

Storyboards and Reading Comprehension of Literary Fiction in English

Historietas y comprensión lectora de obras literarias de ficción

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This article reports on a study developed in order to help a group of six limited- proficient students of English (newcomers) to improve their reading comprehension of English novels by designing storyboards, a type of graphic organizer that condenses both images and scripts. The investigation was carried out in a public school in the state of North Carolina, United States, and lasted eight weeks. The following instruments were implemented in order to measure the impact of this investigation: two pre-tests and two posttests, a teacher's journal, students' portfolios, and the results of a reading benchmark. Data were analyzed using cross tabulation and coding of the data collected. The results revealed that storyboards can have a positive impact on English language learners with limited language proficiency.

Key terms: fiction, graphic organizers, non-linguistic representations, novels, reading comprehension, storyboards

En este artículo se reporta un estudio desarrollado para ayudar a un grupo de seis estudiantes con limitaciones en inglés a mejorar su comprensión de novelas de ficción a través de la realización de historietas, las cuales son un tipo de organizador gráfico que condensa ilustraciones y descripciones. La investigación fue realizada en una escuela pública del estado de Carolina del Norte en Estados Unidos y duró ocho semanas. Los siguientes instrumentos fueron implementados con el fin de medir el impacto de esta investigación: dos exámenes previos al tratamiento y dos exámenes posteriores, diarios de campo, portafolios y los resultados de una prueba de lectura estandarizada. Se emplearon tabulación cruzada y codificación para el análisis de datos. Los resultados revelaron que el uso de historietas puede tener un impacto positivo en aprendices del inglés con habilidades lingüísticas limitadas.

Palabras clave: comprensión lectora, historietas, novelas de ficción, organizadores gráficos, representaciones no lingüísticas

Introduction

According to the latest census data, in the United States “among the 262.4 million people aged 5 and over, 47.0 million (18 percent) spoke a language other than English at home” (Shin & Bruno, 2003, p. 1). The lack of language scaffolding and academic support these multicultural children experience at home often reflects on their performance at school. Their reading comprehension skills, for example, are one of the most affected factors. Historically, very few investigations have attempted to examine the different processes students use whenever they are exposed to reading comprehension in English as a foreign language (EFL) in Colombia. In recent years, however, a few studies that focus on the explicit instruction of reading strategies in EFL have flourished, especially at the university level. Lopera (2012) conducted a case study in which 26 students from Universidad de Antioquia were instructed in how to use reading strategies such as previewing, predicting, and inferring as part of a 20-week reading course designed for the purpose of his investigation. After the completion of the project, it was concluded that the reading comprehension of the study participants had improved significantly. Another study including a web-based program for reading strategy instruction was conducted at the same university as well. Arismendi, Colorado, and Grajales (2011) concluded that, after their investigation, the participants had adopted the utilization of reading strategies as part of their reading habits, which had a positive impact on their reading comprehension skills. Nevertheless, the study proved to have some limitations as the researchers were not experienced in web-based course teaching and frequently had to rely on printed texts.

Despite the fact that many Colombian educators and investigators in the EFL arena consider explicit instruction of reading strategies a ground rule for effective foreign language learning, strategy instruction in EFL as a vehicle to attain reading comprehension has not been widely accepted as an official instructional model in this country, especially in elementary and secondary school settings. According to the program “Leer Libera, Plan Nacional de Lectura y Bibliotecas” (Reading is Freedom, Libraries and National Reading Plan, Biblioteca Nacional de Colombia, 2009), Colombia is ranked 30th among thirty-five different nations from all over the world, which means that the majority of school-aged Colombian children have very low reading comprehension skills in their own native language (L1). As a result, it could be inferred that there is a strong need to implement strategies that will help Colombian students increase their comprehension as they read in Spanish (L1) and in English (L2).

This article explicitly reports some findings of an action-research that focused on the use of storyboards as a type of post-reading activity involving visual representations in which the students were able to rediscover what they read by doing (working on hands-on activities) and seeing (using visual representations or pictures). The project was carried out in a public school in the state of North Carolina in the United States of America. Additionally, the research was

developed and applied in an English as a second language (ESL) setting that consisted of a small group of English language learners of Hispanic descent, and whose socio-cultural background did not differ much from that of Colombian students. The findings of this research study validated the effectiveness of storyboards to help this type of students to decode the knowledge they acquire by exploring their reading understanding in an unconventional manner.

