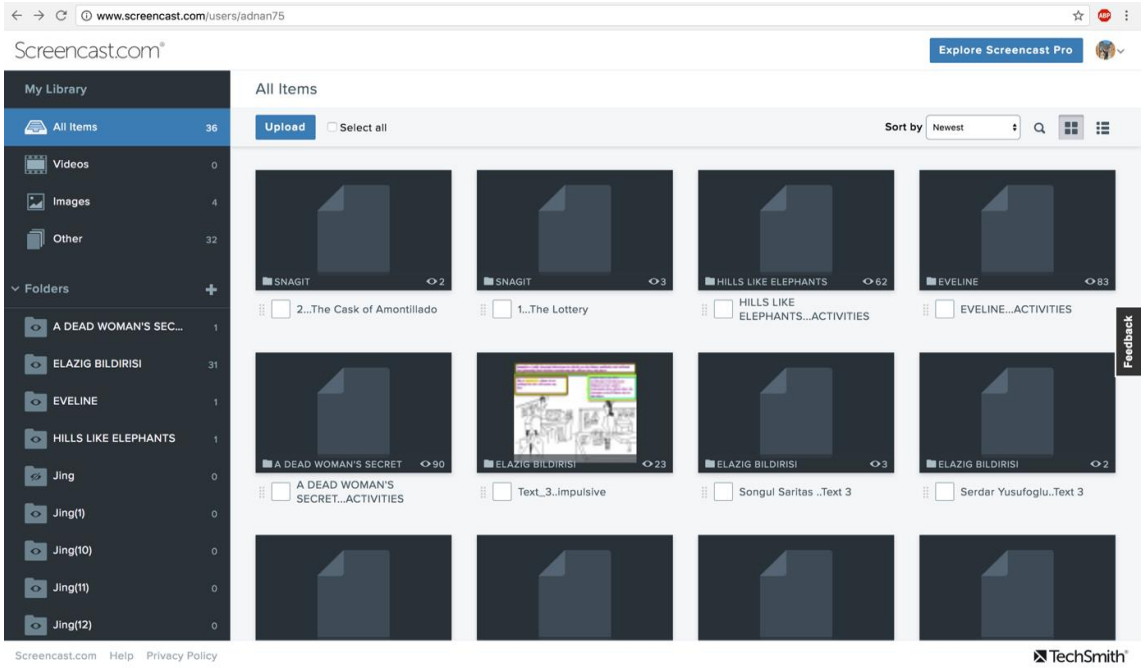

Figure 2. Interface Overview of Screencast

E-mail Services (MSN, Gmail, Yahoo): These services were used in conjunction with Screencast with a purpose to send and receive the links of the recordings that enabled users to access to the content shared with them.

The Stories

In the study, two different stories written by worldwide known authors were used because they met several criteria posited by scholars and researchers in the field (Erten & Karakas, 2007; Nuttall, 1996): *The Lottery* by Shirley Jackson and *The Cask of Amontillado* by Edgar Allan Poe. The rationale behind using these stories was threefold: (a) grabbing attention; (b) being at an appropriate length; (c) meeting an optimum level of language difficulty. First, the stories were considered to draw students' interest and attention because they served as authentic materials written for native speakers rather than for some pedagogical purposes and the topics dealt with in the stories are related to real-life issues and relevant to the students' lives. Second, the length of the stories was regarded proper to be covered in the predetermined period of time, hence preventing the students from a feeling of burden and boredom. Finally, the stories were thought to be at an optimum level of language difficulty in terms of linguistic features and number of unknown vocabulary.

Study Procedures

Table 1 present the steps followed to collect data. First, the students were given the RWMS as the pretest to measure their available motivational level in L2 reading and writing via computers. Following the pretest, the students went through a five-week treatment phase in

which they carried out some pre-, while- and post-reading activities and tasks designed around the stories mentioned above by using computers.

Table 1. Procedures Pursued in the Study

STEPS	PROCEDURES
Step 1	PRETEST: Survey: RWMS
Step 2	TREATMENT: Carrying out computer-based activities for reading and writing skills
Step 3	POSTTEST: Survey: RWMS

Before the activities, the students received a one-week intensive tutorial to learn how to use the Snagit™, Screencast, and e-mail services. During the tutorial, a sophomore (second-year) student who had good knowledge of computer technologies assisted the researcher to help students how to use the programs. Assuring that the students could use the programs, the researcher sent the stories to the students' Screencast accounts using his own Screencast account. The activities and tasks ascribed to the stories were described by different scholars in the field (Lazar, 1993; Sokolik, 2001; Wallace, 1992; Warschauer and Whittaker, 2002). For instance, the activities and tasks designed around the story "*The Lottery*" by Shirley Jackson can be seen in Table 2.

