

Development of Reading Skills Through the Application of Easyreading Gamification Tools and Jigsaw Activities

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ABSTRACT

This research studies the implementation of the Easy Reading digital resource and jigsaw activities on reading comprehension. The objective is to evaluate the effects of Easy Reading and online jigsaw activities on second-level English language students in higher education and thus establish their reading comprehension level. The study begins by identifying appropriate techniques for applying Easy Reading and jigsaw activities, followed by determining students' reading comprehension levels through a pretest and correlating Easy Reading, jigsaw activities, and reading comprehension. The methodology employs an experimental research approach, using readings from the Easy Reading website. Students focused on activities before, during, and after reading. The experimental group also participated in jigsaw activities. The analysis was conducted through a reading comprehension assessment administered at the beginning and end of the experiment. To test the hypothesis, a non-parametric analysis was applied using data symmetry testing to determine whether the experiment conducted in the studies yielded the expected results. The results revealed that both groups improved their reading comprehension; however, the experimental group improved significantly, as jigsaw activities were used, allowing researchers to define the students' learning style and pace.

Introduction

Education has faced many challenges regarding developing independent learners. It has been set as an objective for contemporary education frameworks. However, it has not been successfully achieved in places like Ecuador. There are different proposed methodologies to solve the challenges, two of them being the use of technology and cooperative learning. Using technology in the classroom has become an essential element in the education field. Teachers are utilizing technology as part of the 21st century classes, and students are taking advantage of all the benefits technology provides. According to Mantiri, there are a wide variety of activities that teachers and students can do with technology. Technology allows students to develop their linguistic skills and learn faster than older generations [1].

By the same token, cooperative learning has been used as an effective strategy in the EFL classroom. The strategy mainly consists of grouping students to foster teamwork skills while sharing information. Indeed, these competences are vital not only in education, but in daily life activities too. Kasemi, stated that

jigsaw activities give students the opportunity to communicate with each other and complete missing information about certain topics [2].

The present research project justifies its application since it is crucial to develop reading comprehension skills among teenagers. Although reading comprehension is relevant in the process of acquiring a foreign language, this is one of the skills that presents many difficulties. Ecuador is a country that has required the study of English as a foreign language since 1992 (British Council, 2015). Since that time, Ecuador has been working hard to improve the quality of English instruction, especially due to the importance of English in the entire world. According to, learning English provides the opportunity of being successful in national and international contexts, which is why it should be learned through the most innovative resources and strategies [3].

Technology

Technology has become a very important part of people's lives.

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Nowadays, it is common to see people communicating, working, studying, and having fun with it. So, technology is an essential tool, and it has revolutionized the way people interact with others. The Oxford dictionary defines technology as “scientific knowledge used in practical ways in industry.” It was originated in the early 17th century: from Greek *tekhnologia* ‘systematic treatment’ [4]. Certainly, technology allows people to access a lot of knowledge in different areas, and it helps them to have a practical way of getting information. Also, technology shortens distances. For example, if you are in another country, you can be in touch with other people and have information from all over the world.

Educational technology (ET) has evolved in the last few decades. We can notice and observe it in different professional development settings. Cabero says that ET is a discipline that transforms the learning process [5]. It has science, physics, psychology, pedagogy, communication, and culture, and it is always innovative.

The Easy Reading Website

The Easy Reading website is a section of the Learn English Teens link, on the BBC platform. It offers a wide range of language levels, from beginners to advanced students. Its content is based on the Common European Framework of Reference for Languages (CEFR), and it was created by the Council of Europe. The different descriptors in each level relate to the language proficiency go from A1 level to C1 level.

In addition, this website provides an evaluation system in two ways: multiple choice questions and filling gaps. In the multiple-choice section, students will find a question, and they will be prompted with four options. They have to select the correct one. On the other hand, the section about gap filling presents several ideas from the text which students need to complete by using the words they are prompted with. What is more, the website includes a preteaching activity about vocabulary in a way that prepares students for difficult words that they may encounter in the text. Finally, there is also a comment section in which learners have the opportunity to freely write and discuss their thoughts about reading. Thus, the website fosters the development of reading skills.