Literature Review

The similarities between L1 and L2 reading development have been a matter of discussion for several decades. Even though research has demonstrated that the relationship between L1 and L2 reading processes is very close and significant, the role of L1 reading abilities in the development of the L2 reading process has still been very controversial. Fortunately, several reading strategies attempting to help L2 learners acquire good quality reading skills regardless of their L1 reading level have emerged during the past couple of decades.

Research on L1 Reading: General Overview

Over the past forty years, research on the reading process has evolved significantly. Studies conducted in the 1960s suggested that reading was a bottom-up process consisting of “placing together graphemes to form words, words to form sentences, sentences to form paragraphs, and so on” (Parry, 1996, p. 668). This particular modality of reading gave little importance to the background knowledge, previous experiences, and higher-order thinking skills the readers could use to reach full reading comprehension.

During the 1970s and early 1980s, a new vision of the reading process, frequently called the “Top-Down Revolution,” was supported by reading specialist Kenneth Goodman in 1967 and later, in 1982, by researcher Frank Smith. Goodman and Smith (as cited in Parry, 1996) defined reading as a top-down process in which readers use their expectations and predictions to understand what the text will say. This new idea of reading gave birth to the *schema theory*, which suggests that “when individuals obtain knowledge, they attempt to fit that knowledge into some structure in memory that helps them make sense of that knowledge” (Ajideh, 2006, p. 4). These structures in memory were later known as schemata, and they are thought to be responsible for the ability of the reader to comprehend and make connections when reading a text.

Research in the late 1980s fostered an interactive approach to the reading process. This new approach, widely referred as the “Interactive Model,” places emphasis on both the print and the interpretation of the reader (Rumelhart, Stanovich as cited in Abisamra, 2001). Under this approach, the reading process is conceived as a close and mutual interaction between the

reader and the text. As a result, the Interactive Model has often been considered to be the perfect equilibrium between the text and the reader.

Nevertheless, the 1990s introduced a variety of new approaches and strategies that dissolved the stabilized idea of comprehension provided by the Interactive Model. By the late 1990s, a great number of reading strategies attempting to fulfill the necessities of different types of learners had come to be an effective part of research on the reading process. Scholars like Kamil, Intrator, and Kim (as cited in Eskey, 2005) consider that this new vision of reading has been especially framed on the neurobiological, socioeconomic, sociocultural, and political dimensions of the human being, which has offered a more expanded, rich, and individualized vision of the reading process.

During the last decade, this humanistic vision of the reading process has highly encouraged researchers, educators, and even government agencies to view reading as a sociocultural discipline. In the United States, for example, the No Child Left Behind Act of 2001 established reading as the only way to help school-age children succeed in our current and future society (Mandel-Morrow, Rueda, & Lapp, 2009).

Fortunately, not only L1 but also L2 reading research has made advances in terms of finding the appropriate strategies to help L2 readers master the English reading process. These achievements, however, have not been easy to reach as the relationship between L1 and L2 reading has not been widely accepted due to its apparent feeble foundations.

Relationship Between L1 and L2 Reading Comprehension Processes

In spite of the considerable number of studies attempting to prove the similarities between L1 and L2 acquisition, comparisons between L1 and L2 literacy development have been a matter of discussion for several decades. Cummins presented his widely recognized *language interdependence theory* in the 1970s. This theory stated that “the level of competence a child attains at a certain point in a second language is largely dependent on the level of competence already achieved in their first language” (New Zealand Ministry of Education, 2009, p. 1). Since this premise proposed that learners with a low level of literacy or comprehension in their L1 are not capable of mastering an L2, a substantial number of counterarguments have emerged.

The major rival to Cummins’s interdependence language hypothesis, for example, was Clarke’s *short circuit theory*. Clarke (1980) argued that regardless of the level of knowledge L2 learners have regarding their L1, reading proficiency cannot be attained unless they are proficient in the L2. After he conducted an experiment in which a number of proficient adult Spanish speakers were assessed in both Spanish and English reading comprehension, he concluded that even good readers’ abilities can short circuit and become vulnerable “when confronted with a difficult or confusing task in the second language” (Clarke, 1980, p. 206).