Table 2. Activities and Tasks Ascribed to the Story

ACTIVITIES AND TASKS USED	
Pre-reading Activities	
Brainstorming and Preparing a Cover	
While-reading Activities	
Describing the Setting	
Continuing the story (Writing an End)	
Comprehension Questions	*for Literal Comprehension*
	for Seeking Evaluation
Post-reading Activities	
Summarizing the Story	

At the pre-reading stage, the students were given a brainstorming activity in which they were asked to read the title of the story and utter anything related to the title. Later, they searched on the Internet and found a picture related to what they thought about the title of the story. After finding the picture, they were asked to prepare a cover for the story by using Snagit™ and share their captures with each other through their Screencast accounts (see Figure 3 for a sample image prepared by one of the participants). They were also asked to make comments on each other's captures.

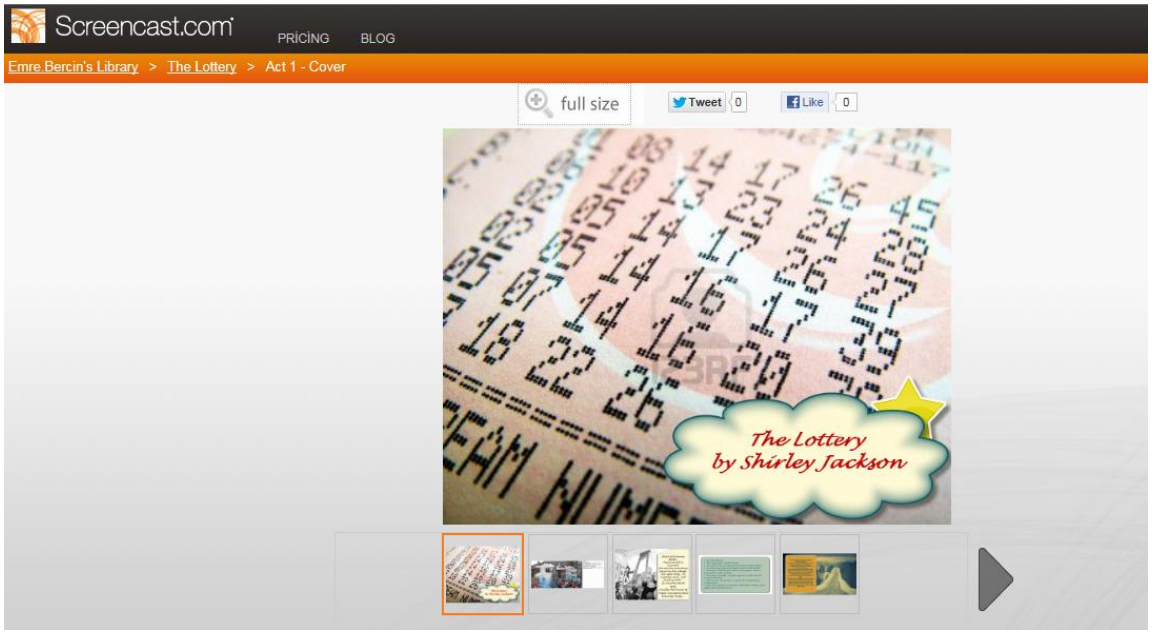

Figure 3. A Sample Cover Prepared by One of the Students

At the while-reading stage, the students carried out three different activities. First, they read the story on their computer screen until the part specified by the teacher, and then described the setting (time and place) using a video captured by Snagit™ (see the following link http://www.screencast.com/users/suatdonen/folders/the_lottery/media/13484d85-3cde-2dd-88bf-668a5a9bb70e for a sample video). Afterwards, they were asked to write the rest of the story by integrating pictures captured via Snagit™ into their texts (see Figure 4 for a sample prepared by one of the students).