Jigsaw Activities

Regarding the jigsaw method, there are three main benefits. The first one is about the role of students in the class. By using the jigsaw method, students become active participants compared with traditional strategies of instruction. The second benefit concerns the affective impact on students. The more students participate in the class, the more confident they are to express themselves in the foreign language. Therefore, creating opportunities for them to master specific languages points, their self-esteem and self-worth increases. Lastly, there is the issue of the effect on attention spans, which is clearly evidenced when using jigsaw activities. To illustrate this, students tend to stop paying attention to texts when they are not used to reading. However, when using the jigsaw strategy, students engage in specific tasks, and as a result they organize ideas and that makes it easier to communicate in the L2 [6]. Therefore, students may become more communicative competent by using jigsaw activities.

The jigsaw reading strategy fosters cooperative learning. This teaching – learning method aims to group students in small teams from four to six students so that they work on a common educational goal. Cooperative learning benefits students in terms of academic achievement, confidence, motivation, and attitude toward the class. Therefore, students are interdependent, active, and accountable learners [7].

Methodology

The current project is identified as being quantitative and qualitative, so it is a mixed approach. It is quantitative because the accumulated data is analyzed through numbers, tabulations and statics presented in tables and graphics to prove the hypothesis and establish conclusions and recommendations. Finally, it is qualitative because the researcher takes direct information from a survey of students from Ikiam University. Also, the qualitative approach wants to identify the problem and explain the lack of reading comprehension, in a statistical way.

To conduct the current project, the researcher conducted online classes with students from Ikiam University, in the city of Tena, Napo province. At the university, contact is maintained between students and the coordinator of the English area, with the main objective of analyzing poor reading comprehension in the university and collecting data. This research work was finished after a deep analysis of reliable information about the Easy Reading website and jigsaw activities taken from books, texts, articles, newspapers, websites, research, and other documents. The two variables of this project were developed by researchers. In other words, “The Easy Reading website and Jigsaw activities” were applied to students of third level at Universidad Regional Amazónica Ikiam, to improve reading comprehension.

The current project is framed within an experimental type of research since an experiment or treatment will be applied to the subjects of the study. The subjects of the study were one hundred and thirty-eight students at Universidad Regional Amazónica Ikiam in Tena. Students ranged in age between nineteen and twenty-five years old. For the study, the subjects were randomly divided into two groups. The researcher used the website *wheeldecide.com* to choose which of the classes would become the experimental group and which would become the control group. In that way the groups were created, and the research process was able to begin.

The current research project was developed in three stages: a pretest, an experiment, and a post test. The pretest was completed by having students read a sample text from the Easy Reading website corresponding to level A2. The topics were stated in the Common European Framework for Language references, so they included basic personal information such as shopping, local geography, employment, advertisements, and newspaper articles describing events [8]. Thus, students were encountering level-appropriate texts with which they could engage.

Results and Discussion

Results of the pretest applied to the experimental group

Table 1: Experimental Group – Pretest

Statistics	Value
Mean	8.2871

95% Confidence Interval	Lower limit	7.9624
	Upper limit	8.6117
Median		8.3000
Standard deviation		1.27838
Min		5.00
Max		10.00
Range		5.00
Asymmetry		-0.078

Source: Software SPSS 25

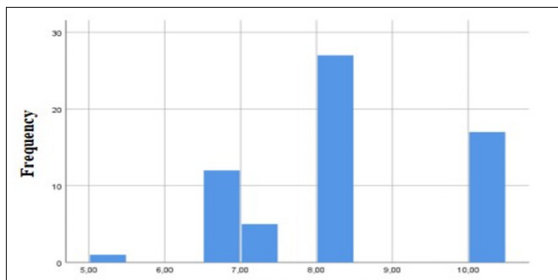


Figure 1: Experimental Group – Pretest Histogram

Table 1 shows that reading comprehension of the students in the experimental group, before the implementation of the Easy Reading website and jigsaw activities, has a mean of 8,287 and a media of 8,300. The meaning is within a confidence interval that varies between 7.962 and 8.612. The minimum score is 5.00 and the maximum is 10.00. Finally, there is an asymmetry of - 0.078.