Hence, Clarke suggested that ESL teachers should make use of reading strategies that effectively help students apply behaviors developed by skilled readers: concentration on passage-level semantic cues, formulation of hypotheses about the text before reading, reading to confirm and refine or reject the hypotheses, and a willingness to take chances and make mistakes. Semantics seen as the conveyance of messages by using nonlinguistic representations in L2 reading justifies the purpose of this research.

Current L2 Reading Research and Instruction: Focus on the Learner

During the last decade, research on L2 reading has been flourishing significantly, which has brought hope to those educators who had to rely on L1 reading research to fulfill the necessities of their L2 learners. Even though researchers and educators in the L2 reading arena still recognize a significant relationship between L1 and L2 reading processes, they have also opened a gap arguing that factors such as age, family role, and previous schooling make native speakers' and second language learners' reading abilities significantly different (Diaz-Rico & Weed, 2006).

Recently, previous experience in schooling has been seen as the most influential factor in L2 reading development. Students who are literate in their L1 are more likely to become proficient in their L2 literacy skills. Likewise, background knowledge has been proven to be a very influential aspect in L2 reading development. Herrera and Murry (2005) suggested that English language learners' (ELL) prior knowledge significantly stimulates their comprehension and allows them to break down new information more easily and effectively.

As a result of this cultural and humanistic vision of L2 reading, several reading strategies have become an active part of the L2 reading arena. Faltis and Coulter (2008) proposed that daily reading in the target language sharpens the learners' L2 reading skills. In addition, Gibbons (2002) emphasizes the importance of scaffolding before, during, and after reading takes place. As pre-reading activities, she suggests predicting, storytelling, and sequencing illustrations. Concerning post-reading activities, she recommends encouraging students to give alternative nuances to the knowledge they acquire from reading by creating cartoon strips, participating in readers' theatre, and producing story innovations. Evidently, the use of nonlinguistic representations has been seen as a solution to close the language gaps of many ELLs, especially during L2 reading instruction (Zuñiga-Dunlap & Marino-Weisman, 2006).

L2 Reading Instruction: Comprehension and Storyboards

Fortunately, the advances in L2 reading research have facilitated the development of a great variety of resources and reading strategies designed to satisfy the needs of every ELL regardless of his or her level of language proficiency. The use of nonlinguistic representations, for example, is an asset to get ELLs engaged in different types of reading activities. Hill and

Flynn (2006) claimed that “knowledge that is presented nonlinguistically is stored in the form of mental pictures or physical sensations such as sight, sound, smell, touch, taste, and movement” (p. 36). Moreover, Short (as cited in Hill & Flynn, 2006) recommended the use of realia, technology, and hands-on activities such as drawing pictures and sequencing stories in order to provide ELLs with a more simple language instruction and level of comprehension.

Based on the previous premises, this study intended to make good use of nonlinguistic representations, particularly storyboards, to help students increase their comprehension of novels. As defined by Varvel and Lindeman (2005), “storyboards are a means to graphically represent layout, organization, content, and linkages of information to create a conceptual idea of the information, location, meaning, and appearance” (p. 1). Many ELLs, especially those with very limited language skills, do not have the language abilities they need to understand different types of texts. Storyboarding as a type of post-reading activity could provide these students with a great number of advantages. For example, storyboarding enhances the students’ organization, time management, and planning because it allows them to organize their ideas and picture them before they write them using words (Doherty & Coggeshall, 2005). Also, storyboards allow students to make use of different reading strategies such as previewing, visualizing, illustrating, using background knowledge, summarizing, sequence understanding, identifying main idea and details, identifying important information, and many more. Last, storyboarding promotes the integration of reading and writing during class instruction since students are expected to describe their illustrations in detail.

Like every process, storyboarding requires a number of steps in order to be well implemented. Varvel and Lindeman (2005) stated that after reading, the first thing to do is to organize both abstract and concrete materials. That is, all of the information and resources to be used during the development of the storyboards need to be handy well in advance. Because it is important to maintain organization, it is necessary to use graphic organizers to record important information such as characters, plot, and setting. This allows students to put down the ideas that will be included in the final work without missing any important detail. It is important to say that this process should always be modeled and monitored by the teacher. When all of the important information has been discussed and recorded in the graphic organizers, students can start creating their storyboards. The layout of the storyboard template should be big enough to allow students to draw neat pictures and write clear explanations of the illustrations. During this step, students can work more independently. Using their imagination and creativity, they have to decide the exact pieces of information they will be including in the storyboards and plan for the illustrations that will accompany them. Once all the visuals are completed, students can start describing what is happening in each flow chart. Lastly, it is advisable to review all the flowcharts on storyboards to check for mistakes dealing with spelling and punctuation, missing or redundant information, and poor transitions.