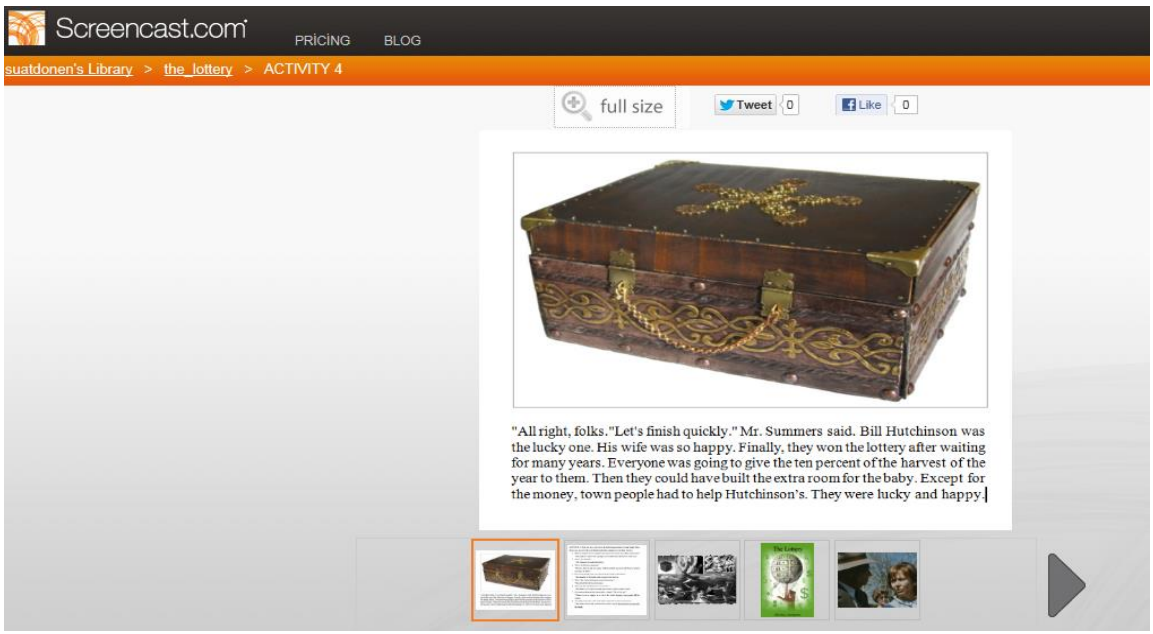

Figure 4. A Sample Ending of the Story Prepared by One of the Students

In the final activity of the while-reading stage, the students were given some comprehension questions which aimed to examine students' literal comprehension of the story and seek their evaluation of the story. The students were asked to answer the questions using the text capture feature of Snagit™ and share their captures with each other (see Figure 5 for a sample capture).