Table 2: Control Group – Pretest

Statistics		Value
Mean		8.2113
95% Confidence Interval	Lower limit	7.7918
	Upper limit	8.6308
Median		8.3000
Standard deviation		1.65184
Min		3.30
Max		10.00
Range		6.70
Asymmetry		-0.686

Fuente: Software SPSS 25

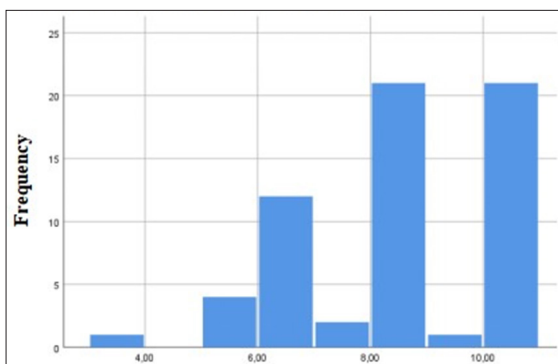


Figure 2: Control Group – Pretest Histogram

Table 2 shows that reading comprehension of the students in the control group, before the implementation of the Easy Reading website and jigsaw activities, has a mean of 8,211 and a median of 8,300. The mean is within a confidence interval that varies between 7.792 and 8.631. The minimum score is 3.30 and the maximum is 10.00. Finally, there is an asymmetry of - 0.686.

Table 3: Control Group – Posttest

Statistics		Value
Mean		8.3790
95% Confidence Interval	Lower limit	8.0950
	Upper limit	8.6631
Median		8.3500
Standard deviation		1.11842
Min		5.30
Max		10.00
Range		4.70
Asymmetry		-0.519

Source: Software SPSS 25

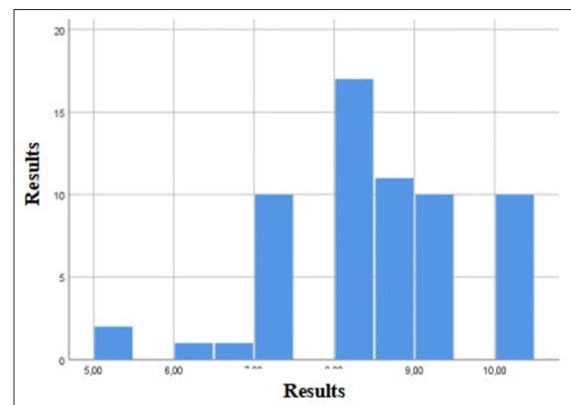


Figure 3: Control Group – Posttest Histogram

Table 3 shows that the reading comprehension level of the students who were part of the control group, after the implementation of the Easy Reading website and jigsaw activities, has a mean of 8,379 and a median of 8,350. The meaning is within a confidence interval that varies between 8,095 and 8,663. The minimum score is 5.30 and the maximum is 10.00. Finally, there is an asymmetry of - 0.519. This means that most students scored higher than the average group.

Discussion

The direct connection between technology and education is evident. It provides education with tools, such as computers and handheld devices, and it is available twenty-four hours a day, seven days a week. So, technology promotes motivation, engagement, and access to a wide variety of content and resources to allow an active and improved teaching-learning process.

Having technology in the classroom is important because of two main reasons; students' engagement and the multiple intelligence presented in a class. First, it has been shown that using technology has a very positive impact on students' attention, and they concentrate in a better way when they are

in class which utilizes technology. A study made by Wang “Applying New Technologies to Upgrade Non-English Speakers’ English-Speaking Skills”, concluded that the most innovative technologies reduce anxiety in the class and raise learner’s interest in English language learning [9]. Indeed, teaching with technology involves not only the tools needed, but also the content from the course, the students’ abilities, and the instructors’ abilities. By complementing these four elements, the process can be successful. The key element is to balance and adapt the use of technology in the learning environment.

Conclusions

The current study drew conclusions regarding the application of Easy Reading website and jigsaw activities. The most appropriate way to apply jigsaw technique is by using the steps proposed by Aranson [10]. These steps include planning and preparation, implementation, observation, and reflection [12-13].

The Easy Reading website and online jigsaw activities are two strategies that can be trusted by teachers and can be used to develop reading comprehension in students. These strategies provide interactive, innovative, and educational activities to manage reading.

After students were exposed to the pretest, which aimed to evaluate reading comprehension, it can be concluded that the level was low since the mean of the grade obtained in the control group was 7.3. On the contrary, the level of the experimental group was 7.4. However, these results showed that there was no significant difference during the pretest, so both groups presented equal conditions prior to application of the experiment.

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