The intention of this study was to demonstrate that storyboards could help the participants improve their comprehension of fiction texts by synthesizing the knowledge they acquired in multiple ways. Many educators and researchers have applied this technique and have obtained gratifying results. In 2008, a high school teacher in Florida concluded that after having worked with storyboards, the students not only improved their reading comprehension skills, but also learned how to use critical thinking, plan well in advance, and manage their time (Snider, 2008).

Method

Burns (2010) suggests that effective educators must use action research (AR), an investigative approach that prompts teachers to evaluate and reflect on their own teaching procedures, in order to identify problems and envision adequate solutions. After identifying and reflecting on a problem regarding the lack of reading comprehension skills present in the setting where this study was developed, it was concluded that an AR intervention needed to be undertaken in order to attain sustainable improvements of that particular issue. The present AR study was carried out in order to determine the impact and effectiveness that storyboards had on the reading comprehension skills of a group of ELLs in the earliest stages of language proficiency. Specifically, the storyboards were made after the students read the novel “Number the Stars” by Lois Lowry, as a requirement of the state standards for middle school. In order to measure the significance of this study, three research instruments were implemented: two pretests and three posttests, a teacher’s journal, and students’ portfolios. Additionally, the results of a district-wide reading test were taken into consideration. These instruments will be described in detail further on in this section.

Participants

The participants of this study were a group of newcomer students belonging to the English Academy Program, a pilot program especially designed to fulfill the needs of newcomer students who were enrolled in sixth, seventh, and eighth grades at Selma Middle School during the 2010-2011 school year. The group consisted of six students, three males and three females, whose ages ranged from 11 to 15. Three of the students were in sixth grade (Participants 1, 2, and 3), two in seventh grade (Participants 4 and 5), and one in eighth grade (Participant 6). All of the students were of Hispanic origin, five from Mexico and one from the Dominican Republic.

According to the results of the W-APT test (WIDA-ACCESS Placement Test), which was used officially in the United States at the time to analyze the ELLs proficiency levels, all of the members of the sample were identified as Level 1—entering, on a scale of 1 to 6. In spite of this, they all had very different levels of language proficiency. In other words, some of

participants seemed to be more advanced or simply had better language skills in the four language domains, but especially in reading and writing. This is due to the fact that some of them had limited access to education back in their home countries (Participant 1), while others were completely literate in their first language and had a very good mastery of it (Participants 2, 5, and 6). Diaz-Rico and Weed (2006) noted that having poor schooling in L1 or experiencing failure significantly affects the students' "self-esteem and willingness to take risks in learning" (p. 87). The final results of this research study, however, revealed unexpected outcomes that made this investigation a lot more interesting.

Instrumentation

As mentioned previously in this section, three different types of instruments were implemented in order to measure the impact of this research study: two pretests and three posttests, a teacher's journal, and students' portfolios. A fourth instrument was also taken into consideration, the results of the Reading Quarterly Assessments, a county reading benchmark assessment whose results were analyzed as follows: one before the treatment and one after the treatment.

Pretests/Posttests. The novel "Number the Stars" has 17 chapters of approximately the same length. Therefore, two pre-tests during the first phase of this research study (before the treatment) and two posttests during the second phase of the research (during the development of the treatment) were administered. These reliable multiple-choice tests were taken from www.thinkquest.org, an educational teacher-created website. The questions did not require the students to make use of higher order thinking skills such as interpreting or evaluating. Also, the tests were traditionally-oriented and did not have any type of visual support.

The first pretest was administered after the students finished reading the first four chapters. Then students took their second pretest after they finished the eighth chapter. The results of these tests were carefully registered in a teacher's grade book. Furthermore, the first posttest was administered after students finished reading chapter twelve. By this time, students had been exposed to the research treatment, which was drawing storyboards after reading each chapter. Last, the students took the second posttest at the end of chapter seventeen. Again, students needed to make their storyboards on the chapters they had read previous to the test. The results of these posttests were also carefully registered in a teacher's grade book.