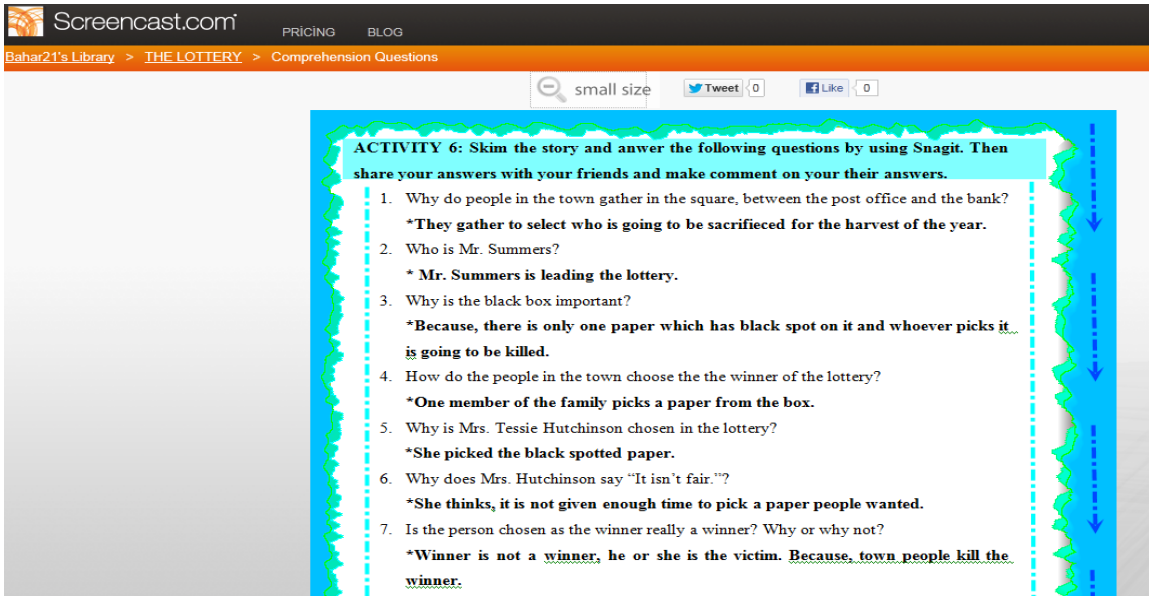

Figure 5. A Sample Text Capture for the Comprehension Questions Related to the Story

At the post-reading stage, the students were asked to skim the story and write an illustrative summary of it using Snagit™ (see Figure 6 for a sample summary by one of the students). The students were also required to share their captures with their classmates and make comments on each other's recordings. In the final step of the study, the RWMS was re-administered to measure the change in the students' L2 motivation level.

Figure 6. A Sample Summary of the Story Prepared by One of the Students

Data Analysis

The elicited data were analyzed using Statistical Package for Social Sciences (SPSS 22.0 for Mac). The program was employed to calculate some descriptive statistics (e.g., frequency rates, means, percentages, and standard deviations) related to the students' demographic information with particular focus on their use of computers. It was also used to carry out reliability analysis, Paired Samples t-test, and correlation analysis regarding the data collected through the RWMS. Warranting the reliability of the scale (.96), a Paired Samples t-test was run to determine the degree of difference between the mean scores of the RWMS on the pretest and posttest. The effect size statistics was calculated to determine the magnitude of the effect of found by the paired samples t-test. Moreover, correlation analysis was conducted to see the relationship between the students' L2 reading and writing motivation level (dependent variable) and their frequency and experience of computer use (independent variables) on both the pretest and posttest. Before performing the correlation analysis, preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, homoscedasticity and multicollinearity. The statistical analysis yielded no violation regarding these assumptions.

Results

As aforementioned, the RWMS consisted two different parts, namely (a) the students' demographic information and computer-related characteristics, and (b) L2 reading and writing motivation scale. The findings related to each of these parts are presented respectively in the following sections.

Students' Computer-related Characteristics

Regarding the students' computer-related characteristics, their frequency of computer use per week and self-evaluation of experience of computer use were examined in this study. The students' frequency of computer use per week is illustrated in Figure 7.

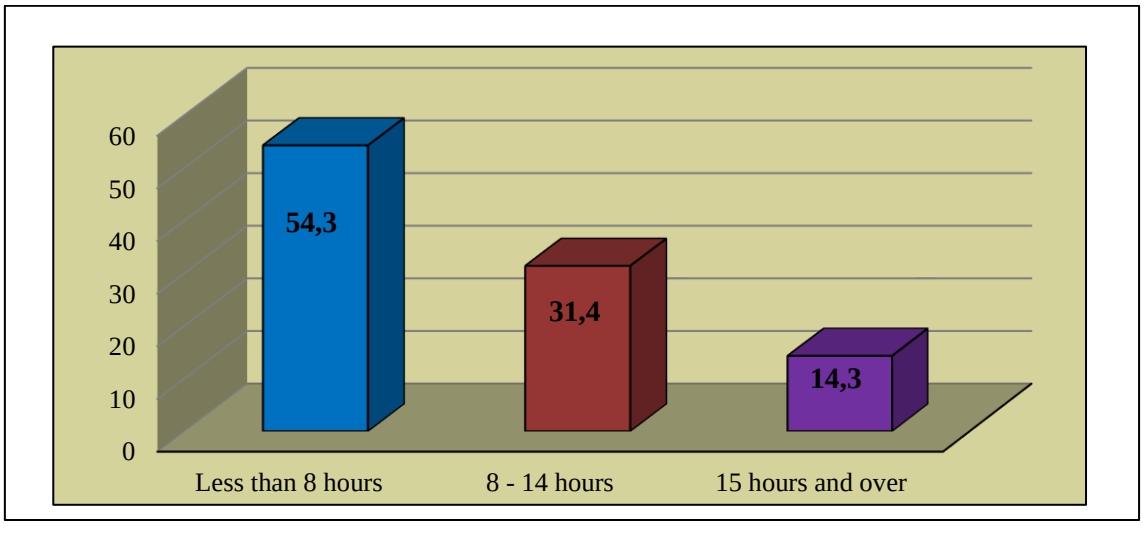

Figure 7. Students' Frequency of Computer Use per Week

As can be seen in the figure above, while the majority of the students (54%)) reported to use computers less than 8 hours, only some of them (14%) stated to use computers 15 hours or over. The rest of the students (31%) said to use computers between 8-14 hours. As for their self-evaluation of experience in using computers, their responses varied (see Figure 8).