Teacher's journal. Throughout the study, a journal containing detailed descriptions of the development of the research was maintained. The journal entries were dated and included the teacher's observations on the students' perceptions, feelings, and attitudes. As part of a color-coding technique used in the analysis of qualitative data, any difficult situation or

problem was highlighted in red while positive aspects were highlighted in yellow. For this purpose, a tally sheet that measured the students' attitudes was used and three possible alternatives were considered: *outstanding*, *good*, and *poor*. Through this system, the teacher-investigator intended to see if the treatment affected the students' engagement as they read the novel. Likewise, using a similar tally sheet, the researcher recorded the engagement of the participants as they created their storyboards. Again, the objective was to see if their attitudes towards the creation of storyboards were related to their success or failure in the posttests they took after reading their novel chapters.

Students' portfolios. These portfolios contained the students' graphic organizers and storyboards as well as the tests. These samples facilitated the registration and processing of more accurate findings while evaluating the impact of the research. In addition, the students recorded their perceptions on the use and effectiveness of storyboards by using a learning log which they also kept in their portfolios. The students were prompted to do this every day after they finished their storyboards and after they took a test.

Reading quarterly assessment. In order to measure student progress, many school districts in North Carolina mandate that every elementary and middle school give pupils a reading benchmark at the end of each quarter, which covers a period of nine weeks. This assessment tool offers teachers feedback on how to modify their instruction in the language arts class and prepare all of their students for the Reading End-Of-Grade (EOG) tests.

Particularly, the results of this system-wide assessment provided information on how this research study impacted the students' reading comprehension skills in general. In other words, by comparing the results of the reading assessments the students took before and after the treatment, it could be determined if the use of storyboards helped students improve their reading comprehension in a long term basis. This fourth instrument was not intended to measure the impact of this research study directly, but it did strengthen it.

Research and Pedagogical Design

This research study was conducted for a period of eight weeks between November, 2010 and January, 2011. It covered three main phases: Preparation Phase, Development Phase, and Analysis Phase. These phases were modeled on the four AR steps proposed by Glanz (2003): (1) select a focus, (2) collect data, (3) analyze and interpret data, and (4) take action.

During the Preparation Phase, the students were trained in how to design storyboards. First, as part of the language arts class, they were prompted to read several short stories for about a period of two weeks. During this time, they not only read but also analyzed the characters, plots, and settings of each story using graphic organizers. After the students had read and analyzed about five different stories, they were shown a storyboard that was designed based on one of the stories they had read in class. The students were taught about

the elements of a storyboard as well as the steps on how to create it. Also, they could see how the sample storyboard was elaborated based on the information that was collected in the graphic organizers they had filled out in previous classes. Using the information in the graphic organizer as a support, the students were encouraged to choose a different story and design a storyboard following the model they had been provided. When the storyboards were finished, the students were asked to retell their stories using the storyboards as a support.

The Development Phase was the actual implementation of the treatment and covered a period of four weeks. During this time, the students read the novel, filled in the graphic organizers, designed their storyboards, and took the pretests and posttests previously described. These materials were filed in the students' portfolios. Simultaneously, perceptions on the students' attitudes were thoroughly recorded in the teacher's journal.

During the first two weeks of the Development Phase, the students read the first eight chapters of the novel without having any contact with storyboards. In the third week and starting on chapter nine, the students filled in their graphic organizers after reading each chapter and then created their storyboards using a storyboard template. On average, they spent about forty minutes doing this. Additionally, the students were given a rubric that contained the project guidelines, grading scale, and expectations about the storyboards. They were assessed on the choice of scenes they made for their storyboards, the relationship between the captions and the illustrations, the quality of their work (color, neatness, organization), and the effort and interest they exhibited as they worked. Along with the pretests and posttests, these storyboards served as a formative assessment tool.

Finally, during the Analysis Phase, an exhaustive analysis of the data collected from the instruments selected for this research study was carried out. For a period of about three weeks, the teacher's journal was examined using a tally sheet. Moreover, a detailed comparison between the students' growth in their reading comprehension using the results of the pretests and posttests took place. Likewise, all of the materials inside the students' portfolios including tests, graphic organizers, storyboards, and rubrics were assessed. The results of this analysis will be explained in the next section of this article.

Results

This research study attempted to change a problem present in an L2 setting: the lack of reading comprehension skills concerning fiction texts of a group of newly-arrived ELLs. Through the design of storyboards, the participants of the study received extra support that allowed them to understand a 137-page novel in four weeks only. The rigorous analysis of the instruments that were utilized for this research helped the researcher conclude that the use of storyboard did positively impact the participants' reading comprehension skills of a fiction

text since there was a positive relationship among the data obtained from all of them. Below specific details of the study outcomes based on the analysis of each instrument are provided.

Results of Pretests and Posttests

First, based on the observations of the participants' attitudes during the implementation of the treatment and their academic histories, the results of the pretests and posttests were predictable. Participant 1 had limited access to school back in his home country. As a consequence, significantly low scores were expected. Participant 3 did not have interrupted schooling, but he had some problems staying focused and following directions. Because of his lack of attention and commitment, poor test results were predicted as well. Participants 2, 5, and 6 had strong academic backgrounds in L1, so they were expected to have good results on the tests. Plus, they were engaged all the time during the development of the research study. Participant 4 had a fair academic background and was usually engaged during the development of the activities, but this engagement was not consistent. Her test results showed that she experienced growth, but not as much growth as expected.

After the final analysis of both pretests, it could be concluded that the predictions made were correct. From the first pretest to the second pretest, Participant 1 grew four points only; and Participant 3 grew six points. Participants 2, 5, and 6 grew twelve, ten, and twelve points, respectively. Participant 4 grew six points.

The results of the posttests also showed some unanticipated outcomes. Although Participant 1 always struggled because of his poor academic background, he showed much more growth than the rest of the participants: twelve points. In spite of his poor performance during the treatment, Participant 3 grew six points. Participant 4 grew four points only, but she got more than 90% accuracy on both posttests. Participants 2, 5, and 6 grew six, six, and four points, respectively. These figures do not seem significantly high, but they all got more than 95% accuracy on each posttest.

After both pretest and posttest results were collected, each student's average was calculated. Likewise, the number of points each participant grew was added. This information has been summarized in Table 1.

The analysis of the first instrument—the pretests and the posttests—revealed that the use of storyboards did have a positive impact on the participants' reading comprehension skills of fiction texts as they all made significant growth after the treatment.

Teacher's Journal Analysis

The teacher's journal was analyzed by using a tally sheet that contained the frequency of the participants' positive behaviors and attitudes towards the design and use of storyboards.

This process was carried out by using a color-coding technique that consisted of studying the occurrence of these positive attitudes and behaviors on a daily basis. It is important to say that three categories (*outstanding*, *good*, and *poor*) were considered in order to simplify the process and make the tabulation of this type of qualitative data more feasible (see Appendix 1).

Table 1. Analysis of Pretests and Posttests

Subject	Pretest Average	Posttest Average	Growth
Participant 1	50%	76%	26 points
Participant 2	59%	95%	36 points
Participant 3	55%	77%	22 points
Participant 4	67%	94%	27 points
Participant 5	55%	93%	38 points
Participant 6	78%	98%	20 points

Table 2 shows the analysis of the observations made after the data analysis of this instrument was concluded.

Table 2. Participants' Engagement in the Study

Subject	Tally (Participants' Engagement)	Frequency (Four Weeks)
Participant 1	+++ +++	14
Participant 2	+++ +++ +++ +++	20
Participant 3	+++ +++	12
Participant 4	+++ +++ +++	16
Participant 5	+++ +++ +++ +++	20
Participant 6	+++ +++ +++ +++	20

Participants 2, 5, and 6 were always engaged during the application of the treatment. An excerpt from the journal, for instance, reads:

As usual, Participant 2 and Participant 5 were very engaged today. They worked on their storyboards diligently and finished their work in a timely manner. Participant 6 took his time to complete his work, maybe more than usual. However, he also showed commitment and interest in doing a good job.

It is evident that these three participants always demonstrated a positive attitude regarding the design and use of storyboards. Also, their consistent participation and engagement was directly related to their test results as they always scored higher than the rest of the participants. In addition, the engagement of Participant 4 was not always consistent, although she showed commitment at least 80% of the time. For example, in one particular entry at the beginning of the research treatment, the journal reads: "Participant 4 was very engaged today while working on the storyboards," whereas a few days later, another entry expresses that "Participant 4 was a little off today. She seemed to be a little unmotivated and quit doing her job several times. I had to remind her she had to be on task at all times." Participants 1 and 3 exhibited 70% and 60% of engagement, respectively. Because they got distracted or did not follow directions, they sometimes experienced frustration throughout the design of the storyboards, especially when they had to describe their scenes. Evidence of this can be seen in some journal entries that state: "Participant 1 and Participant 3 struggled to do their work today. They were frustrated and refused to complete their work on time." These findings led to the conclusion that the engagement and active participation students had during the design of storyboards strongly influenced their success in the pretests and posttests.