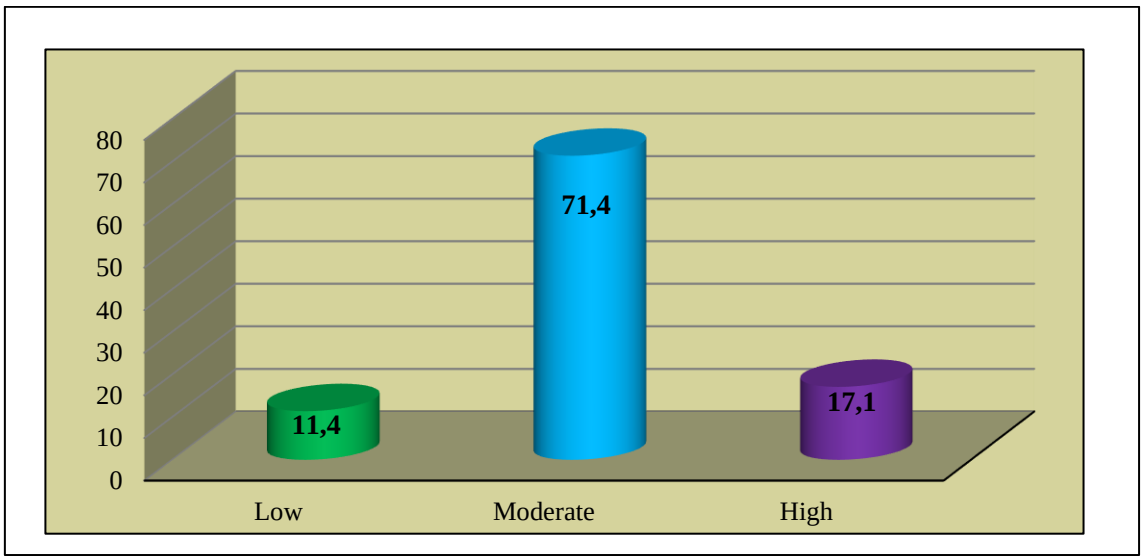

Figure 8. Students' Experience of Computer Use

Figure 8 shows that most of the students (71%) reported a moderate level of experience in using computers. The number of those who stated a low (11%) or high (17%) level was found to be quite close to each other.

Research Questions under Investigation

In this section, the research questions under investigation are dealt with consecutively. First, the impact of the use of computers on the students' L2 reading and writing motivation level was measured by employing a Paired Samples T-test (see Table 3).

RQ1: What impact does the use of computers have on L2 students' motivation in reading and writing skills?

Table 3. Paired Samples Statistics between the Pretest-Posttest

Tests	N	Mean	SD	SE	t	df	Sig.
Pretest	35	3.8817	.67	.11481	-2.257	34	**.031**
Posttest	35	4.2222	.58	.09854			

$p<.05$

Table 3 shows a statistically significant difference between the pretest and posttest regarding the impact of computers on the students' motivation in L2 reading and writing skills ($p<.05$). The students appeared to have higher level of motivation on the posttest ($M=4.2222$, $SD=.58$)

when compared to the pretest [*M*=3.8817, *SD*=.67, *t*(34)=-2.257, *p*=.031]. The Cohen's d statistics (.38) indicated a medium effect size.

In the current study, the students' frequency and experience of computer use were considered to influence their motivation in L2 reading and writing skills. Therefore, correlation analysis was carried out to answer the following research question:

RQ2: What relationship exists between L2 students' motivation in reading and writing skills and their (a) frequency of computer use, and (b) experience of computer use?