Analysis of Students' Portfolios

The documents that the students filed in their portfolios as well as the log where they recorded their perceptions about the role and the effectiveness of storyboards were studied. Appendices 2 and 3 show examples of learning logs and graphic organizers the students used during the development of this research study, and which were analyzed in order to support its main findings.

The average grade each participant obtained after they completed the nine storyboards they designed during the Development Phase was calculated. The data obtained from these calculations have been summarized in Table 3.

The results of the survey to find out about the effectiveness of storyboards revealed that a 100% of the participants enjoyed designing their storyboards, even the two students who sometimes felt frustrated and unengaged. Also, 100% of the participants expressed that designing storyboards helped them score better on the tests.

Table 3. Effectiveness of Storyboards

Partic.	Tally (I really enjoyed working on my storyboard)	Freq.	Tally (I think designing storyboards helped me do well on the tests)	Freq.
1	++++	9		2
2	++++	9		2
3	++++	9		2
4	++++	9		2
5	++++	9		2
6	++++	9		2

In general, all of the students seemed to enjoy being part of the study. They all enjoyed choosing the scenes for their storyboards, especially because they had the opportunity to interact with their peers and exchange their opinions on what events were the most important ones. They also enjoyed drawing and coloring the pictures. On the other hand, when they had to describe the scenes, they sometimes struggled to express their ideas in written form. Figure 1 shows the grade average every participant obtained for their work on nine storyboards on nine different chapters.

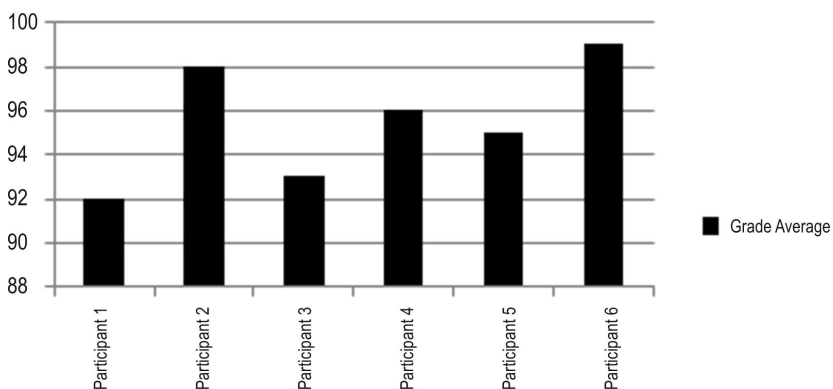


Figure 1. Grade Average

Results of Reading Benchmark

The results of the fourth and last instrument, the Reading Quarterly Assessments, revealed some unexpected outcomes that made this research significantly interesting. Participant 1, who had limited schooling back in his home country and who struggled during the development of the study, scored higher than Participant 2 on both the assessment before the treatment and after the treatment. This situation was unexpected as Participant 2 seemed to be one of the strongest subjects of this research study. Participant 1 also scored higher than Participant 3 on the reading assessment they took after the treatment. Nevertheless, this fact was predictable as Participant 3 showed a considerable amount of disinterest as the study progressed. The students who exhibited the most growth were Participant 5 and Participant 6, two of the most committed subjects of this research study. To summarize, based on the results of the Reading Quarterly Assessments, it was revealed that all of the participants except Participant 3 demonstrated growth in their reading skills. Nonetheless, it would be difficult to determine if the use of storyboards was the only factor that influenced the students' reading comprehension positively since they were also applying different strategies that made up part of the language arts class routine. Figure 2 shows their results on the reading quarterly benchmark they took before the treatment (Assessment 1) and after the treatment (Assessment 2).