The relationship between the students' motivation in L2 reading and writing skills and their frequency and experience of computer use was investigated using Pearson product-moment correlation coefficient (see Table 4). Regarding the pretest, no significant correlation was found between the students' motivation in L2 reading and writing skills and their frequency (*r*= -.04, *n*=35, *p*>.01) and experience (*r*=.04, *n*=35, *p*>.01) of computer use. However, a positive significant correlation was observed between the students' frequency and experience of computer use (*r*=.53, *n*=35, *p*<.01), with high levels of frequency of computer use associated with high levels of experience of computer use. This particular finding raises concern with the presence of multicollinearity to impede the results of the study. However, because the correlation between these two variables (*r*=.53) is less than the critical value of .7 and also the variance inflation factor (*VIF*) figures (1.39) is well below the critical value of 10 (Pallant, 2016; Tabachnick & Fidell, 2001), they posed no obstruction in relation to the obtained results.

Table 4. Correlation between Students' L2 Reading and Writing Motivation and Their Frequency and Experience of Computer Use

		L2 Motivation	Frequency of Computer Use	Experience of Computer Use
Pretest	L2 Motivation	1		
	Frequency of Computer Use	-.04	1	
	Experience of Computer Use	.04	.53**	1
Posttest	L2 Motivation	1		
	Frequency of Computer Use	-.06	1	
	Experience of Computer Use	.11	.53**	1

**p<0.01

As for the posttest, the correlation analysis yielded similar results to that of the pretest. That is, no significant correlation was observed between the students' motivation in L2 reading and writing skills and their frequency (*r*= -.06, *n*=35, *p*>.01) and experience (*r*=.11, *n*=35, *p*>.01) of computer use. These correlations close to zero on both the pretest and posttest suggest no linear association between the students' L2 reading and writing motivation and their frequency and experience of computer use. Therefore, conducting multiple linear regression was deemed unnecessary.

Discussion and Conclusion

As a general interpretation of the responses given to the two questions about the students' characteristics in relation to computers, it can be stated that approximately all the students were familiar with computers at the time of the study. Moreover, as informally observed, every year the number of students having computers is increasing. Consequently, it can be inferred that students will integrate computers more into their language learning processes because different and various research findings reveal that familiarity is an important element in the use of computers in both language learning and teaching (Asan 2003; Edwards 2005, Zehir-Topkaya, 2010).

The significant increase in the students' motivation L2 reading and writing skills after the completion of various activities and tasks through computer technologies confirms the outcomes of several other studies which focused on the impact of computers on students' L2 reading and writing motivation (see Beatty, 2003; Kledecka-Nadera, 2001; Li & Hart, 2002; Schoepp & Erogul, 2001; Warschauer, 1996; Wu, 1992; Yilmaz, 2015). This is primarily because computers enhance L2 students' motivation of language learning by providing them a less threatening means to communicate and by enabling them to work on meaningful and fruitful projects (Barson et al., 1993; Kelm, 1992; Kroonenberg, 1994, 1995; Vilmi, 1995 cited in Warschauer, 1996; Pim, 2013).

The interactive platform provided through Screencast and e-mail services is considered to be a major factor which increased the students' L2 reading and writing motivation. This is because the students had the chance to share their products with one another and make comments on these products. As noted by numerous scholars (see Ferris, 2002; Pim, 2013; Sokolik, 2001; Sullivian & Pratt, 1996; Wang & Vasques, 2012; Warschauer, 1996; Warschauer & Healey, 1998), the synchronous and asynchronous interactive environment provided via computers increase students' L2 reading and writing motivation because students could build a wide audience (their instructor and classmates in this study), which would not be possible otherwise.

Another important factor that promoted the students' L2 reading and writing motivation can be attributed to the provision of the opportunity to integrate visuals in the activities and tasks carried out at the pre-, while-, and post-reading and writing stages. The students felt further motivated to read and write because computers enabled them to enhance the quality of their products by integrating visuals and videos in their products. In a similar study, Yeh (2005) reported the positive effects of the inclusion of PowerPoint and online videos in a poetry lesson as well as in students' assignments after the lesson in order to highlight the impact of integrating new technologies into teaching literature in the language classroom. Likewise, Oskoz and Elola (2016a, 2016b) underscore that computer technologies promote L2 students' language gains (e.g., pronunciation, media skills development, increased language production, and syntactical complexity) by providing the multimodal platforms in which audio-visuals means can be used in the process of L teaching and learning.