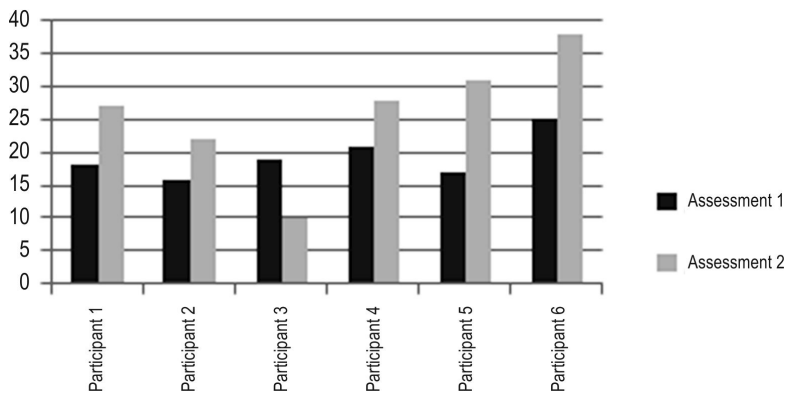


Figure 2. Reading Benchmark Results

Conclusions and Future Implications

The design and use of storyboards proved to be effective in helping a specific group of newcomer ELLs improve their comprehension of novels. The analysis of the data gathered

revealed that all of the participants of the study showed some growth in their reading comprehension of literary fiction. Moreover, their motivation significantly increased since 100% of the students expressed that designing storyboards helped them succeed in their assessments.

Additionally, all of the students benefitted from this research as they all expanded their knowledge of different cultures and historical events, gained organizational skills, explored their creativity, and strengthened their social skills as they interacted with their classmates daily. Furthermore, the students were exposed to a variety of instructional strategies that had an effective impact on their vocabulary development as they were required to learn a significant number of words that appeared in the novel. Last, the students' writing skills were also positively impacted since they had to write descriptions of their illustrations every day.

Despite all the advantages that this study seemed to bring, it also had some limitations. To start with, the sample was probably not the most suitable. Due to the lack of vocabulary and experience with the structure of the English language, students at the earliest stages of language proficiency lack the abilities to understand longer novels. Even though the participants of the study had constant guidance and support, they sometimes struggled to participate in the activities planned for the treatment. Also, the sample was too small, so no generalizations about the effectiveness of storyboards and their incidence in ELL long-term reading comprehension can be made. In addition, some of the instruments were not easy to work with or analyze. The teacher journal, for example, required too much time as detailed descriptions of the attitudes of six different individuals had to be provided. Plus, analyzing the information recorded on the tally sheet was not easy as the descriptions were sometimes too vague. It is important to be precise and create standard conventions that facilitate the interpretation of the ideas recorded.

To conclude, it would be advisable that the study be applied using technology. In recent years, many scholars in the English as a second language field of study have stated that the incorporation of technology in the 21st century classroom has “undoubtedly always facilitated the task of language learning for both instructed and non-instructed learners” (Brinton, 2001, p. 459). The design of storyboards using computers might have a much more positive impact on the students as they could have the opportunity to increase their knowledge of technology and augment their motivation. Likewise, it would be recommendable to apply this research study for a longer period of time. The results of the country reading benchmarks were taken into consideration in order to see if the use of storyboards would result in gains that allowed the students to transfer the skills they learned and apply them in texts other than novels. Based on the results of this investigation, it cannot be concluded if the participants really gained sufficient knowledge and skills to succeed in such assessment. Perhaps if the treatment is applied for more time, this hypothesis might be demonstrated. However, it is important to

mention that the research question and hypothesis were proven since the use of storyboards did have a positive impact on the reading comprehension of nonfiction texts in this particular sample.

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Appendix 1: Measuring the Engagement of Students as They Design Storyboards

Key: 1 = Outstanding, 2 = Good, 3 = Poor

Week of 12/6-12/10

Subject	12/6	12/7	12/8	12/9	12/10
Participant 1					
Participant 2					
Participant 3					
Participant 4					
Participant 5					
Participant 6					

Appendix 2: “Number the Stars” Reading Log

After you finish reading your chapter book and design your storyboard, circle your answer in the third column. After you take your test, circle your answer in the fourth column. Do not forget to put the date!

Date	Chapter Number	I really enjoyed working on my storyboard	I think designing storyboards helped me do well on the tests
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		

Appendix 3: “Number the Stars” Storyboards

After you read each chapter, design your storyboard. First, choose four important events, and draw pictures of them. Then, write a short description for each event. Use your story elements graphic organizer to help you choose the events, draw the pictures, and write the descriptions. Be neat and creative!

Chapter #