The findings regarding no relationship between the students' L2 reading and writing motivation and their frequency and experience of computer use on both the pretest and posttest could be considered as an indication of the benefit of computers for reading and writing skills in the L2 classroom. This is because any significant effects of the students' frequency and experience of computer use would obscure determining the real impact of using computers to increase L2 students' motivation in reading and writing skills. In the related

literature, it is emphasized that students naturally tend to build similar computer experience over the course of time because they spend more time working with computers due to certain course requirements (Zehir-Topkaya, 2010), which, as a result, diminishes the significance observed between their L2 reading and writing motivation levels and their frequency and experience of computer use. Similarly, Yilmaz (2012) found that students' computer self-efficacy perceptions had no significant impact on their L2 motivation level. Consequently, it can be inferred that the amount of time spent using computers and experience of using computers have no influence on students' L2 reading and writing motivation.

Briefly, it can be concluded that the use of computers in language classrooms has positive effects on students' motivation in L2 reading and writing skills. Particularly, the rapid and continuous developments in computers technologies provide various tools and means to the use of teachers in the language classroom. Therefore, more studies could be conducted in order to shed further light on this issue.

Limitations and Recommendations

The current research had several limitations which require further consideration in order to draw sound conclusions. One of these limitations is related to the research design applied in this study, namely *one-group pretest-posttest* which is classified as a pre-experimental research design. The lack of a control group in this research design poses some limitations to compare the experimental group data with the control group data. This limitation resulted from the lack of enough number of students in the English Language Teaching Program in which the research was conducted. As a recommendation to overcome this limitation, studies based on true experimental research design that include both experimental and control groups can be employed to overcome this limitation. Another limitation of this study is concerned with the instruments used for eliciting data (RWMS) which allowed to collect quantitative data. In further research, different tools can be utilized to collect both quantitative and qualitative data in order to corroborate the findings of the study. For instance, mixed-methods research paradigm can be implemented by using semi-structured interviews designed in the format of both individual and focus-group interviews. The final limitation of this study pertains to the L2 proficiency of the participants, namely the students who studied in the English Language Teaching Program at state university in Turkey. The students had a minimum of intermediate level of English language proficiency at the time of study, which eased the process of carrying out the activities and tasks designed around the stories by using the computer programs described above. Regarding this limitation, future research can be conducted with students at different L2 proficiency (e.g., beginner and preintermediate) and with students who study in programs other than English Language Teaching.

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Appendix

		Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
1.	I can write better essays when I do them on computer.					
2.	Revising my papers is a lot easier when I write them on computer.					
3.	I enjoy writing my papers by hand more than by computer.					
4.	I enjoy seeing the things I write printed out.					
5.	Using computers gives me more control over my writing skills.					
6.	Computers contribute to my writing skills positively.					
7.	Writing through computer makes me more creative.					
8.	Writing via computers causes a loss of time.					
9.	Computers enable me to write visually enhanced texts.					
10.	I can write texts in English more independently when I use a computer.					
11.	Computers make people weak and powerless while writing.					
12.	Computers enable me to share my writing tasks with my classmates and other people.					
13.	Using computers gives me more chances to practice my writing skills.					
14.	Writing through computers gives me a feeling of accomplishment.					
15.	Writing papers by hand saves time when compared to by computers.					
16.	Computers help me self-correct my spelling, grammar and style errors.					
17.	I can get immediate feedback on my writing via computers.					
18.	I can organize my paragraphs better when I write via computers.					
19.	I prefer computers to textbooks in writing courses.					
20.	Using a computer gives me more chances to read *authentic* materials.					
21.	Reading through computers makes me feel curious.					
22.	Reading on the computer screen causes a loss of time.					
23.	Computers contribute to my reading skills positively.					

24.	I can read texts in English more independently when I use computers.					
25.	Using computers gives me more chances to read in English.					
26.	I want to continue using computers while doing reading activities.					
27.	I feel motivated while reading on the computer screen.					
28.	I prefer checking the words in a reading text in a paper dictionary to in an online dictionary.					
29.	I have the chance to look for additional information on the Internet if I don't understand something.					
30.	I use pictures to understand the text while reading via computers.					
31.	I look for pictures before reading via computers.					
32.	Reading on the computer screen hampers my comprehension of the text.					
33.	I enjoy the pleasure of using on-line dictionaries while reading on the computer screen.					
34.	Computers make our job easier in reading activities.					
35.	I prefer reading via computers to reading in a textbook.					
36.	Reading via computers is more interesting when supported with visual information.					

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